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

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Title: Proposal to encode additional Cyrillic characters in the BMP of the UCS

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**1. Introduction.** This document requests the addition of a number of Cyrillic characters to be added to the UCS. It also requests clarification in the Unicode Standard of four existing characters. This is a large proposal. While all of the characters are either Cyrillic characters (plus a couple which are used with the Cyrillic script), they are used by different communities. Some are used for non-Slavic minority languages and others are used for early Slavic philology and linguistics, while others are used in more recent ecclesiastical contexts. We considered the possibility of dividing the proposal into several proposals, but since this proposal involves changes to glyphs in the main Cyrillic block, adds a character to the main Cyrillic block, adds 16 characters to the Cyrillic Supplement block, adds 10 characters to the new Cyrillic Extended-A block currently under ballot, creates two entirely new Cyrillic blocks with 55 and 26 characters respectively, as well as adding two characters to the Supplementary Punctuation block, it seemed best for reviewers to keep everything together in one document.

2. Rehabilitation of existing characters. Four characters already encoded require clarification.

**CYRILLIC LETTER OMEGA WITH TITLO** (U+047C and U+047D) should have the reference glyphs changed from O and  $\circlearrowright$  to the glyphs given below, with three notes added:

047C CÓ CYRILLIC CAPITAL LETTER OMEGA WITH TIT
--

047D & CYRILLIC SMALL LETTER OMEGA WITH TITLO

= cyrillic "beautiful omega"

- despite its character name, this letter does not have a titlo
- · this character is not decomposable into a base with diacritics

**CYRILLIC LETTER UK** (U+0478 and U+0479) should have its reference glyphs changed to the glyphs given below, with three notes added:

0478	Oy	CYRILLIC CAPITAL LETTER UK
0479	оу	CYRILLIC SMALL LETTER UK
		• this character has ambiguous glyph representation and should not be used

- for "digraph uk" use U+043E and U+0443
- for "monograph uk" use U+A6CB

**2.** Additional letters for Mordvin, Kurdish, Aleut, and Chuvash. Twelve of these characters are encoded in ISO 10754; the two additions for Aleut are used in ecclesiastical texts in Aleut, and are attested with both Grazhdanka and Slavonic letterforms.

LHA JXJX, RHA Kpx, and YAE Ææ are used in early orthographies of Mordvin for voiceless [1], [r], and [jæ] respectively. These were encoded in ISO 10754:1996 at positions 5A, 4A, 73, 63, 7E, and 6E respectively. They are not typographic ligatures. See Figures 1, 2, 3.

**Q**A Qq is used in Kurdish Cyrillic orthography and in early Abkhaz orthographies to represent [q]. These were encoded in ISO 10754:1996 at positions 56 and 46. In ISO 10754, as well as in early Abkhaz orthography, the glyph of the capital looks like an enlarged small q or like a reversed capital P. This variation is unknown for the Latin progenitor of the Cyrillic letter. See Figures 4, 5, 6, 7, 8, 9, 10, 37, 38a, 38c, 39c.

WE Ww is used in Kurdish Cyrillic orthography to represent [w]. These were encoded in ISO 10754:1996 at positions 78 and 68. The letter WE derives from the Latin letter W. It does not exhibit non-Latin shape behaviour (as QA does), but it does have non-Latin sorting behaviour (it comes between Cyrillic *Q* and I and not between Latin v and x). The argument ("when does an alphabetic adoption become naturalized?") is an old one, but the arguments against Cyrillic WE are weak. Kurdish Cyrillic makes use of 14 Cyrillic letters which are identical with Latin originals (Aa, Ee, Oo, Öö, Qq, Ww, and  $\Im$ ), so why should two of these be considered "unnaturalized"? Since Kurdish is written in both Latin and Cyrillic alphabets, a multilingual wordlist cannot sort Kurdish correctly because Latin w cannot be in two places at the same time. By sorting, we mean ordinary plain-text sorting, for instance of files in a directory. Expecting Kurdish users to have recourse to special language-and-script tagging software for these two letters alone is simply not a credible defence for the retention of the unification. Continued unification of w with wE will also likely mean that Russian Kurds will be unable to make use of IDN, as script mixing of Latin and Cyrillic is certainly to be frowned upon; the addition of wE will not make spoofability any worse than a, e, o,  $\ddot{o}$ , and  $\ddot{a}$  already do or than q will. The UTC and WG2 have also already ignored other cloneables: COMBINING CYRILLIC LETTER O and COMBINING CYRILLIC LETTER HA were not unified with their Latin lookalikes U+0366 or U+036F. This disunification is long overdue. (Indeed it is the last of the pernicious unhelpful unifications from the late 1980s.) See Figures 4, 5, 6, 7, 8, 9, 10.

ALEUT KA KK is used in Aleut Cyrillic orthography to represent [q]. See Figures 11, 12, 13.

EL WITH MIDDLE HOOK Лул, and EN WITH MIDDLE HOOK Нун, were used in Jakovlev's Chuvash orthography which was used from 1873–1938 to represent [l<sup>i</sup>] and [n<sup>i</sup>] respectively. These were encoded in ISO 10754:1996 at positions 59, 49, 5E, and 4E. See Figure 14.

**3. Additional letters for Early Slavic.** A large number of letters are needed to support editions of early Slavic manuscripts, or the more recent Slavonic ecclesiastical tradition. A number of these characters were previously reviewed by the UTC, in document L2/06-359. These are coloured light orange in the code chart on page 45.

**ZEMLYA** Zz is the earliest form of a letter which represents [z]. It is used alongside 33 ZE in 16th- and 17th century alphabets. See Figures 15,17, 20, 24, 30, 40.

**DZELO Zz** is the earliest form of a letter which represents [dz]. It is used alongside Ss DZE which originally derives from Greek stigma, particularly in manuscripts which use the latter as a numeral. See Figure 24.

**REVERSED DZE** Zz is a common character, especially in early South Slavonic manuscripts and inscriptions, and particularly when used as a numeral. It co-occurs with Ss, for example in the manuscripts NBKM 880 and RGB Sevast'janov 17; in the former Zz is also found. See Figure 22.

**IOTA** lu has been used in scholarly literature since the nineteenth century to transcribe Glagolitic  $\mathfrak{B}\mathfrak{R}$ . See Figure 23.

**DJERV** Å $\star$  is the Old Cyrillic letter for the voiced palatal affricate, used particularly in the Bosnian manuscript tradition and in early Bosnian printings, where it also serves to indicate palatal *l* and *n*, by analogy with Italian *gl*, *gn*. The glyph is the ancestor of U+040B and U+045B Th, but the two characters do not correspond either phonetically or etymologically. U+0402 and U+0452 Th was in turn derived from Th in 1819. DJERV cannot be unified with  $\hbar$  because the latter corresponds to it only partially, and besides, the two are sorted differently:  $\star$  comes between  $\mu$  and  $\kappa$ , while  $\hbar$  comes between  $\mu$  and e. See Figure 21.

**MONOGRAPH UK** & was incorrectly unified with Cyrillic Yy; these two letters are not the same either historically or functionally. It is not unusual to find manuscripts using both y and & (see Figure 15). Both historically and in modern Church Slavonic, y is also used as a numeral, but & is only used as a letter: the two are therefore not interchangeable. Old Cyrillic & originated as a ligated form of oy, but cannot be unified with it as the two quickly diverged in usage. They are distinguished by orthographical conventions going back many centuries and formalized in modern Church Slavonic; according to these rules, the substitution of either y or oy for & is an error, and all three characters are required for proper Church Slavonic typesetting. See Figures 11, 12, 13, 15, 16, 17, 18, 20, 25, 27, 30.

**BROAD OMEGA** CD $\omega$  is found alongside Ww in most sixteenth- and seventeenth-century alphabets and is most frequently used with a distinctive supralinear element (in most typefaces unique to this character) for the vocative particle "O!". However, in some alphabets (e.g. the 1631, 1653 and 1692 Primers) it appears without any supralinear element, and in the 1648 grammar is used to correspond to Greek  $\omega$  in proper names derived from Greek, in which function it may take the same diacritics as the other vowel characters (cf. on f.93v in the paradigm of Jonah, vocative  $\hat{\omega}$  iciHo, locative  $\hat{w}$  TOME iciHb). This indicates that it is the body of the letter that is distinctive, not the supralinear element, and  $\hat{\omega}$  is not to be regarded as w + diacritic. See Figures 17, 20.

**NEUTRAL YER** Ъъ is used in transcribing documents where it is impossible to tell the difference between Ъъ and Ъь (a common situation in late medieval Russian archival materials). See Figure 27.

**YERU WITH BACK YER** ЪІът is found alongside Ыы in important manuscripts, such as the Dobrejšo Gospels. The ability to make the distinction between ът and ы is of great importance to palaeography, and essential for a comprehensive palaeographic description of Cyrillic sources. See Figures 26, 40.

**IOTIFIED VAT** IBIB is letter occurs in certain early Cyrillic texts, in which it is used contrastively with Bb. See Figure 40.

**REVERSED YU** Oloi appears in some early Middle Bulgarian manuscripts and inscriptions, and has palaeographic and phonological significance. It is uncertain whether it has a common origin with Юю. See Figures 22, 30.

**IOTIFIED** A IAA occurs regularly from the earliest times to modern Church Slavonic. It is not to be unified with  $\Re$  (which is a variant of AA), which is used as a distinct character alongside it in early modern Bulgarian. See Figures 15, 16, 17, 25, 26, 32.

**CLOSED LITTLE YUS** AA is found in Old Church Slavonic and Middle Bulgarian manuscripts, and may be used contrastively with AA: in the Codex Supraslensis, for example, A represents ję and A represents q. See Figure 32.

**BLENDED YUS**  $A \cong$  is found in certain Middle Bulgarian manuscripts where it replaces (and eliminates) both  $A \cong$  and  $A \boxtimes$ . To encode it as if it were equivalent to either of them would be misleading, and a distinct character is therefore required. See Figures 30, 31.

**IOTIFIED CLOSED LITTLE YUS** HAA sometimes represents the pre-jotated vowel, in manuscripts following an orthographical system where AA represents the corresponding non-jotated vowel, IA The IOTATED CLOSED LITTLE YUS is found on the Preslav ceramic inscription, according to Andrej Bojadžiev, cited in Birnbaum 1996. See Figure 52.

YN ∱∱ is a standard character in Rumanian Cyrillic, both manuscript and printed. See Figure 18.

**EARLY YUS** AA is shaped like an inverted V with a shorter diagonal stroke running from the midpoint of one of the main diagonals to the centre of the baseline. The direction of slant of this short diagonal stroke is not significant. In South Slavonic monuments, EARLY YUS is ambiguous and may represent either etymological front or back nasal vowels, so it cannot be unified with BIG YUS or LITTLE YUS. See Figure 53.

**SOFT DE** Дт, **SOFT EL** Лг, and **SOFT EM** Мт are palatalized consonants which can also be represented as a base character with U+0484  $\hat{c}$ , so, for instance, земля *zemlja* 'winter' may be written земля or земля. Fused forms of these are attested, along with U+04A4 and U+04A5 Нг which is used for *soft en* as well as *eng*. The character SOFT EM is attested in Гольшенко 1987 (listed in Birnbaum 1996), but we have not been able to scan this for this proposal. See Figure 36.

**MONOCULAR O**  $\Theta_{\Theta}$ , **BINOCULAR O**  $\Theta_{\Theta}$ , **DOUBLE MONOCULAR O**  $\Theta_{\Theta}$ , and **MULTIOCULAR O**  $\circledast$  are used in words which are based on the root for 'eye'. The first is used when the wordform is singular, as  $\Theta_{KO}$ ; the second and third are used in the root for 'eye' when the wordform is dual, as  $\Theta_{YU}$ ,  $\Theta_{YU}$ ; and the last in the epithet 'many-eyed' as in *cepaфumu много* @*umïŭ* 'many-eyed seraphim'. It has no upper-case form. See Figures 34, 41, 42, 55.

**4. Additional combining characters and marks for Early Slavic.** A number of combining characters are needed to support editions of early Slavic manuscripts, or the more recent Slavonic ecclesiastical tradition.

Combining cyrillic letter A  $a^{\circ}$ , combining cyrillic letter ie  $b^{\circ}$ , combining cyrillic letter djerv  $a^{\circ}$ , combining cyrillic letter monograph uk  $b^{\circ}$ , combining cyrillic letter yat  $b^{\circ}$ , combining cyrillic letter yu  $b^{\circ}$ , combining cyrillic letter iotified a  $b^{\circ}$ , combining cyrillic letter yu  $b^{\circ}$ , combining cyrillic letter big yus  $b^{\circ}$  and combining cyrillic letter iotified big yus  $b^{\circ}$  are used in manuscripts in abbreviations of various kinds. See Figures 43, 44, 45, 46, 47, 48, 49, 50. This proposal lacks an example of combining cyrillic big yus.

**COMBINING CYRILLIC TEN MILLIONS SIGN** and **COMBINING CYRILLIC HUNDRED MILLIONS SIGN** and **COMBINING CYRILLIC THOUSAND MILLIONS SIGN** are used around letters to indicate their numeric use. See Figure 51.

**COMBINING CYRILLIC POKRYTIE** is optionally used with combining Cyrillic letters (letter-titlos) to indicate abbreviation. Because of its unique shape it is not possible to unify this character with, for example, U+0311 COMBINING INVERTED BREVE ABOVE. The already-encoded U+0483 combining cyrillic titlo is also used to indicate abbreviations, but is not used with the letter titlos. See Figures 19, 35, 49.

**COMBINING CYRILLIC VZMET** is optionally used with Cyrillic letters and with combining Cyrillic letters (letter-titlos) to indicate abbreviation. Because of its unique shape it is not possible to unify this character with, for example, U+0311 COMBINING INVERTED BREVE ABOVE. The already-encoded U+0483

combining cyrillic titlo is also used to indicate abbreviations, but is not used with the letter titlos. See Figure 36.

**COMBINING CYRILLIC KAVYKA**  $\stackrel{\sim}{}$  is used to indicate an alternative reading to only part of a word, as in Figure 29, where the feminine ending in the margin is substituted for the masculine ending in the text. In this case the COMBINING KAVYKA is placed directly over the relevant letters. Note that COMBINING KAVYKA is typographically as well as functionally distinct from U+0306 COMBINING BREVE, which is visible in MMJNAM, the penultimate word of the example in Figure 29.

**CYRILLIC KAVYKA** is used on either side of a word or passage of text to indicate a substitution or alternative reading, usually indicated in the margin likewise between two *kavyki*. Functionally this is similar to the use of U+2E02 LEFT SUBSTITUTION BRACKET and U+2E03 RIGHT SUBSTITUTION BRACKET, although the brackets are visually different. There is no difference between a KAVYKA used at the beginning of a word or phrase and a KAVYKA at the end. See Figures 28, 29.

**COMBINING CYRILLIC PAYEROK** *i* is frequent from the earliest period, originally to replace an omitted yer, later also to break up consonant clusters. See Figure 54.

**CYRILLIC PAYEROK** ' is the spacing equivalent of the COMBINING CYRILLIC PAYEROK, used to replace an omitted yer, later also to break up consonant clusters. See Figure 19.

**SLAVONIC ASTERISK**  $\ddagger$  is a punctuation star used in ecclesiastical printing. It is a spacing character, but often kerns very closely over punctuation like COMMA, FULLSTOP, AND COLON. See Figure 35.

**VERTICAL TILDE** ' is the spacing form of U+033E COMBINING VERTICAL TILDE, which represents the Cyrillic *yerik*, a character which functions similarly to the PAYEROK. We recommend the following notes be added to the Unicode Standard names list: For U+033E, add "used for combining Cyrillic yerik"; for VERTICAL TILDE, add "used for Cyrillic yerik"; both should have cross-references to the two *payeroks*. See Figures 19, 33.

**5.** Additional letters for Abkhaz. Abkhaz has been studied scientifically since the mid-19th century. The first alphabet for Abkhaz was devised by P. K. Uslar in 1862, based on the Bzyb dialect. This orthography was used for textbooks and religious material until 1928, when a Latin alphabet was devised for Abkhaz by Soviet authorities. M. R. Zapadskij was the first to put Uslar's handwritten alphabet into type, which was used until "the Translation Committee" further refined the alphabet; the examples from the translation of the four gospels in Figures 38a, 38c, and 38d are in this latter orthography. Most of the Cyrillic characters used in these early alphabets are already encoded. Figure 39 shows the Zapadskij and Translation Committee alphabets, and the unique characters missing from the UCS from each of those alphabets is proposed here.

**DZWE** SS is used in early orthographies for Abkhaz to represent [dz<sup>w</sup>]. See Figures 38c, 39b.

**ZHWE**  $3K_{3K}$  is used in early orthographies for Abkhaz to represent [ $3^{w}$ ]. The character is a fusion of a Cyrillic ZE to the base of the letter ZHE. It is not a divisible ligature. See Figures 38a, 38c, 39a.

**CCHE**  $\Psi\Psi$  is used in early orthographies for Abkhaz to represent [t $\int$ :]. The character is a double Cyrillic CHE. It is not a divisible ligature. See Figure 39b.

**DZZE** Дд is used in Uslar's orthography for Abkhaz to represent [dz]. The character is a fusion of a tiny Cyrillic ZE to the base of the letter DE. It is not a divisible ligature. See Figure 39b.

**TE WITH MIDDLE HOOK**  $\mathfrak{F}_{\mathfrak{F}}$  is used in early orthographies for Abkhaz to represent [t]. It is also used in Jakovlev's orthography for Chuvash to represent [t<sup>i</sup>]. It is not related to either Serbian  $\mathfrak{F}_{\mathfrak{F}}$  or  $\mathfrak{F}_{\mathfrak{h}}$ . See Figures 14, 38a, 38c, 39c.

TWE Tt is used in early orthographies for Abkhaz to represent [t<sup>w</sup>]. See Figures 37, 38a, 38c, 39c.

TSWE IJI is used in early orthographies for Abkhaz to represent [ts<sup>w</sup>]. See Figures 37, 38a, 38c, 39d.

**TSSE** T<sub>T</sub> is used in early orthographies for Abkhaz to represent [ts<sup>*j*</sup>]. The character is a fusion of a tiny Cyrillic ES to the base of the letter TE. It is not a divisible ligature. See Figure 39d.

**TCHE** "In is used in early orthographies for Abkhaz to represent  $[t\int']$ . The character is a fusion of the topbar of Cyrillic TE to the letter CHE. It is not a divisible ligature. See Figures 38c, 39e.

HWE fin is used in early orthographies for Abkhaz to represent [h<sup>w</sup>]. See Figures 38a, 38c, 39e.

**SHWE** III is used in early orthographies for Abkhaz to represent  $[\int^w]$ . See Figures 38a, 38c, 39e.

6. Unicode Character Properties. Character properties are proposed here.

0487;COMBINING CYRILLIC POKRYTIE;Mn;230;NSM;;;;;N;;;;

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0514;CYRILLIC CAPITAL LETTER LHA;Lu;0;L;;;;;N;;;;0515;
0515;CYRILLIC SMALL LETTER LHA;L1;0;L;;;;;N;;;0514;;0514
0516;CYRILLIC CAPITAL LETTER RHA;Lu;0;L;;;;N;;;;0517;
0517;CYRILLIC SMALL LETTER RHA;Ll;0;L;;;;;N;;;0516;;0516
0518;CYRILLIC CAPITAL LETTER YAE;Lu;0;L;;;;;N;;;;0519;
0519;CYRILLIC SMALL LETTER YAE;L1;0;L;;;;;N;;;0518;;0518
051A;CYRILLIC CAPITAL LETTER QA;Lu;0;L;;;;;N;;;;051B;
051B;CYRILLIC SMALL LETTER QA;Ll;0;L;;;;N;;;051A;;051A
051C;CYRILLIC CAPITAL LETTER WE;Lu;0;L;;;;;N;;;;051D;
051D;CYRILLIC SMALL LETTER WE;Ll;0;L;;;;;N;;;051C;;051C
051E;CYRILLIC CAPITAL LETTER ALEUT KA;Lu;0;L;;;;N;;;;051F;
051F;CYRILLIC SMALL LETTER ALEUT KA;L1;0;L;;;;N;;;051E;;051E
0520;CYRILLIC CAPITAL LETTER EL WITH MIDDLE HOOK;Lu;0;L;;;;N;;;;0521;
0521;CYRILLIC SMALL LETTER EL WITH MIDDLE HOOK;Ll;0;L;;;;;N;;;0520;;0520
0522;CYRILLIC CAPITAL LETTER EN WITH MIDDLE HOOK;Lu;0;L;;;;N;;;;0523;
0523;CYRILLIC SMALL LETTER EN WITH MIDDLE HOOK;Ll;0;L;;;;N;;;0522;;0522
2DF6;COMBINING CYRILLIC LETTER A;Mn;230;NSM;;;;;N;;;;;
2DF7;COMBINING CYRILLIC LETTER IE;Mn;230;NSM;;;;;N;;;;
2DF8;COMBINING CYRILLIC LETTER DJERV;Mn;230;NSM;;;;;N;;;;;
2DF9;COMBINING CYRILLIC LETTER MONOGRAPH UK;Mn;230;NSM;;;;;N;;;;;
2DFA; COMBINING CYRILLIC LETTER YAT; Mn; 230; NSM; ;; ;; ;N; ;; ;;
2DFB;COMBINING CYRILLIC LETTER YU;Mn;230;NSM;;;;;N;;;;;
2DFC; COMBINING CYRILLIC LETTER IOTIFIED A; Mn; 230; NSM; ;; ;; N; ;; ;;
2DFD; COMBINING CYRILLIC LETTER LITTLE YUS; Mn; 230; NSM;;;;; N;;;;;
2DFE;COMBINING CYRILLIC LETTER BUG YUS;Mn;230;NSM;;;;;N;;;;;
2DFF;COMBINING CYRILLIC LETTER IOTIFIED BIG YUS;Mn;230;NSM;;;;;N;;;;
2E3A; SLAVONIC ASTERISK; Po;0;0N;;;;;N;;;;
2E3B;VERTICAL TILDE;Lm;0;ON;;;;;N;;yerik;;;
A6C0;CYRILLIC CAPITAL LETTER ZEMLYA;Lu;0;L;;;;N;;;;A6C1;
A6C1;CYRILLIC SMALL LETTER ZEMLYA;L1;0;L;;;;;N;;;A6C0;;A6C0
A6C2;CYRILLIC CAPITAL LETTER DZELO;Lu;0;L;;;;;N;;;;A6C3;
A6C3;CYRILLIC SMALL LETTER DZELO;L1;0;L;;;;;N;;;A6C2;;A6C2
A6C4;CYRILLIC CAPITAL LETTER REVERSED DZE;Lu;0;L;;;;;N;;;;A6C5;
A6C5;CYRILLIC SMALL LETTER REVERSED DZE;L1;0;L;;;;;N;;;A6C4;;A6C4
A6C6;CYRILLIC CAPITAL LETTER IOTA;Lu;0;L;;;;N;;;;A6C7;
A6C7;CYRILLIC SMALL LETTER IOTA;L1;0;L;;;;N;;;A6C6;;A6C6
A6C8;CYRILLIC CAPITAL LETTER DJERV;Lu;0;L;;;;N;;;;A6C9;
A6C9;CYRILLIC SMALL LETTER DJERV;Ll;0;L;;;;N;;;A6C8;;A6C8
A6CA;CYRILLIC CAPITAL LETTER MONOGRAPH UK;Lu;0;L;;;;N;;;;A6CB;
A6CB;CYRILLIC SMALL LETTER MONOGRAPH UK;Ll;0;L;;;;N;;;A6CA;;A6CA
A6CC;CYRILLIC CAPITAL LETTER BROAD OMEGA;Lu;0;L;;;;;N;;;;A6CD;
A6CD;CYRILLIC SMALL LETTER BROAD OMEGA;L1;0;L;;;;;N;;;A6CC;;A6CC
A6CE;CYRILLIC CAPITAL LETTER NEUTRAL YER;Lu;0;L;;;;N;;;;A6CF;
A6CF;CYRILLIC SMALL LETTER NEUTRAL YER;Ll;0;L;;;;N;;;A6CE;;A6CE
A6D0;CYRILLIC CAPITAL LETTER YERU WITH BACK YER;Lu;0;L;;;;N;;;;A6D1;
A6D1;CYRILLIC SMALL LETTER YERU WITH BACK YER;Ll;0;L;;;;;N;;;A6D0;;A6D0
A6D2;CYRILLIC CAPITAL LETTER IOTIFIED YAT;Lu;0;L;;;;N;;;;A6D3;
A6D3;CYRILLIC SMALL LETTER IOTIFIED YAT;L1;0;L;;;;N;;;A6D2;;A6D2
A6D4;CYRILLIC CAPITAL LETTER REVERSED YU;Lu;0;L;;;;;N;;;;A6D5;
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A6D5;CYRILLIC SMALL LETTER REVERSED YU;L1;0;L;;;;N;;;A6D4;;A6D4
A6D6;CYRILLIC CAPITAL LETTER IOTIFIED A;Lu;0;L;;;;;N;;;;A6D7;
A6D7;CYRILLIC SMALL LETTER IOTIFIED A;L1;0;L;;;;;N;;;A6D6;;A6D6
A6D8;CYRILLIC CAPITAL LETTER CLOSED LITTLE YUS;Lu;0;L;;;;N;;;A6D9;
A6D9;CYRILLIC SMALL LETTER CLOSED LITTLE YUS;Ll;0;L;;;;N;;;A6D8;;A6D8
A6DA;CYRILLIC CAPITAL LETTER BLENDED YUS;Lu;0;L;;;;;N;;;;A6DB;
A6DB;CYRILLIC SMALL LETTER BLENDED YUS;L1;0;L;;;;N;;;A6DA;;A6DA
A6DC;CYRILLIC CAPITAL LETTER IOTIFIED CLOSED LITTLE YUS;Lu;0;L;;;;N;;;;A6DD;
A6DD;CYRILLIC SMALL LETTER IOTIFIED CLOSED LITTLE YUS;Ll;0;L;;;;N;;;A6DC;;A6DC
A6DE;CYRILLIC CAPITAL LETTER YN;Lu;0;L;;;;;N;;;;A6DF;
A6DF;CYRILLIC SMALL LETTER YN;Ll;0;L;;;;N;;;A6DE;;A6DE
A6E0;CYRILLIC CAPITAL LETTER EARLY YUS;Lu;0;L;;;;N;;;;A6E1;
A6E1;CYRILLIC SMALL LETTER EARLY YUS;Ll;0;L;;;;N;;;A6E0;;A6E0
A6E2;CYRILLIC CAPITAL LETTER SOFT DE;Lu;0;L;;;;N;;;;A6E3
A6E3;CYRILLIC SMALL LETTER SOFT DE;L1;0;L;;;;N;;;A6E2;;A6E2
A6E4;CYRILLIC CAPITAL LETTER SOFT EL;Lu;0;L;;;;N;;;;A6E5;
A6E5;CYRILLIC SMALL LETTER SOFT EL;Ll;0;L;;;;;N;;;A6E4;;A6E4
A6E6;CYRILLIC CAPITAL LETTER SOFT EM;Lu;0;L;;;;N;;;;A6E7;
A6E7;CYRILLIC SMALL LETTER SOFT EM;Ll;0;L;;;;;N;;;A6E6;;A6E6
A6E8;CYRILLIC CAPITAL LETTER MONOCULAR O;Lu;0;L;;;;;N;;;;A6E9;
A6E9;CYRILLIC SMALL LETTER MONOCULAR O;L1;0;L;;;;;N;;;A6E8;;A6E8
A6EA;CYRILLIC CAPITAL LETTER BINOCULAR O;Lu;0;L;;;;;N;;;;A6EB;
A6EB;CYRILLIC SMALL LETTER BINOCULAR O;L1;0;L;;;;N;;;A6EA;;A6EA
A6EC;CYRILLIC CAPITAL LETTER DOUBLE MONOCULAR O;Lu;0;L;;;;N;;;;A6ED;
A6ED;CYRILLIC SMALL LETTER DOUBLE MONOCULAR O;L1;0;L;;;;N;;;A6EC;;A6EC
A6EE;CYRILLIC LETTER MULTIOCULAR O;L0;0;L;;;;N;;;;
A6EF;COMBINING CYRILLIC VZMET;Mn;230;NSM;;;;;N;;;;;
A6F0;COMBINING CYRILLIC TEN MILLIONS SIGN;Me;0;NSM;;;;;N;;;;;
A6F1; COMBINING CYRILLIC HUNDRED MILLIONS SIGN; Me; 0; NSM; ;; ;; N; ;; ;;
A6F2; COMBINING CYRILLIC THOUSAND MILLIONS SIGN; Me; 0; NSM; ;; ;; N; ;; ;;
A6FC; COMBINING CYRILLIC KAVYKA; Mn; 230; NSM; ;; ;; N; ;; ;;
A6FD; COMBINING CYRILLIC PAYEROK; Mn; 232; NSM; ;; ;; N; ;; ;;
A6FE;CYRILLIC KAVYKA;Lm;0;ON;;;;;N;;;;
A6FF;CYRILLIC PAYEROK;Lm;0;ON;;;;;N;;;;
A8E0;CYRILLIC CAPITAL LETTER DWE;Lu;0;L;;;;;N;;;;A8E1;
A8E1;CYRILLIC SMALL LETTER DWE;L1;0;L;;;;N;;;A8E0;;A8E0
A8E2;CYRILLIC CAPITAL LETTER DZWE;Lu;0;L;;;;;N;;;;A8E3;
A8E3;CYRILLIC SMALL LETTER DZWE;Ll;0;L;;;;N;;;A8E2;;A8E2
A8E4;CYRILLIC CAPITAL LETTER ZHWE;Lu;0;L;;;;;N;;;;A8E5;
A8E5;CYRILLIC SMALL LETTER ZHWE;Ll;0;L;;;;N;;;A8E4;;A8E4
A8E6;CYRILLIC CAPITAL LETTER CCHE;Lu;0;L;;;;N;;;;A8E7;
A8E7;CYRILLIC SMALL LETTER CCHE;Ll;0;L;;;;N;;;A8E6;;A8E6
A8E8;CYRILLIC CAPITAL LETTER DZZE;Lu;0;L;;;;N;;;;A8E9;
A8E9;CYRILLIC SMALL LETTER DZZE;L1;0;L;;;;N;;;A8E8;;A8E8
A8EA;CYRILLIC CAPITAL LETTER TE WITH MIDDLE HOOK;Lu;0;L;;;;;N;;;;A8EB;
A8EB;CYRILLIC SMALL LETTER TE WITH MIDDLE HOOK;L1;0;L;;;;N;;;A8EA;;A8EA
A8EC;CYRILLIC CAPITAL LETTER TWE;Lu;0;L;;;;;N;;;;A8ED;
A8ED;CYRILLIC SMALL LETTER TWE;Ll;0;L;;;;;N;;;A8EC;;A8EC
A8EE;CYRILLIC CAPITAL LETTER TSWE;Lu;0;L;;;;N;;;;A8EF;
A8EF;CYRILLIC SMALL LETTER TSWE;L1;0;L;;;;N;;;A8EE;;A8EE
A8F0;CYRILLIC CAPITAL LETTER TSSE;Lu;0;L;;;;;N;;;;A8F1;
A8F1;CYRILLIC SMALL LETTER TSSE;L1;0;L;;;;N;;;A8F0;;A8F0
A8F2;CYRILLIC CAPITAL LETTER TCHE;Lu;0;L;;;;;N;;;;A8F3;
A8F3;CYRILLIC SMALL LETTER TCHE;L1;0;L;;;;N;;;A8F2;;A8F2
A8F4;CYRILLIC CAPITAL LETTER HWE;Lu;0;L;;;;N;;;A8F5;
A8F5;CYRILLIC SMALL LETTER HWE;Ll;0;L;;;;N;;;A8F4;;A8F4
A8F6;CYRILLIC CAPITAL LETTER SHWE;Lu;0;L;;;;N;;;;A8F7;
A8F7;CYRILLIC SMALL LETTER SHWE;L1;0;L;;;;N;;;A8F6;;A8F6
```

**7. Ordering.** The first paragraph here shows the current order of Cyrillic characters according to the Common Tailorable Template. The second paragraph shows, in red the Slavic characters proposed here, and in cyan the non-Slavic characters proposed.

```
\begin{array}{c} a < \ddot{a} ~ \ddot{a} < \ddot{a} < \ddot{a} ~ \ddot{a}
```

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# Figures

аф учфтродозь. (Стэй моркш ваксста). Эх, деяйалэй, укольгяда... (Сембэ стякшнихть). Мезевок лие аф няя, эряви. Ну, аф ламос коданга кырьдеда. Тон, деяй, тят аварьчнэ. Мон саян.

Корпа атэ. Кода, цёрай, тисак, нать тяфтак эряви. Илык коданга тяса тиеньттяма,—тон тоса коданга улхьт, шумбра, шумбраста сак куду курбконэ.

Председателсь. Эрь, Петэ, коданга тон пажалыста эряскатт. Мон молян нингэ лядыксиёнь ширева якан. Прощайте мзярс. (Лиси).

Карпа баба. (Мешоксь кэцонза). Вога тяса понкст, панархть, пракстанят. Кшенэ путонь. лэтфтаса мезэ нингэ эряви. Нэк пэк вышкста быхкать. Пиделёнь-панелёнь мезьнявок мархт...

**Figure 1.** Sample from Бондяков 1925, showing letters LHA and RHA. Typographically, the former is based on HA with an EL extension, and the latter is ER with a HA extension.

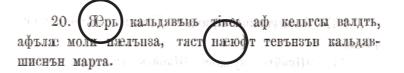


Figure 2. Sample from Барсов 1901, showing the letter YAE.

6) яе = среднему изъ я + е: пряе, ужяель куяе; сяели, сяень, пяели.

**Figure 3.** Sample from Eapcob 1901, showing the letter YAE and describing its sound as being between YA and IE (evidently [jæ]).

#### әлйфба

Aa—II.	33- <b>2</b>	∏n−¶	իս <b>⊥Հ</b>	
Бб— Р	Ин-Р	П'п'— Ф	5m—2f	U.
BBϤ	Йй — 6	Рр – <b>Р</b>	Чч <b>— 2</b>	Цррш – аббат. И потбала иссобар дарбан
Гг—Գ	<u>Кк</u> —Կ	P'p' - A	Կ <b>գ</b> —Ճ	Աբբանայւ - аббабап, дербав. Աբբայական — аббати.
Г'г <b>'—Ղ</b>	К <b>к'</b> — <b>4</b>	Cc -II	1Սա—Շ	Црыпшурно - абер'асна.
ДдԳ	Лл—Ц	T <b>r —</b> 8	11(Iu— <b>Ջ</b>	Աբխազ - ․․
Ee—l	Мм Մ	Т'т' <b>Ю</b>	Ьь <b>С</b>	Աբիազիա — Абхазна. Աբոնեմենտ – аболемент.
əə )	HңՆ	<b>У</b> у–ՈՒ	Ээ⊸l;	иринини – лоонскент. Ирицьки – аболент.
. 0'a' } lL	Oo-0	Фф <b>Ъ</b>	Qa-I.	<b>Цриги</b> ~ аборт, зар'о бар хwa-
Жж—4	Öö <b>—"Ⅰî</b>	Xx—Iu	Ww MNU	кърыя, зар'о бэркърыя. Иривцики - абсолут, з'йани.
				Ценцинивал абсолутизм.

Figure 4. Sample from Hassanpour 1992, showing Kurdish QA and WE in an Armenian-Kurdish dictionary published in Erevan in 1957.

11) Әгәр (һәгәр): әгәр щамера дьгәри, һәрә мала мир Сендин, әгәр дьхwәзи һәри мала мәри әфата, һәрә мала Qәрә Таждин, Ъқан у Әрфан, ле әгәр хьраба дьгәри, һәрә чаға Бәкое Әwal. (Ф. К. 299).

12) Чь кё: чь кё мьн дазанщ дькьр, мьн дьда дийа-кура (КЗК 94): чь кё ћатийа саре мьн, бъра нае саре калде чь кё расти та ћат, бъда бар хур бажо.

(3) Һәрке: һәрке тö ньзани, тö хызани, һәрке һун бен, әме арикарийа wә бықын; һәрке әw досте һәвып, әwe бы дости жи бь һәвра дәрбас бықын.

14) Кэнге: кэнге пьшик нә ль малә, дә́waтa мышканә; кәнге тә ани, әзе бъдьм тә; кәнге мә һәв дит, мә һәвра то

15 Wəxre (кö): wəxre (кö) әз һатьм гöнд, мьн тö дити; w тт тö дьхәбьти, мьн ль тә дьньһери; wəxre баран бари, әм ль мерге бун.

16. Чахе: чахе нав шуна щинава тен хәбьтандын, чажа хöданфел, hьнге пьртька «е» сәр wанда зедә дьбә (Q.К.)94).

Figure 5. Sample from Köpgo 1956, showing QA and WE used .in a reader for the 5th and 6th class.

#### АЛФАВИТ

В 1929 г. курды, проживающие в СССР, получили письменность; был создан алфавит на основе латинской графики с добавлением знака ь. В 1945 г. курды СССР перешли на повый алфавит на основе русской графики с добавлением четырёх знаков: ә, h, q, w. Кроме того над некоторыми буквами с правой стороны стали ставить знак ', который означает добавочную артикуляцию<sup>1</sup>.

на основе русской графики	на основе латинской графики	на основе русской графики	на основе латинской графики
а	а	u	· p
б	b	п,	p
в	v	р	г
г	g	p*	r [r]
r'	q	с	s
д	d	т	t
e	e	т'	t
ə	a	y.	u
ə'	5'	ф	f
ж	Ŧ	х	х
3	7.	h	h
И	i	h'	h
й	j	ч	с
к	К	ч'	e
к'	к	щ	ç
л	1	ш	ş
м	m	L.	
н	n	9	q
0	0	w	w)
ö	ö		

Figure 6. Sample from Бакаев 1957, showing Latin Q and w alongside Cyrillic QA and WE, in columns labelled, literally, "Latin graphics" and "Russian graphics" respectively; we use the terms "Cyrillic characters" and "Latin characters" today. The text above states that in 1945 Kurds in the USSR adopted a new alphabet based on "Russian graphics" with the addition of four characters: Эә, hh, Qq, and Ww. All of these ultimately derive from the Latin script, but were naturalized Cyrillic characters 61 years ago. Other Cyrillic characters used in Kurdish with identical Latin counterparts are Aa, Ee, Oo, and Öö.

гіп лизоблю́зничать. подхалймст-	(сесенка).
вовать.	kúzkirin [кузкырын] и. д. ж.
kûtik (Кутык) юк. презренный,	a) сгóрбливание; б) сгиба́ние; на-
nóдлый.	гиба́ние.
kût-kût [Кут-Кут] юк. куска́ми.	kwanê [ќwа] юк. см. ka I.
kût û kur [Кут у кöр] см. кет-	kwanê [ќwане] юк. см. ka-
kur.	nê.
kûvî [Куви] 1. l) го́рный;	kwexa [ќwäxa] юк. см. kew-
2) ди́кий; неприручённый; путлй-	xwe.
вый; нелюди́мый; ∽ bûn стать	kwîner [ќwинар] ж. l) биухоль;
ди́ким, дича́ть; ∽ kirin сде́лать	2) нары́в; чи́рей.
ди́ким, нелюди́мым; 3) перен. бýр-	kwînêr [ќwинер] см. kwîner.
ный; песде́ржапный; бе́шеный;	kwînêr [ќwинер] юк. см. kor I.
2. ж. се́рна.	kwîsî [ќwиси] юк. см. kûsî.
	5
qab I [qaб] l) ж. коробка;	qab II [qaб] 1. м. развра́тняк;
футля́р; 2) ж. но́жны́; 3) ж. ко-	jina — развра́тница; проститут-
ло́дка (для обуви и т. п.); 4) ж.	ка; 2. yê — распу́тный (о мужчине).
тех. форма (для отливки); 5) юк.	qaban [qaбан] м. каба́н; бо́ров;
посу́да.	ди́кий каба́н, вепрь.

**Figure 7.** Sample from Курдоев 1960, showing Latin Q and w alongside Cyrillic QA and WE. This is a dictionary of Kurdish in a Latin orthography; here, the phonetic re-spelling is given for Russian-speaking readers in Cyrillic transcription, as in **kwîsî** [кwиси] and **qaban** [qaбaH].

$\Lambda lphabet$	Transliteration	Alphabet	Transliteration
Ла	a	Φφ	f
Бб	b	Хх	kh
Вв	v	Чч	ch
Гг	g	чŀч	ch'
Г' г'	g'	Шш	sh
Дд	d	Щщ	j
Ее	e	Ьъ	ï
Жж	zh	Ээ	ë
Зз	z	h հ	h
Ии	i	<b>h</b> ' h'	$\mathbf{h}^{i}$
Йй	у	Qq	q
Кк	k	W w	W
К' к'	k'	<del>3</del> 9	ä
Лл	1		
Мм	m		
IIн	n		
Оo	0		
Öö	ö		
Пп	р		usacv, Alfavity iazykov
П' п'	p'	"Nauka," 19	SR (Moscow:1zdatel'stvo 965), pp. 26–28; N. A.
Сс	8		1., Osnovnye protsessy urnogo razvitila iranskikh
Тт	t	i iberiisko-ka	wkasskikh iasykov zdateľstvo "Nauka,"
Т'т'	ť	1969), pp. 1.	
Уу	u	ALLWORTH: NAT	TIONALITIES OF SOVIET EAST

Figure 8. Sample from Allworth 1971, showing the Kurdish Cyrillic alphabet and its Latin transliteration. The following letters are identical between Latin and Cyrillic: Aa, Ee, Oo, Öö, Qq, Ww, and Əə (though Allworth transliterates the last as Ää). Сопоставление графем курдского алфавита 1945 г. с применявщимися для выражения тех же звуков курдского языка графемами арабской письменности, а также с алфавитами, принятыми при издании курдских текстов латинским шрифтом, дает следующую картину.

№№ пп.	Курдский алфавит 1945 г. (на основе русской графики)	Латинизи- рованный курдский алфавит 1927 г.	ур Аской п Алфавит, выработан- ный общест- вом "Хавар" в Сирии	Латинизи- рованный алфавит курдов Ирака	Курдский алфавит (на основе арабской графики)
1	2	3	4	5	6
$ \begin{array}{c} 1\\2\\3\\4\\5\\6\\7\\8\\9\\10\\11\\12\\13\\14\\15\\16\\17\\18\\19\\20\\21\\22\\23\\24\\25\\26\end{array} $	а б ч ч ч я д с а с а с а с а с а с а с а с а с а с	a b c s d e s f f g h h t i b j k k l l m n o P P	a b c c d e e, o f g x h h h i i y k k l l m n o P p	a b ch c d ê e e f g h h h i, iy i, y g g k, kh l l h m n o p, ph	ہ ہے۔ اب آ ل کونی کی ج بی ج ج ج ج ج ج ج ج ج ج ج ج ج ج ج ج ج
1 Произн	носится как	дж (твердое)			
1	2	3	4	5	6
27 28 29 30 31 32 33 34 35 36 37 38 39 40	$ \begin{array}{c} q \\ p \\ p \\ c \\ w \\ m \\ m \\ y \\ \theta \\ w \\ x \\ \ddot{o} \\ s \\ \kappa \\ \end{array} $	q r r s s t t t u v w x y z z z	q r,rr s t t û v w x u z j	9 r rh s sh t th u v x ö z j, zh	ة مى ,س ش ش د _ وو ,و و ء و ئ ر ر

Таблица алфавитов, употребляемых в курдской письменности

**Figure 9.** Sample from Курдоев 1957, showing the Kurdish alphabet of 1945 (with "Russian graphics"), the Latinized Kurdish alphabet of 1927, the Latin alphabet devised by the "Xavar" society in Sirin, the Latinized alphabet of Iranian Kurds, and the Kurdish alphabet (with "Arabic graphics"). Latin Q and W are used alongside Cyrillic QA and WE. Here, as in Figure 6, the author identifies the letters as Russian, that is, as Cyrillic.

# курдский

Щарәке бәрф, баран у ба һәвр'а к'әтн һ'бщәте, чька к'и жь waнa зорә. Баране гот: "Әз гьшка зортьрьм. һәр дәра дьбарьм. Кәсәк бь мьн нькарә". Ба гот: "Qә жи на, ә'мре тә кьнә. Дьбарн у зу тейи бьр'ине, зу жи дьмьч'ьqи. Е зор әзьм, wәки ч'ьл у ч'йар'а дьбәзьм, хwә ль һәр дәрар'а дьгһиньм". Бәрфе гот: "Ә'мре тә жи кьнә. Зу тей бьр'ине, кәс тә дәрнахә, чька к'бда чуйи. Йа зор диса әзьм, дьбарьм, рудьним, h әрдәра сьпи дькьм". Ба гот: "Лә wәки әз бем, го тöе жь бәр мьн к'öда хьлаз би".

h'ощәта waнa we he гәләки бьк'ьшанда, hәрге бь waнар'a ро дәрнәк'әта; әwe п'әнще xwә зәр-зәрьданд; дьнйа пер'а к'әийа: "Баран, бәрф у ба ида hәр йәк аликида мьна бубун".

#### Алфавит

Аа, Бб, Вв, Гг, Г'г', Дд, Ее, Ээ, Э'э', Жж, Зз, Ии, Йй, Кк. К'к', Лд. Мм, Нн, Оо, Оö, Пп, П'п', Рр, Р'р', Сс, Тт, Т'т', Уу, Фф, Хх, hh, h'h', Чч, Ч'ч', Шш, Щщ, Ьь, Ээ Qq, Ww.

Отличительными признаками служат буквы q (Q), w(W), не употребляющиеся в настоящее время в других языках с русским письмом. Имеются также дополнительные буквы ә, ö, h. Часто встречается апостроф (') после букв г, ә, к, п, р, т, h, ч. В алфавите отсутствуют буквы ё, ц, ъ, ы, ю, я.

Прежде использовалось арабское письмо с допол-

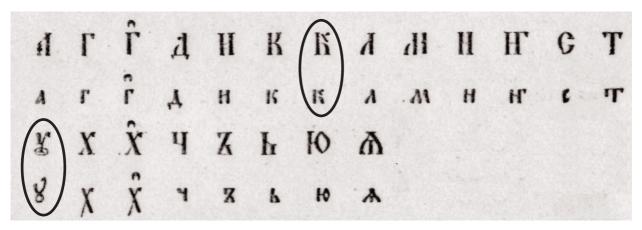
# нительными буквами: پ چ گ ڨ ڵ

армянское письмо с дополнительной буквой m; латинское письмо с дополнительными буквами

с, є, ә, б, ћ, қ, q, ş, ţ, R, Z, ь. Курды, проживающие за рубежом, пользуются латинским и арабским письмом (см. раздел "Языки народов Азии и Океании").

В СССР курдский язык распространен в Армянской ССР, Грузинской ССР, Азербайджанской ССР и частично в Средней Азии. На нем говорит в СССР около 50 тыс. человек. Принадлежит к иранской группе индоевропейских языков. 15

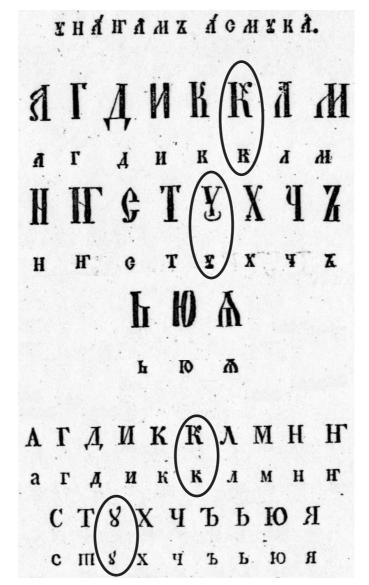
Figure 10. Sample from Гиляревский & Гривнин 1964, showing Cyrillic QA and WE.



**Figure 11.** Sample from the alphabet page of an 1893 Aleut Primer, showing ALEUT KA and MONOGRAPH UK.

Тиня KKKH T8cn8 ALSLANZ . HX THITE SHERSKHMHHTE AS AFHHR A) AFSTER HMHHR алакагния Амаганя снгнм\_ KSTALAKZ 6)0 B) АГ8ГАНАХТУННЗ, HMHHX AMAFAHZ HHHMAZ F) KS FANZ AKANSHE AMAFANZ

Figure 12. Sample of the first of the 10 Commandments in Aleut, showing ALEUT KA and MONOGRAPH UK.



**Figure 13.** Sample from another Aleut alphabet page, showing ALEUT KA and MONOGRAPH UK in both Slavonic and Graždanka font styles.

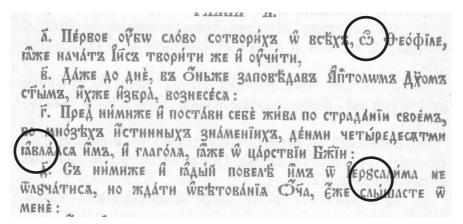
Алфавит

Ай, Бб, Вв, Гг, Дд, Ее, Ёё, Ӗё, Жж, Зз, Ин, Йй Лл, Мм, Нн, Оо, Пп, Рр, Сс, Çç, Тт, Уу, Ўў, Фф, Ци, Чч, Шш, Щщ, ъ, ыы, ь, Ээ, Юю, Яя.
Отличительным признаком служат все дополнительбуквы алфавита (ă, ё, ç, ў),
скольку они не встречаются в других письменностях усской графикой.
До 40-х годов ХХ в. употреблялись также дополнивные буквы "Э, Њ, Ъ, <sup>\*</sup>.
Чувашский хык — 9 ык основного населения Чувашй АССР; на нем говорит более 1,45 млн. человек. Относится к тюркским языкам.

**Figure 14.** Sample from Гиляревский & Гривнин 1964, showing EL WITH MIDDLE HOOK, EN WITH MIDDLE HOOK, and TE WITH MIDDLE HOOK.



**Figure 15.** Sample from a 1574 Primer, showing ZEMLYA alongside ZE, MONOGRAPH UK alongside digraph UK, and IOTIFIED A.



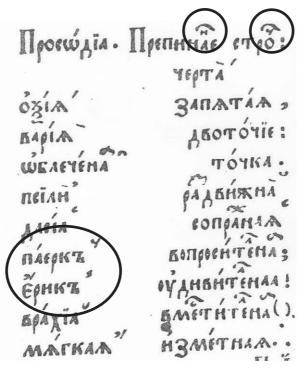
**Figure 16.** Sample from a modern edition of the Acts of the Apostles, showing the *beautiful omega*, MONOGRAPH UK and IOTIFIED A.



Figure 17. Sample from a 1631 Primer, showing MONOGRAPH UK, IOTIFIED A, ZEMLYA, and BROAD OMEGA.

ATTIABNA FILLIH. LUN AAAAT# 156 OMHSAG 43 ШН . 17 名7月下来 ĸ ПЛЕЛНАЛБА OMAHDINA . 1030 35/4 THIN YTTAIHAS OMMIKK MAR HTS AMEHRETHES asH1 RUIH AFAA

**Figure 18.** Sample from *Kapme ромънѣскѫ де двъцѫтЯрѫ (Carte românească de învățătură)*, Iași 1646, showing MONOGRAPH UK and the special Romanian letter YN.



**Figure 19.** Sample from a 1631 Primer, showing *payerok* (*naepкъ*) and *yerik* (*epuкъ*). The character U+033E NON-SPACING VERTICAL TILDE was encoded to represent the *yerik*, but the *yerik* can be spacing as well as non-spacing. In order to accommodate the needs of Slavicists, three characters are proposed: a spacing VERTICAL TILDE for the *yerik*, as well as COMBINING CYRILLIC YERIK and CYRILLIC YERIK. The character COMBINING CYRILLIC POKRYTIE is also shown in this example.

далеце оный декоторой , ала далеко ваше Weimi POR OUTER WHOBIT ATTHEM MIENO (11254 HANTH ) HABIAMIA FAMIBAAA . HHOTT BHATAMIE ITO , HAJAGIATE , HIEMOMS JAKPACTMISUS HACTIPES , H OHIMS RAGPARS, THRIVH REIAEBURSH HALBIE ANUE BRAAAAHTIMS TEPCOHS , MAAIMIS HETGIATE , ABO ивыла поровный . во што запоровна стеринам? יע כוויץ חוצא ווו א איאיאיא אינדו א גע האינד אין יצאאונ вырыватика. запытай бо мовито шцовов твой שוחו איואין א אימוו שומעון אחוז כ אוח שושאת שומוחשא повть Соднакта же пришедши впамать , же Омольным мовить твоей , них то авы незано AGABAATS , או אונוה פאיוא באובאונחאותגע בנותואאא HTSTHUBITI MUYCEA BANGE IY KJAWAETTIE , ME IY הנוףוכוווג לאאונאאל אא מוום איא נוווב אי אינ אינ אינוווא אואואה דווגים אבאזיץ נווא בנוחואאאודוים . אוא במ א א דוו נושום חואו האועהאל אשם אדע אולואא אסא

Figure 20. Sample showing ZEMLYA, MONOGRAPH UK, and BROAD OMEGA.

Λ Ε > 3 Λ Τ Ο **УХХОПИО** W NOVETKA, H CHAPXE HOTE VOUNVANCKOT4. ю, нразрежено 8 петнансст ANTHA азгодора, абсто и пефесет авана, алити свылан поглапнтих. Svarner mers Meyson , a fatto-UHM SVENHKOM Нстомачено из нетка Нталнамскога,8 Сл ониски. SHMETYHEX. KH По Нар 8 жны мн липрар88 мар-Царионанзу спетога Нарка. NCERNE Інеранце . W

Figure 21. Sample from *Ogledalo duhovno*, Venice 1628, showing DJERV.

55 10 BHBAETSCAO MECTOTOOHYNA ГАА. Н. П. 0. Г. LL B BNHT HOY YENHUH . NAOY MER ELE GIAYALA TOPAHIO YT ALGO(K ODAH SHEMLINEA O TA 600 TA PA NHM LCAHAML TANA веднагоганапрадаь уранитанныля TOTOPALOYAABAENHOBBAASh E H MALA ETTHNELETHAME CONTAESUCHTA

Figure 22. Sample from Hrvatska Akademija Znanosti i Umjetnosti in Zagreb (IV d.107), showing REVERSED DZE and REVERSED YU.

#### Мариинское евангелие

I въ третии день бракъ быстъ въ кану такиленсции. с бъ мати исва тоу. Зъванъ же быстъ и исв. с оученици его но БРАКЪ. 1 NELOCTABЪШЮ ВИНОУ. ГЛА МАТИ КЕЛКЪ NEMOY. ВИНУ NE ИМЖТЪ. ГЛА ЕИ ИСЪ. ЧТО ЕСТЪ МЬНВ И ТЕБВ ЖЕНО. НЕ ОУ приде година мой. гла мати его слоугамъ. еже аште глетъ вамъ сътворите. Бъ же тоу водоносъ камънъ шесть лежаштъ. по очиштемию июденскоу. въмистлшть по дывима ли тремъ мърамъ. гла имъ исъ. наплъните водоносы воды. е наплъниша на до връда. р гла имъ. почръпъте нынъ и принесъте ар'хитриклинови. с принъсм. ъко же въкоуси архитриклинъ вина бывъшааго ото воды. с не въдъаше отъкждоу естъ. а слоугы вначах почръпъшен водж. пригласи жениха архитриклияъ. і гла смоу. въсткъ члекъ пртжде доброе вино полагаатъ. оупинять са тогда тачее. ты же съблюде доброе егд вино доссли. сътвори начатока этамениемъ исъ. въ кана галиленсции. 1 ин славж свою. 1 выроваша во нь оученици его. (Иоанн, II, 1-11)

Figure 23. Sample a passage from the Codex Marianus from Иванова 1977, showing numerous examples of CYRILLIC IOTA.



Figure 24. Sample of a text in the Vatican Library (Vat. Slav. 2, f.8), showing ZEMLYA and DZELO.

12 *28>	<b>****</b> 13
I. I.	
	ЗИІКЛМНО
Π Γ С Τ Ο <sup>γ</sup> (Χ) Φ Χ	сэ Ц Ч Ш Щ Ъ Ы
b to b co th a ž	
а Б Б Г Д В Ж З З Н Ї Ф Х СЭТ Ц Ч Ш Џ Ъ Ы Ь ѣ	КАМНО́ПРСТО́Х Ю сэпа́а́ž́У́ ө V Џ.
а к к г д е ж 5 3 н ї ф х шт ц ч ш щ ч ы к	
аф 8 в X т џ в с v г щ н а 3 ы л w н ь к	, W
аеніо 8 су ы таю ш	a a v.
ввгджэзклмнпр	стфхцчшщѯфду.
Ъ.	

Figure 25. Sample from EepoH 1824, showing MONOGRAPH UK and IOTIFIED A.

Благодарение на голѣмы-ты жрьтвы, които почитаема-та Госпожа Мариа Н. Герова принесе, рѣчникъ-тъ можа да излѣзе докрай въ духа и начрьтание-то, което покойный-тъ му авторъ баше нарядилъ. Съ тѣзи си жрьтвы Госпека Мариа Н. Герова въздигнж несъкрушимъ памятникъ на чекойныа зи съпругъ и изплъни най-добросъвѣстно задлъжениата, които той имеще камъ народа си, а та сама заслужи най-голѣмж хвалж и благодарность.

Figure 26. Sample from FepoB 1904, showing IOTIFIED A and YERU WITH BACK YER.

#### А. И. БЕЗОБРАЗОВ АЛЕКСЕЮ МАТВЕЕВИЧУ

| л. 537 | Приятел мои гсдрь и добродеи Аледъ́и Ма|твеевичь здравствуи о Хрсте на веки і пребы|ваи во всяких радостях и с теми кто тебъ прия|телю моему всякого добра желает и здоровя | твоего остерегает<sup>1</sup> Пожалуи прикажи ко мне писат о своемъ здорове а я слышат про

твое | здоровье всегда желател1 |

Челом гсдрь бью | за пъремъного твою къ бе<sup>2</sup> милосьт ито по съвоемо милосеръдо му милосьтивому вомотърнью<sup>3</sup> учнил.<sup>4</sup> мие въ людехъ указъ и я за тъвою къ се бе милосьтъ вечьнои тебе<sup>5</sup> работникъ<sup>6</sup> | И о техъ гсдрь людех, посълалъ я людише къ своихъ зъ гсдревою грамотою уди ви милосьтъ гсдрь мон нада мъною | дан мне милосьтъ свою на веки по мънить учини меня себе вечьны мъ работъникомъ<sup>7</sup> | И я послал для тех<sup>5</sup> отлък людеи люди шек своих а с ними послал я<sup>9</sup> пожалуи приятел | ми уди и надо мною млстъ свою пошли для | тех моих беглых людеи пристава і пожа луи<sup>10</sup>

А семъ писав вечнои твои работник Андрюшка Бѣзо|бразов со бпрошениемъ челомъ бью не пре|зри приятел мои ббогова моево прошения | к себѣ водше

Моск. ст., стб. 599, л. 537

1-1 Написано на левом поле, вставка; далее зачеркнуто челомъ гсдрь быю за премногую твою к сејбѣ млсть что жалуеш (далее буква не читается) ом крстьяннишек | нших і впред \$ тебя о том же млсти про|шу пожалуи буди к ним млсрдъ; далее почерком А. И. Безобразова. <sup>2</sup> Так в ркп. <sup>3</sup> Так в ркп., милосътивом\$ вомотъренью

Figure 27. Sample from Kotkob & Tapabacoba 1965, showing NEUTRAL YER and MONOGRAPH UK.

Предетожтель: Рцемя но во Гдн помилон, трижды. வூடி் **Н**лтва<u>м</u>н нашн **T'**2337

Figure 28. Sample from the Horologion, Moscow 1980, showing CYRILLIC KAVYKA.

Очкы мні блёдноль, очкы เส้เหม ครั้นเร Окажномв: простнра́ю KZ thi мойми другими, н CAÉRKI W проливаю, но ннктоже

**Figure 29.** Sample the Euchologion, Moscow 1980, showing COMBINING CYRILLIC KAVYKA alongside COMBINING BREVE; to the right the spacing CYRILLIC KAVYKA can be seen.

Th MALLENANS HRA: NE: ATTAN 112:5 TAT WAHK MA ICO(AA : ULH TAANH NOS GURARA ARAG EME HNEL THIA ANOTALTROKOHHBIT A BALLEAUSEBEKOPATALA IBEITHIABBAHRA MINANTH:-112 (ARONHIC AONT APHITAPL CONALBEINAONHA HAL NAOT ABLA NAVATNHEA OBENTIS B ALTGANHEDANYHT ABEFALAOUL H: WALANY OK FWB? IX TIOHAOKAMABBA ILAI TALIZANE STAR 11 TOHHADOTHE AYHNA KUSHAHK HHIM

Figure 30. Sample from NBKM 880, showing ZEMLYA, MONOGRAPH UK, REVERSED YU and BLENDED YUS.



Figure 31. Sample from BL Add. MS 39628, showing BLENDED YUS.

H KERPCRX PHYCH BALKT'SOT'SNET YFFAAPOA HABAB XLVIIKIIX ONH እ N NANA 0 H 1 A H T A CA. CABH AKIN/ KICA'SIUHAI'AH OTBT 0

Figure 32. Sample from Codex Supraslensis, showing IOTIFIED A, LITTLE YUS, and CLOSED LITTLE YUS.

# въблгоприетнень со въсть, иженастрацо нъсор Аттвое на со

**Figure 33.** Sample from Athos, Mone Zographou, III6.6, f.61v, showing the spacing *yerik*, proposed for encoding as VERTICAL TILDE.

нуъ, како шенръша. Очкы мнъ, кто дасть бчима мойма слезы. 2.754 ї главть моен видоу, да са плачю и женисть своёмъ дна н нищь, да беспрестани рыдаю в'довьства свое, да прим сточю w сирідствік ча свойхть! очвы мить, кого к рыданію моёмоу призокоу на помищь, кто ми пособитъ плакатися, кти ми слезы WTPE, КТW МИ ПЛАЧЬ ОУТОЛИТЬ, КТW МИ ПЕЧАЛЬ OVT BUHTЬ! тикпа ли скойго призовоу на оуткшенте, том'я вы дана была τακά δάντь, ι τότь μΜάμε τακού βάντь, αλόθω ου τειμέμια, έπε оуткијати печалным и съкроущеным срщемъ, изліа бы см. рече. влёть въ очествуъ его, но шваче очже нъсть его, не слышо бш глса ёго въ цокви, очетич ёго мшлчаніемъ затвористася, очета ένό με γλιότь, ά έжε μελιάςα βλήτь βλάμαα έμου, Όλεττλα πρό гла его оулийлие, изыкъ его преста глати, оучение же пресяклю, їсто́чникъ оуче́ніа преса́че, и ръка преси́хла, шскоу ме пооуче́ніе 1. 755. В' Перминк вижо бы лица его в' церкви, не вижоу бчію) его в' церкви, Эчи цркки увы! бшли йлено тъло црковное тоудоке «части, разболъшаса вылъзнию чада црковнай, не соущог

**Figure 34.** Sample from the life of St Stephen of Perm (creator of the Old Permic script), showing BINOCULAR O.

птенеця бышнагы гнезда агглыкагы; ніколае треблженне зовешн прнены ка бгу и всеха наск, нже ва нужныха бедаха й некушенінха; й йзбавлаешн алтвали твойми.

Сщенных Одежды красотУ, делтельными содеклаля вей добродетелми светленшУю, бче бтоносе. темже намя сщенноденствУещи инкнал, славныхя чудеся сщеннодетелю, ютыхя избавлал ны. Невидимыхя добросты порохода, страещнУю бнУ разУмеля вид лабУ стых, сте. темже намя ненал словеса, ценоживотныхя бныхя виденти гавлаещи, сщениетных бимах виденти гавлаещи, сщениетных бимах виденти гавлаещи, сщениетных бимах виденталя вси следетниети. вому цею, и обще таленти.

Figure 35. Sample from the Life of St Nicholas, showing SLAVONIC ASTERISK alongside COMBINING CYRILLIC POKRYTIE and COMBINING CYRILLIC TITLO.

Из рассмотрения всего сказанного о надстрочных значках можно видеть, что только в немногих случаях они действительно указывали на некоторые звуковые явления и, следовательно, были живой особенностью. Несомненно, на живую черту, именно: на мязкость созласных р. л. н. к. г. х (а, может быть, и некоторых других) указывают следующие значки: а) , с большою последовательностью выдержанный в Супрасльской рукописи; напр., сь йный, глагояд, горжштнных, кела, аггель, рахниль; то же в лествице XII в. (б. Рум. муз. № 198); б) в Хиландарских листках, сборн. Святосл. 1073 г., Мстиславовом ев., Галицком ев. 1143 г., Выголексинском сборн. XII—XIII в. (б. Рум. муз. № 1832) и некоторых других памятниках мягкость сагласных обозначается посредством приниски к ним особого значка ' ( л, н.) Примеры: приємлай, одолати, тьлаштиных Хиландар. листки и др., ляди, съ ичими, жилъ 9, болене 10 б, оставление 43 б сбори. Святосл. 1073 - кланашеса гла Далецк. ев., ти 26, болин 11, люблю 25 б и даже иждено 106 Мстисл. ев., въждилахъ 166 б Выгол. сборн. (Р. Ф. В. XII, 95), яю, пона устав с кондакар. XI-XII в. (Типогр. б. № 285, л. 87). Смягченные w и к встречаются даже в Луцком ев. XIV в. (Соболевский. «Очерки», 41). В других позднейших памятниках к = м:

Figure 36. Sample from Karskij 1972, showing SOFT EL, EN GHE, and SOFT DE, as well as COMBINING CYRILLIC VZMET.



Figure 37. Sample shield of the Abkhaz SSR, showing TSWE, TWE, QA, and SHWE. The text reads:АПРОЛЕТАРЦА АТУЛАКУА ЗЕГУ РЕУ IQOY ЩСЕІДУЩКУЛ!In mixed case this is: Апролетарца атулақуа зегу реу iqoy, шееідущкул!In modern orthography: Апролетарцаа атаылақуа зегьы реы икоу, шееидышақыл!

9. III từ ha ) adàc: 3Ko h'Аб, іцкаан xàait yxi3; 10. laàiair yŋchapà; iqaлàair yryaŋxapà, xax аэкоан адну еіцш цада адунеі аёгу. 11. Ача зда hxyарђам ihaђ hapa exa 12. Еřhазнуж hapà hayanyya, hapà htv кукуду ішурзуннажуа еіцш; 13. Паталаумгалан hapa ацутбушара, haтацнурха hapa ангара. Уара ацсhapei амчі адуреі цумкруда іўмоуп азу. Амін.

**Figure 38a.** Sample from *Iева̀нгеліа цқа*, 1912 (the Four Gospels in Abkhaz), showing нwe, zнwe, QA, те with Middle Hook, twe, shwe, and tswe.

9 Шәныҳәа абас: Жәюан икоу Ҳаб, ицқьахааит ухиз.

10 Иааиаит Упсҳара; икалааит угуапҳара, ҳаҳь ажәюан акны еипш цака адунеи аҿгьы.

11 Ача ада ҳхуарҭам иҳаҭ ҳара ехьа.

12 Егьҳазныжь ҳара ҳауалқуа, ҳара ҳтәы зықуқуоу ишырзнҳажьуа еипш;

13 Ҳагьалаумгалан ҳара ацәыгьҵышәара, ҳагьацәнырҳа ҳара ацәгьара. Уара Аҵсҳареи амчи адуреи ҵымкрыда иумоуп азы. Амин.

Figure 38b. Sample from *The Gospels of Mathew, Mark, Luke and John in Abkhaz Language*, Christian Publishing House, 1998, showing the text of Figure 38a in modern orthography.

16

17 Уара уанучгууа, уху (азеђун) ахшу, уёр уа, 18. ушучгууа ауаа ідмурбакуа, у'Аб маза іqoy іёу уааірацу; у'Абру амаза збуа іуіђан аргама.

19. Ісізүжумгалан шху азү ахазуна адгіл аёу, афі ажаўцсі іахуурхууа, аўучцаўу іахцуржаауа стахурзууа:

20. Ісійужгала ахазуна шху азу ажоан аёў, аогу ажавчаг іахурзувумхууа, авуундагу іахцрумжаауа сгахурумзууа.

21. Ізбан акузар, шуулазуна ахудоу шугуйу уа ідазаашт.

22. Андеіж азу лашурбагас іqoy аблоуп. Убас, убла цўазар, уцеіж шеібакуу лашахуудіт.

23. Убла рахумзар, уцейк шеібакуу лашцахуудіт. Убас, алашара ўлоу лашцаразар, нас алашцара зеіцшрдузеі?

24. Аўт ілшуом Ф-анцак румац аура, ізбан акузар, ма аў діцумузаашт, агі бзіа дібалашт, ма аў ізу ігу шуузаашт, агі діцаашалашт. Анцеі маммонеі румац шзеіцууом.

25. Убрі азі ішаспоіт: шамеічанан шуцсі ішфарузеі ізкжрузеі па, шисіж азі ілпшанцарузоп па. Афат ацкіс ацьсі еінамі, ашцаті ацкіс ацкіх

26. Щургынуш экоант ацсаакуа: уръ егла-

**Figure 38c.** Sample from *Iева̀нгеліа цқа*, 1912 (the Four Gospels in Abkhaz), showing те WITH MIDDLE HOOK, DZWE, QA, ZHWE, SHWE, TSWE, TCHE, HWE, and TWE.

43. Лаҧш-ҕуҕуала д@аlxyaҧшvн убрlсаађ ддууундент.

44. Еřièiĥт: ahhài a∫řỳ акỳ iòyмħaн; yцанỳ àҧшаф yevipбà, iнàг yaxỳцğахаз азỳ Moicèi liĥaз, ipзỳµаһаъхаразу.

45. Данціўля, зегі іреіпуа далагиеіт дзукуцаз, убруг аднут Іісус аргама акэлақ дзаламлуа далуеіт; ацпуракуа рах далани дуаан. Зегіндарант Іара ізаауан.

Figure 38d. Sample from Iebàhzenia uğa, 1912 (the Four Gospels in Abkhaz), showing DWE.

T ar	1	П	111	INOTY	V	VI.	VII	VIII
·*		Sec. 9	1.5	1.5				
· 2	a	a	a	a	a	5.	a	a
4 2	5	б	б	b	b	3	б	b
, 3	в	В	в	v	v	3	в	v
4.	r	Г	Г	g	g	8	г	g
5.	[zj]	[rj]	ř	g	. g	[22]	[rb]	g
6.	[ry]	[ <b>гу</b> ]	[ry]	8	[gu]	[37]	Г°	g°
7.	Zj	r	ŋ	ğ	01	Q	Ę	Y
8	[zj]	[ <b>r</b> j]	Ť	ğ,	[011]	[me]	[гь]	r
9	[zy]	[ry]	[5y]	305	[0111]	[mu]	Γ°	γ°
10,	9	Д	д	d	d	20	,Д	d
11	or (	丸	Д	ď	đ	[@0]	,Д <sup>°</sup>	d°.
12.	e	e.	e	е	e	3	e	е
13.	ж	ж	231	j	Z	ဩၓ	ж	Žð
.14.	[жј]	[ <b>H</b> j]	ж	J.	T	5	[mb]	ž
15.	31C	3 <b>H</b> .	341	p	j	[5]0]	ж°	ž°
16.	HC.	зĸ	ME	þ			3°	Z°

**Figure 39a.** Sample from Бгажба 1964, showing eight different transcription systems for Abkhaz. Shown here are the letters DWE (two glyph variants) and ZHWE.

Bgažba describes the dolumns in this table as follows:

I. The (handwritten) alphabet of Uslar.

II. The printed form of Uslar's alphabet with additions and alterations by M. R. Zapadskij.

III is the alphabet of the Translation Committee.

IV. The analytical (Yaphetidological) alphabet of Marr.

V. The Latinizing alphabet of N. F. Jakovlev.

VI. The alphabet on the basis of Georgian characters.

VII. Transcription on the basis of the modern Abkhaz alphabet, used in the monograph of Kh. S. Bgažba

"The Bzyb dialect of the Abkhaz language"

VIII. Suitable Latin transcription marks, used for linguistic purposes.

	I	II	111	IV	V	VI	V]]	1/1/I
- 17.	-	-	Ц	ď	g	352	Ц	ž
18	药	<u>II</u>	цĭ	eton 1 1	q	32	[LIP]	Č <sup>r</sup> š
19.	é	(uy)	œ		φ	[ઝિટ]	·e	čr
20.	ě	uy	ê	2 t	P	9.0	ę	Čr
21.	3	з	3	Z	Z	100	3	Z
22.		-	-	Z,			3	Ż
23	z	(A3)	3	z, ď	3	d	3	3
24	-	-	ā	ď	-	÷	3	3
25.	f	S	(	ď	Ę.	[do]	5°	30
26.	i	i.	i	i	i	0	й	1
27.	j	j	-	У	- 		Й	j
28.	12	ĸ	ĸ	k	k,	3	K	ķ
29	$[\kappa j]$	[ĸj]	ĸ	ŀ.	[K,I]	[22]	[Kb]	ķ
30.	[rsy]	[ĸy]	[ky]	ho	[k,u]	57	К°	ŀ.º
31,	H.	Ķ	ĸ	q	k	E	K,	k
32,	[15j]·	[kj]	Ķ	q.	[ki]	[72]	[ңь]	ĸ.

Figure 39b. Sample from Бгажба 1964, showing CCHE, DZZE, and DZWE.

	I	11	III	IN	V	VI	VII	VIII	
33.	[Ky]	['ny]	[ђу]	q	[ĸu]	[]]	қ°	Ko	
34.	9	q	(q)	k	q	y	k	q	
<b>3</b> 5.	[qj]	[qj]	ğ	k	[q1]	[42]	[kb]	q	
36	[94]	[qy]	[qy]	ko	[qu]	[ၯဤ]	tio	q°	
37.	л	Л	л	1	L	m	Л	l	
IB.	м	М	M	m	m	9	М	m	
<b>3</b> 9.	H	Н	н	n	n	6	Н	n	
40.	0	.0	0	0	0	m	0	0	
41.	n	п	п	р	p	રે	π	ı p	
42.	nz	ñ	гђ	φ	р	3	ђ	p	
43.	p	р	р	r	r	3,09	р	r	
44.	c	с	с	s	s	6	с	S	
45.	G.	ç		S,		-	C'	s	
46	m	т	T	t	ţ	8	T	ţ	
47.	m,	ŕ	$\overline{\mathbf{F}}$	S	t	00	î Ţ	t	
. 48.	τ	τ	$\overleftarrow{\tau}$	Y	Ъ	[တ၀]	τ°	ť°.	

Figure 39c. Sample from Бгажба 1964, showing QA, TE WITH MIDDLE HOOK, and TWE.

			ي الم	V	10 cmpp		-		
- 1		I.	11	<i>Ⅲ</i> ·	IV II	V	VI	VII	VIII
5 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	49.	ž	ų	ř	ť	·ዩ	[ <b>ල</b> ං]	Т <sup>о</sup>	ţ°
	50,	y	У	У	u	u	ω.	У	u
	51.	-	*-	-	w	-	_	Ў	w
	52.	gв	ф	ф	f	f	ழ	ф	f
	53.	x	х	x	ġ	Х	5	X	X
	54,	[xj]	[xj]	x	ġ		[62]	[хь]	x
	55.	[xy]	[xy]	[xy]	ġ	[xu]	[by]	X°	X° .
	55.	oc	x	-	ġ	-	-	Ŷ	Х.
	57.	[ˈːːːy]	[xy]	-	ئې d	-	-	χ°	Х°
	58.	Ц	Ц	Ц		с	3	Ц	C l
	59	ly.	ц		Å	-	_	Ц′	C'
	60,	y	Ц	(IJ)	.Ĵo	J	$[\mathcal{G}_{0}]$	Ц°	Co
	6/.	ÿ	Ц	ц	AL.	Ţ	[Go]	Щo	ǰ
-	62.	P	ц	Щ	ť	ç	F	ΨĮ,	ċ
	63.	Ē	T	-	÷Ц			Ш,	ç'
	64	~	Ч	Ч	ý	ч	B	Ч	č.

Figure 39d. Sample from Бгажба 1964, showing TSWE and TSSE.

Mart								
		Ш	III	JV	V	- V7	VII .	VIII
65.	f	ů.	('U	ţ	ų	Cer	Ч	č
66,	ĥ	.h	h	ħ	h	5	X,	h
67.	ĥ	ĥ	(h)	ħ	ħ	[30]	X,°	h°
68	ш	Ш	ш	Ш	Ş	[gs]	Ш	Šř
69.	й	ш	ш	Щ	ſ	G	[шь]	š
70.	Щ	Щ	(IJ)	ШÞ	f	[do]	щ°	š°
<b>7</b> 1.	ů,	Щ.	Щ	Щ	-	-	C°	S°
72,	Ø	Q.	Q.	₩.	У	3	Q.	ω°
73.	r	٣	v	Э	9	2	Ы	9
.74.	-		-	· ·	_	0	0	0
75.		-		<u></u>	I	8	Ь	- 115
76	- 1	-	1 - 1			য	· _	ಶ
77.		-	-	2,7	-	-	-	q6(f)
7 <i>8</i> .	-	-	÷	-	-	-	-	۶
		1		. N*				5.1

Figure 39e. Sample from Бгажба 1964, showing TCHE, HWE, and SHWE.

TTACOT PII. T ED PC& EFY Th T K TL E CAO b Н CA. HHEC. KA AVH **bH** sca. 1 61 OPXECY. HU БÅ Т енжден T E

**Figure 40.** Sample from the Izbornik of 1073, showing YAT alongside IOTIFIED YAT. Also shown is YERU WITH BACK YER and ZEMLYA.

# 00000

Figure 41. Sample from Карский 1979, showing two variants of BINOCULAR O, and three variants of DOUBLE MONOCULAR O.

orpdanmenta untin.

**Figure 42.** Sample from Карский 1979, showing MULTIOCULAR 0 in the phrase *серафими много читй* 'many-eyed seraphim'.

b) Undolskijsche Blätter (cyr., s. 4).

(mc. 5, 24) в ма \*\*\*\*д\*\*аша ісоч наридъ многъ и очти тахж и (25) и се жена етера въ точение кръви | лътъ двъ на десате имжщи (26) и многи посто давъши отъ многъ врачъ -

Figure 43. Sample from Карский 1979, showing COMBINING CYRILLIC LETTER A.

Auferweckung des Lazarus: Ev. Joh. 11, 1-45 (bl. 81a).

Figure 44. Sample from Kapcкий 1979, showing COMBINING CYRILLIC LETTER IOTIFIED A.

**Figure 45.** Sample from Kapcкий 1979, showing COMBINING CYRILLIC LETTER YAT and COMBINING CYRILLIC LETTER DJERV (here shown with a TSHE glyph, but it must be DJERV as the word is еванлелию *evangeliie*).

вь | на тк сна ха его: — | (3) растръртета жяъ іхъ | с отъвръзъмъ отъ насъ | нго іхъ: | (4) живъп на бсхъ посмъетъ | са емоч і тъ поржгаетъ са <sup>імъ</sup>: | (5) тъгда възглетъ къ німъ | гитвомъ скоімъ:

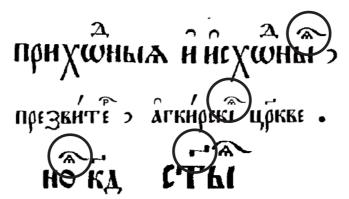
Figure 46. Sample from Карский 1979, showing COMBINING CYRILLIC LETTER IE.

1. Gebet für einen Fieberkranken, Euch. 45a, 16-46a, 18.  $\widehat{A}$   $\widehat{A}$   $\widehat{M}$   $\widehat{M}$ (Euch. 45a, 16) Mo Ha Rek TPACO TPACABULE

Figure 47. Sample from Kapcкий 1979, showing COMBINING CYRILLIC LETTER IOTIFIED BIG YUS.



Figure 48. Sample from a Bulgarian manuscript, showing COMBINING CYRILLIC LETTER MONOGRAPH UK.



**Figure 49.** Sample from "Ustav o molitve domašnej", published by the Preobraženskij Događelnyj Dom in Moscow in the early 20th century, showing COMBINING CYRILLIC LETTER LITTLE YUS, as well as COMBINING CYRILLIC POKRYTIE alongside COMBINING CYRILLIC TITLO.

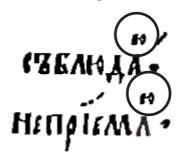


Figure 50. Sample from Карский 1979, showing COMBINING CYRILLIC LETTER YU.

тыса тма (а). деса темь легіонъ (а). деса легіоновъ лефрь

цеса лефровъ. вброн. как. десатъ воронбвъ. колода аминь». В некоторых уткописях при обозначении леодров пишутся не паточные круги, а круги из запятатх ;;, ворон обозначается крестиками \*a;, колоды обозначались тобками a.<sup>1</sup> В некоторых рукописях Новгородской Софийской библиотеки встречается еще тма тем, или десять колод: -u. все эти хитрые способы обозначения чисел, однако, сравнительно позднего времени. В хронографе 1494 г. (л. 416) встречается численный знак для ста тысяч изби Ю им<sup>х</sup> дне<sup>и</sup> єдине<sup>и</sup>:  $\infty$  (i) (ii); то же в Амартоле читается; тем й и и (т.-е. 580,000), так что оба эти кружка надобно читать: пять легеоновъ и осмь тем.

Figure 51. Sample from Kapcкий 1979, showing COMBINING CYRILLIC TEN MILLIONS SIGN, COMBINING CYRILLIC HUNDRED MILLIONS SIGN, and COMBINING CYRILLIC THOUSAND MILLIONS SIGN.

Кроме отмеченных двух начертаний в памятниках югославянского письма, еще встречается △, напр., в Супрасльской рукописи, Слуцкой псалтыря, Саввиной книге, Хиландарских листках, Мирославовом ев., Слепченском апостоле, паримейнике Григоровича, минейном листке Григоровича (6. Рум. муз. № 1727), евангелии Сречковича XIII в. («Starine» XXIX, 98), ев. XIII в. собрания Уварова (№ 38), отрывках XIV в. Белгр. н. б. (Сперанск., 41) и нек. др. Это а обыкновенно употребляется после согласных, в смысле а (Супр. рук., Слуцк. пс., изредка Савв. кн.); в Хиландарских листках — наоборот а вм. м, а в Македонском листке XI века а единственный знак для а и м. В Каралсебеш. окт. XIII в. есть йотованное м: приматт) (Сборник ОРЯС, т. 67, ст. Сырку). В Саввиной книге раз всяро кнось ь (ср. на снимке № 5): мь 101 б.

Figure 52. Sample from Карский 1979, showing CYRILLIC LETTER IOTIFIED CLOSED LITTLE YUS.

Памятники югославянские еще знают Аи (ср. на снимке № 2 и 4) в роли а, а иногда и ж, напр., в Боянском ев. XII—XIII в.: сгод., илакаах́д 2 л. систематически вм. ж в Македонском апостоле XII Сл., глаголдие, покажд полд (Archiv f. sl. Phil.» X, 110), в Путнан. ев. XIV в., повидимому, своеобразио написан а, так что получилось как бы д: гондхуть, изганда и др. (Калужняцкий, табл. 3); такое написание можно

Figure 53. Sample from Карский 1979, showing CYRILLIC LETTER EARLY YUS.

Аншина сипть инправления - Дша бо єгда єдиното оббезъграмитина поноужденна бждепіть въ безболіб сиї Шпадаєтть и инже кроппинать повинеттела Сливнемъ прочес, инже прещеньми прекланається и ин багод тайми подвиженть а но мийго горшіа града Онаго бываєтть и найже по мийго горшіа града Онаго бываєтть и найже ти, обегдита дика баше: Эракть бана и найже ти, обегдита дика баше : Эракть бана и мийкаго потреба развила Пантарв. и тмами сбунь, къ къ єже об супати в вена за дийвио талани сбунь, Като потреба развила Пантарв. и тмами сбунь, Къ єже об сиратин то вена за дийвио та мибо -Пакоже бо в недомыслытиво в семлюти а мий си

Figure 54. Sample from Златоуст 1614, showing COMBINING CYRILLIC PAYEROK.

 Эко (Описание» Востокова, 799]). При употреблении слова око во множественном числе о часто удваивалось, при чем точки ставились либо в обенх частях такого о, либо в одной (ср. на снимке №№ 3,4,5), примеры:
 Эчи апостол 1495 г. (б. Рум. муз № 9), Путнян. ен: о́очи псалт. б. Рум. муз № 335; еще удвоенное о в собою отрывки XIV века Белгр. (Сперан-

**Figure 55.** Sample from Kapcкий 1979, showing BINOCULAR O, DOUBLE BINOCULAR O, and MONOCULAR O. In this sample, two MONOCULAR Os are shown alongside DOUBLE BINOCULAR O: өко, өөчи, бочи, собою.

	040	041	042	043	044	045	046	047
0	È	A	Р	a	р	è	W	$\Psi$
1	Ë	Б	С	б	С	ë	w	$\Psi$
2	Ъ	В	Т	В	Т	ħ	Ъ	Θ
3	ŕ	Γ	У	Г	У	ŕ	Ъ	Θ
4	Е	Д	Φ	Д	ф	е	Ю	$\mathbf{V}$
5	S	E	X	e	X	S	ю	V
6	Ι	Ж	Ц	Ж	Ц	i	А	Ň
7	Ϊ	3	Ч	3	Ч	ï	А	Ň
8	J	И	Ш	И	III	j	ЬА	<b>0</b> y
9	Љ	Й	Щ	й	Щ	Љ	Ы	оу
A	Њ	K	Ъ	K	Ъ	њ	Ж	O
В	Ћ	Л	Ы	Л	Ы	ħ	Ж	¢
С	Ќ	Μ	Ь	М	Ь	Ŕ	Ж	ĈĴ
D	À	Η	Э	Н	Э	й	Ж	ධ
Е	ÿ	0	Ю	0	Ю	ÿ	ğ	Ŵ
F	Ų	П	R	П	R	Ų	ŝ	Ŵ

## TABLE 11 - Row 04: CYRILLIC

# TABLE 11 - Row 04: CYRILLIC

\_\_\_\_\_

hex	Name	he
00 01 02 03 04 50 60 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 90 A B C D E F 0 11 12 13 14 51 61 7 8 9 A B C D E F 0 11 12 13 14 51 6 7 8 9 A B C D E F 0 11 1 12 12 22 24 52 62 7 8 9 A B C D E F 0 11 12 12 23 4 5 6 7 8 9 A B C D E F 0 11 12 12 23 4 5 6 7 8 9 A B C D E F 0 11 12 12 22 24 5 6 27 8 9 A B C D E F 6 7 8 9 A B C D E F 6 7 8 9 A 8 9 A 8 9 A 8 9 3 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8	CYRILLIC CAPITAL LETTER ID CYRILLIC CAPITAL LETTER DJE (Serbocroatian) CYRILLIC CAPITAL LETTER DJE (Serbocroatian) CYRILLIC CAPITAL LETTER DZE CYRILLIC CAPITAL LETTER BYELORUSSIAN-UKRAINIAN I CYRILLIC CAPITAL LETTER SHE (Serbocroatian) CYRILLIC CAPITAL LETTER SHE (SER) CYRILLIC SMALL LETTER SHE (SER) CYRILLIC SMALL LETTER SHE (SER) CYRILLIC SMALL LETTER SHE (SER) CYRILLIC SMALL LETTER SHE (SER) CYRILLIC SMA	55555555555555555555555555555555555555

hex	Name
59 55A 55B 55D 55E 55C 661 62 664 666 666 667 668 666 668 668 668 668 668	CYRILLIC SMALL LETTER LJE CYRILLIC SMALL LETTER NJE CYRILLIC SMALL LETTER TSHE (Serbocroatian) CYRILLIC SMALL LETTER SHORT U (Byelorussian) CYRILLIC SMALL LETTER SHORT U (Byelorussian) CYRILLIC SMALL LETTER SHORT U (Byelorussian) CYRILLIC CAPITAL LETTER NOTHED E CYRILLIC CAPITAL LETTER NOTHED E CYRILLIC CAPITAL LETTER NOTHED E CYRILLIC CAPITAL LETTER INTIFIED E CYRILLIC CAPITAL LETTER INTIFIED LITTLE YUS CYRILLIC CAPITAL LETTER INTIFIED LITTLE YUS CYRILLIC SMALL LETTER INTIFIED BIG YUS CYRILLIC SMALL LETTER INTIFIED BIG YUS CYRILLIC SMALL LETTER BIG YUS CYRILLIC SMALL LETTER BIG YUS CYRILLIC SMALL LETTER BIG YUS CYRILLIC SMALL LETTER NOTHED BIG YUS CYRILLIC CAPITAL LETTER SI CYRILLIC CAPITAL LETTER SI CYRILLIC CAPITAL LETTER SI CYRILLIC CAPITAL LETTER TA CYRILLIC CAPITAL LETTER INTA CYRILLIC CAPITAL LETTER INTO CYRILLIC CAPITAL LETTER NOUND OMEGA CYRILLIC CAPITAL LETTER ON CYRILLIC SMALL LETTER OT

	048	049	04A	04B	04C	04D	04E	04F
0	Ç	Г	К	¥	Ι	Ă	3	ÿ
1	q	Г	К	¥	Ӂ	ă	3	ÿ
2	\$	F	Ң	Ҳ	ӂ	Ä	Ā	Ϋ́
3	ॕ	F	ң	Ҳ	К	ä	Й	ű
4	$\sim$	Ҕ	Н	ΤЦ	қ	Æ	Й	Ÿ
5		ђ	H	ΤЦ	Л	æ	Й	ÿ
6	<b>?</b> :	Ж	П	Ч	Л	Ĕ	Ö	Γ
7	$\sim$	ж	Ih	Ч	H	ĕ	ö	Г
8		Ş	Q	Ч	ӈ	G	θ	Ӹ
9	لو. 4. چ من عد غن غنه	Ş	Q	Ч	H	G	θ	ӹ
A	Ҋ	K	Ç	h	H,	Ë	Ä	£
В	й	K	Ç	h	Ч	ë	ë	£
С	Ъ	К	Ţ	Ċ	Ч	Ӝ	Ë	Х
D	Ъ	К	Ţ	е	M,	ж	Ë	Ӽ
Е	P	K	Y	Ę	M,	Ï	Ӯ	X
F	p	ħ	Y	ę	Ι	;; ;;	ÿ	X

# TABLE 12 - Row 04: CYRILLIC

# TABLE 12 - Row 04: CYRILLIC

hex	Name
80	
81 82	CYRILLIC SMALL LETTER KOPPA CYRILLIC THOUSANDS SIGN
83 84	
85	COMBINING CYRILLIC PALATALIZATION COMBINING CYRILLIC DASIA PNEUMATA
86 87	COMBINING CYRILLIC PSILI PNEUMATA COMBINING CYRILLIC POKRYTIE
88	COMBINING CYRILLIC FORMTHE COMBINING CYRILLIC HUNDRED THOUSANDS SIGN
89 8A	COMBINING CYRILLIC MILLIONS SIGN CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
8B	CYRILLIC CAPITAL LETTER SHORT I WITH TAIL
8C 8D	CYRILLIC CAPITAL LETTER SEMISOFT SIGN
8E	CYRILLIC CAPITAL LETTER ER WITH TICK
8F 90	CYRILLIC SMALL LETTER ER WITH TICK CYRILLIC CAPITAL LETTER GHE WITH UPTURN
91	CYRILLIC SMALL LETTER GHE WITH UPTURN
92 93	CYRILLIC CAPITAL LETTER GHE WITH STROKE CYRILLIC SMALL LETTER GHE WITH STROKE
94	CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK
95 96	CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK CYRILLIC CAPITAL LETTER ZHE WITH DESCENDER
97	CYRILLIC SMALL LETTER ZHE WITH DESCENDER
98 99	CYRILLIC CAPITAL LETTER ZE WITH DESCENDER CYRILLIC SMALL LETTER ZE WITH DESCENDER
9A	CYRILLIC CAPITAL LETTER KA WITH DESCENDER
9B 9C	CYRILLIC SMALL LETTER KA WITH DESCENDER
90 9D	CYRILLIC SMALL LETTER KA WITH VERTICAL STROKE
9E 9F	CYRILLIC CAPITAL LETTER KA WITH STROKE CYRILLIC SMALL LETTER KA WITH STROKE
A0	CYRILLIC CAPITAL LETTER BASHKIR KA
A1 A2	CYRILLIC SMALL LETTER BASHKIR KA CYRILLIC CAPITAL LETTER EN WITH DESCENDER
A3	CYRILLIC SMALL LETTER EN WITH DESCENDER
A4 A5	CYRILLIC CAPITAL LIGATURE EN GHE CYRILLIC SMALL LIGATURE EN GHE
A6	CYRILLIC CAPITAL LETTER PE WITH MIDDLE HOOK
A7	(Abkhasian) CYRILLIC SMALL LETTER PE WITH MIDDLE HOOK
	(Abkhasian)
A8 A9	CYRILLIC CAPITAL LETTER ABKHASIAN HA
AA	CYRILLIC CAPITAL LETTER ES WITH DESCENDER
AB AC	CYRILLIC SMALL LETTER ES WITH DESCENDER CYRILLIC CAPITAL LETTER TE WITH DESCENDER
AD AE	CYRILLIC SMALL LETTER TE WITH DESCENDER CYRILLIC CAPITAL LETTER STRAIGHT U
AF	CYRILLIC SMALL LETTER STRAIGHT U
B0 B1	CYRILLIC CAPITAL LETTER STRAIGHT U WITH STROKE
B2	CYRILLIC CAPITAL LETTER HA WITH DESCENDER
B3 B4	CYRILLIC SMALL LETTER HA WITH DESCENDER CYRILLIC CAPITAL LIGATURE TE TSE (Abkhasian)
B5	CYRILLIC SMALL LIGATURE TE TSE (Abkhasian)
B6 B7	CYRILLIC CAPITAL LETTER CHE WITH DESCENDER CYRILLIC SMALL LETTER CHE WITH DESCENDER
B8	CYRILLIC CAPITAL LETTER CHE WITH VERTICAL
B9	STROKE CYRILLIC SMALL LETTER CHE WITH VERTICAL STROKE
BA BB	CYRILLIC CAPITAL LETTER SHHA
BC	CYRILLIC SMALL LETTER SHHA CYRILLIC CAPITAL LETTER ABKHASIAN CHE
BD BE	CYRILLIC SMALL LETTER ABKHASIAN CHE CYRILLIC CAPITAL LETTER ABKHASIAN CHE WITH
	DESCENDER
BF	CYRILLIC SMALL LETTER ABKHASIAN CHE WITH DESCENDER
CO	CYRILLIC LETTER PALOCHKA
C1 C2	CYRILLIC CAPITAL LETTER ZHE WITH BREVE CYRILLIC SMALL LETTER ZHE WITH BREVE
C3	CYRILLIC CAPITAL LETTER KA WITH HOOK
C4 C5	CYRILLIC SMALL LETTER KA WITH HOOK CYRILLIC CAPITAL LETTER EL WITH TAIL
C6	CYRILLIC SMALL LETTER EL WITH TAIL
C7 C8	CYRILLIC CAPITAL LETTER EN WITH HOOK CYRILLIC SMALL LETTER EN WITH HOOK
C9	CYRILLIC CAPITAL LETTER EN WITH TAIL
CA CB	CYRILLIC SMALL LETTER EN WITH TAIL CYRILLIC CAPITAL LETTER KHAKASSIAN CHE
CC	CYRILLIC SMALL LETTER KHAKASSIAN CHE
CD CE	CYRILLIC CAPITAL LETTER EM WITH TAIL CYRILLIC SMALL LETTER EM WITH TAIL
CF	CYRILLIC SMALL LETTER PALOCHKA
D0 D1	CYRILLIC CAPITAL LETTER A WITH BREVE CYRILLIC SMALL LETTER A WITH BREVE
D2 D3	CYRILLIC CAPITAL LETTER A WITH DIAERESIS CYRILLIC SMALL LETTER A WITH DIAERESIS
00 auo	) <b>F</b>

	TRILLIC
hex	Name
D4 D5 D6 D7 D8 DA DCD DEF0 123456789A BCDEFF DEF0 123456789A BCDEFF BCDEFF BCDEFF BCDEFF BCDEFF BCDEFF BCDEFFF BCDEFFF BCDEFFF BCDEFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	CYRILLIC CAPITAL LIGATURE A IE CYRILLIC SMALL LIGATURE A IE CYRILLIC CAPITAL LETTER IE WITH BREVE CYRILLIC CAPITAL LETTER SCHWA CYRILLIC CAPITAL LETTER SCHWA CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS CYRILLIC CAPITAL LETTER SCHWA WITH DIAERESIS CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS CYRILLIC CAPITAL LETTER ZE WITH DIAERESIS CYRILLIC CAPITAL LETTER A BKHASIAN DZE CYRILLIC CAPITAL LETTER A BKHASIAN DZE CYRILLIC CAPITAL LETTER WITH DIAERESIS CYRILLIC CAPITAL LETTER BARRED O CYRILLIC CAPITAL LETTER BARRED O CYRILLIC CAPITAL LETTER BARRED O CYRILLIC CAPITAL LETTER WITH DIAERESIS CYRILLIC CAPITAL LETTER WITH DIAERESIS CYRILLIC SMALL LETTER BARRED O CYRILLIC SMALL LETTER WITH DIAERESIS CYRILLIC CAPITAL LETTER GHE WITH STROKE AND HOOK CYRILLIC CAPITAL LETTER GHE WITH STROKE AND HOOK CYRILLIC CAPITAL LETTER HA WITH STROKE AND HOOK CYRILLIC CAPITAL LETTER HA WITH STROKE CYRILLIC SMALL LETTER HA WITH STROKE CYRIL

	050	051	052
0	Ь	3	Љ
1	d	3	Љ
2	d	IJ	Нĵ
3	d	IJ	Њ
4	$\mathcal{F}$	JX	
5	$\Im$	JX	
6	ર્	R	
7	ર્	px	
8	Л	Æ	
9	Л	æ	
A	H	Q	
В	H	q	
С	G	W	
D	G	W	
E	T	K	
F	Ծ	K	

# TABLE 13 - Row 05: CYRILLIC SUPPLEMENT

<b>TABLE 13</b> -	Row 05:	CYRILLIC	SUPPLEMENT
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00     CVPLUE CANTAL LETTER KOM DE       01     CVPLUE CANTAL LETTER KOM DE       03     CVPLUE CANTAL LETTER KOM DE       04     CVPLUE CANTAL LETTER KOM DE       05     CVPLUE CANTAL LETTER KOM DE       06     CVPLUE CANTAL LETTER KOM DE       07     CVPLUE CANTAL LETTER KOM DE       08     CVPLUE CANTAL LETTER KOM DE       09     CVPLUE CANTAL LETTER KOM DE       00     CVPLUE CANTAL LETTER KOM SE       00     CVPLUE CANTAL LETTER REVESTOR       01     CVPLUE CANTAL LETTER REVESTOR       02     CVPLUE CANTAL LETTER REVESTOR       03     CVPLUE CANTAL LETTER REVESTOR       04     CVPLUE CANTAL LETTER REVESTOR       05     CVPLUE CANTAL LETTER REVESTOR       04     CVPLUE CANTAL LETTER REVESTOR       05     CVPLUE CANTAL LETTER REVESTOR       06     CVPLUE CANTAL LETTER REVESTOR       07     CVPLUE CANTAL LETTER REVESTOR       05     CVPLUE CANTAL LETTER REVESTOR	hex	Name	hex	Name
Dup 00 Plane 00 Row	01 02 03 04 05 06 07 08 00 0E 0F 01 11 12 13 4 15 16 7 18 9 A 0B 0C 0E 0F 0 11 12 14 15 16 7 18 9 A 0B 0C 0E 7 8 9 0A 0E 0 7 8 9 0A 0E 0 7 8 9 0A 0E 0 7 8 9 0A 0E 0 7 0 8 9 0A 0E 0 7 0 8 9 0A 0E 0 7 0 8 9 0A 0E 0 7 0 8 9 0A 0E 0 7 0 8 9 0A 0E 0 7 0 8 9 0A 0E 0 7 0 8 9 0A 0E 0 7 0 8 9 0A 0 8 9 0A 0 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CYRILLIC CAPITAL LETTER KOMI DJE CYRILLIC CAPITAL LETTER KOMI DJE CYRILLIC CAPITAL LETTER KOMI DJE CYRILLIC SMALL LETTER KOMI DJE CYRILLIC SMALL LETTER KOMI JE CYRILLIC CAPITAL LETTER KOMI JE CYRILLIC CAPITAL LETTER KOMI JE CYRILLIC SMALL LETTER KOMI JE CYRILLIC CAPITAL LETTER KOMI JE CYRILLIC SMALL LETTER KOMI JE CYRILLIC SMALL LETTER KOMI JE CYRILLIC SMALL LETTER KOMI JE CYRILLIC CAPITAL LETTER REVERSED ZE CYRILLIC CAPITAL LETTER REVERSED ZE CYRILLIC CAPITAL LETTER REVERSED ZE CYRILLIC CAPITAL LETTER ADA CYRILLIC CAPITAL LETTER ADA CYRILIC CAPITAL LETTER ADA CYRILLIC CAPITAL ADA CYRILLIC CAPITAL ADA CYRILLIC CAPITAL ADA CYRILLIC CAPITAL CAPITAL ADA CYRILIC CAPITAL CAP	Plane 00	

## TABLE XX - Row 2D: CYRILLIC EXTENDED-A

	2DE	2DF
0	б ()	Ц С
1	B	<b>Ч</b> ()
2	Г ()	
3	<u>д</u>	ш С
4	<b>Ж</b>	<b>0</b>
5	3 ())	СГ ©
6	K	a
7	л े	e
8	M	Ă O
9	H O	ँ
A	<b>0</b>	Ъ
В	ं	Ю
С	p	на С
D	c O	<b>A</b> <∷>
Е	T O	<b>Ж</b>
F	<b>X</b>	ЬЖ С

	2DE	2DF
0	a ())	c ⇔
1	б	СГ С
2	B	T O
3	Г ()	ँ
4	л Ф	X
5	e	ц С
6	Ж	<b>Ч</b>
7	3 	ш О
8	Å	ш О
9	K	Ъ С
A	л Ö	Ю
В	M	на ()
С	H O	<b>A</b> ∴∵
D	o O	<b>Ж</b>
Е	п С	Ж О
F	p	<b>0</b>

2DE

2DF

Green characters shown here are already in PDAM 4. The table on the right shows an improved rearrangement of the chart, which would put all these in alphabetical order.

# TABLE XX - Row 2D: CYRILLIC EXTENDED-A

hex Name	hex	Name
E0 COMBINING CYFILLIC LETTER BE E1 COMBINING CYFILLIC LETTER DE E2 COMBINING CYFILLIC LETTER DE E3 COMBINING CYFILLIC LETTER A E5 COMBINING CYFILLIC LETTER EM E6 COMBINING CYFILLIC LETTER EM E7 COMBINING CYFILLIC LETTER EN E8 COMBINING CYFILLIC LETTER EN E9 COMBINING CYFILLIC LETTER EN E9 COMBINING CYFILLIC LETTER FR E0 COMBINING CYFILLIC LETTER FR E1 COMBINING CYFILLIC LETTER FR F7 COMBINING CYFILLIC LETTER FS F1 COMBINING CYFILLIC LETTER FS F2 COMBINING CYFILLIC LETTER FS F3 COMBINING CYFILLIC LETTER FS F4 COMBINING CYFILLIC LETTER FS F5 COMBINING CYFILLIC LETTER FS F6 COMBINING CYFILLIC LETTER FS F7 COMBINING CYFILLIC LETTER FS F6 COMBINING CYFILLIC LETTER FS F7 COMBINING CYFILLIC LETTER FS F6 COMBINING CYFILLIC LETTER FS F7 COMBINING CYFILLIC LETTER FS F7 COMBINING CYFILLIC LETTER FS F7 COMBINING CYFILLIC LETTER FS F7 COMBINING CYFILLIC LETTER SA F7 COMBINING CYFILLIC LETTER SA F7 COMBINING CYFILLIC LETTER SA F7 COMBINING CYFILLIC LETTER SA F7 COMBINING CYFILLIC LETTER DA F7 F5 COMBINAL DA F7 F5 COMBINAL DA F7 F5 COMBINAL DA F5 F5 COMBINAL DA F5 F5	E0 E1 E2 E3 E4 E6 E7 E8 EA ECDEEF F7 F7 F7 F7 F7 F7 F7 F7 F7 F7 F7 F7 F7	COMBINING CYRILLIC LETTER A COMBINING CYRILLIC LETTER A COMBINING CYRILLIC LETTER GHE COMBINING CYRILLIC LETTER DE COMBINING CYRILLIC LETTER DE COMBINING CYRILLIC LETTER A COMBINING CYRILLIC LETTER A COMBINING CYRILLIC LETTER FL COMBINING CYRILLIC LETTER SHC COMBINING CYRILLIC LETTER DITIED SHC COMBINING CYRILLIC LETTER SHC COMBINING CYRIL CHARTER SHC COMBINING CYRIC CHARTER SHC COMBINING CHARTER SHC COMBINING CHARTER SHC COMBIN CHARTER SHC

TABLE XX - Row A6: C	YRILLIC EXTENDED-B

	A6C	A6D	A6E	A6F
0	Z	Ы	Л	
1	Z	Ъ	Л	x.×.x x. x x.x
2	Z	ΙЪ	Д	∃ <mark>t</mark> e
3	Z	ľЪ	Д	
4	S	Ю	Л	
5	S	Ю	Л	
6	l	Ы	М	
7	l	њ	М	
8	¥	Α	$\mathbf{O}$	
9	Å	А	Θ	
A	R	Ä	$\odot$	
В	8	Ä	O	
С	СЭ	Ю	$\odot$	ॅ
D	ω	Ю	00	<b>7</b>
Е	Ъ	$\mathbf{\Lambda}$		~
F	Ъ	♪	្រ	ч

# TABLE XX - Row A6: CYRILLIC EXTENDED-B

hex	Name	hex	Name
C0122324566789ABCCDEF0D12304566789ABCDDEF012234566789ABCDEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEE	CYRILLIC CAPITAL LETTER ZEMLYA CYRILLIC SMALL LETTER ZELO CYRILLIC CAPITAL LETTER REVERSED DZE CYRILLIC CAPITAL LETTER REVERSED Y CYRILLIC SMALL LETTER DRONOGRAPH UK CYRILLIC CAPITAL LETTER BOAD OMEGA CYRILLIC CAPITAL LETTER BOAD OMEGA CYRILLIC CAPITAL LETTER BOAD OMEGA CYRILLIC CAPITAL LETTER BOAD OMEGA CYRILLIC CAPITAL LETTER NEUTRAL YER CYRILLIC SMALL LETTER NEUTRAL YER CYRILLIC CAPITAL LETTER REVERSED YU CYRILLIC SMALL LETTER REVERSED YUS CYRILLIC SMALL LETTER REVERSED YUS CYRILLIC SMALL LETTER BLENDED YUS CYRILLIC SMALL LETTER BLENDED YUS CYRILLIC SMALL LETTER BLENDED YUS CYRILLIC SMALL LETTER NY CYRILLIC CAPITAL LETTER SOFT DE CYRILLIC CAPITAL LETTER SOFT EL CYRILLIC CAPITAL LETTER SOFT DE CYRILLIC CAPITAL LETTER SOFT EL CYRILLIC CAPITAL LETTER SOFT DE CYRILLIC CAPITAL LETTER BUNCCULAR O CYRILLIC CAPITAL LETTER BUNCCULAR O CYRILLIC CAPITAL LETTER BUNCCULAR O CYRILLIC CAPITAL LETTER DUBLE MONOCULAR O CYRILLIC CAPITAL LETTER BUNCCULAR O CYRILLIC CAPITAL LETTER DUBLE MONOCULAR O CYRILLIC CAPITAL LETTER DUBLE MONOCULAR		
roup 00		Plane 00	Row A

G = 00

P = 00

# A8E A8F Д Ţ 0 Д 1 Ţ S Ч 2 S 3 Ч Ж h 4 h 5 Ж Ч Щ 6 7 щ Ш Д 8 9 Д Ђ А В Ђ J С D τ IJ Е F IJ

# TABLE XX - Row A8: CYRILLIC EXTENDED-C

47

hex	Name	hex	Name
E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 EA EB ECD EE EF F7 F8 F8 F7 F8 F7 F8 F7 F8 F8 F7 F8 F8 F7 F8 F8 F7 F8 F8 F8 F7 F8 F8 F8 F7 F8 F8 F8 F7 F8 F8 F8 F7 F8 F8 F7 F7 F8 F8 F7 F7 F8 F8 F7 F7 F8 F7 F8 F7 F8 F7 F7 F8 F7 F7 F8 F7 F7 F8 F7 F7 F8 F7 F7 F8 F7 F7 F8 F7 F7 F7 F8 F7 F7 F7 F8 F7 F7 F7 F8 F7 F7 F7 F7 F7 F7 F7 F7 F7 F7 F7 F7 F7	CYRILLIC SMALL LETTER DWE CYRILLIC SMALL LETTER DWE CYRILLIC SMALL LETTER DWE CYRILLIC SMALL LETTER DWE CYRILLIC SMALL LETTER DYWE CYRILLIC SMALL LETTER CHE CYRILLIC SMALL LETTER TE WITH MIDDLE HOOK CYRILLIC SMALL LETTER TE WITH MIDDLE HOOK CYRILLIC SMALL LETTER TE WITH MIDDLE HOOK CYRILLIC SMALL LETTER TWE CYRILLIC SMALL LETTER TWE CYRILLIC SMALL LETTER TWE CYRILLIC SMALL LETTER TSWE CYRILLIC SMALL LETTER THE CYRILLIC SMALL LETTER SSE CYRILLIC SMALL LETTER TWE CYRILLIC SMALL LETTER SSE CYRILLIC SMALL STAR CYRILLIC SMALL STAR CYRILLIC SMALL STAR SSE CYRILLIC SMALL STAR SSE CYRILS SSE CY	Plane 00	
	1		BOW

# TABLE XX - Row A8: CYRILLIC EXTENDED-C

G = 00 P = 00

	2E0	2E1	2E2	2E3	2E4	2E5	2E6	2E7
0	Г							
1	Ŀ							
2	٢	>						
3	٦	·/.						
4	ſ	<						
5	<b>ب</b>	$\nearrow$						
6	Т	÷						
7	т	"						
8	s	j.						
9	S							
А	2			τζι				
В				\$				
С	<b>\</b>							
D	1	/						
Е	- <u> </u>							
F								

# TABLE xx - Row 2E: SUPPLEMENTARY PUNCTUATION

# TABLE XXX - Row 2E: SUPPLEMENTARY PUNCTUATION

00         Right ANGLE SUSSITUTION MARKER DEFT ANST DY TED SUSSITUTION MARKER EFT ANST DY TED SUSSITUTION MARKER STATUS         50         This position shull not be used the position shull not be u	hex	Name	hex	Name
01     RIGHT ANGE DOTTED SUBSTUTION MARKER     5A     CTP position that not be used       02     LEFL DOTTED SUBSTUTION MARKER     5A     CTP position that not be used       03     LEFL DOTTED SUBSTUTION MARKER     5D     CTP position that not be used       04     LEFL DOTTED SUBSTUTION MARKER     5D     CTP position that not be used       05     RUGHT TOTTED ATTERCATION MARKER     5D     CTP position that not be used       06     RUGHT TOTSPORTED ATTERCATION MARKER     6D     CTP position that not be used       07     RAGED COTTED OWNERSCHT     6D     CTP position that not be used       08     DETT TOTSPORTED ATTERCATION MARKER     6D     CTP position that not be used       09     DETT TOTSPORTED ATTERCATION MARKER     6D     CTP position that not be used       00     DETT TOTSPORTED ATTERCATION MARKER     6D     CTP position that not be used       00     REGT TAKED CONSTRUCT     6D     CTP position that not be used       00     REGT TAKED CONSTRUCT     6D     CTP position that not be used       00     REGT TAKED CONSTRUCT     6D     CTP position that not be used       00     REGT TAKED CONSTRUCT     6D     CTP position that not be used       00     REGT TAKED CONSTRUCT     6D     CTP position that not be used       00     REGT TAKED CONSTRUCT     6D				
002         LEFT SUBSTITUTION BRACKET         58         (The position shall not be used)           014         LEFT SUBSTITUTION BRACKET         50         (The position shall not be used)           015         RIGHT OUTED SUBSTITUTION BRACKET         50         (The position shall not be used)           017         RIGHT OUTED SUBSTITUTION BRACKET         50         (The position shall not be used)           017         RIGHT OUTED SUBSTITUTION BRACKET         50         (The position shall not be used)           017         RIGHT OUTED SUBSTITUTION BRACKET         50         (The position shall not be used)           017         RIGHT FURNSPOSITION MARKER         61         (The position shall not be used)           018         RIGHT FURNSPOSITION MARKER         61         (The position shall not be used)           018         RIGHT FURNSPOSITION BRACKET         64         (The position shall not be used)           018         RIGHT FURNSPOSITION BRACKET         64         (The position shall not be used)           018         RIGHT FURNSPOSITION BRACKET         64         (The position shall not be used)           019         RIGHT FORT FURNSPOSITION BRACKET         64         (The position shall not be used)           019         RIGHT FORT FURNSPOSITION BRACKET         64         (The position shall not be used)	01	RIGHT ANGLE DOTTED SUBSTITUTION MARKER	5A	
6     FIGH TOTTE SUBSTITUTE MARKET     FE     (The instance shall not be used)       7     FARSE DOTTED TRANSPORTING MARKET     FE     (The instance shall not be used)       8     DOTTED TRANSPORTING MARKET     FE     (The instance shall not be used)       9     FARSE DOTTED TRANSPORTING MARKET     FE     (The instance shall not be used)       9     FARSE DOTTED TRANSPORTING MARKET     FE     FT     FE       9     FARSE DOTTED TRANSPORTING MARKET     FE     FT     FT       9     FARSE DOTTED TRANSPORTING MARKET     FT     FT     FT       9     FARSE DOTTED TRANSPORTING MARKET     FT     FT     FT <td< td=""><td>02</td><td>LEFT SUBSTITUTION BRACKET</td><td>5B</td><td>(This position shall not be used)</td></td<>	02	LEFT SUBSTITUTION BRACKET	5B	(This position shall not be used)
6     FIGH TOTTE SUBSTITUTE MARKET     FE     (The instance shall not be used)       7     FARSE DOTTED TRANSPORTING MARKET     FE     (The instance shall not be used)       8     DOTTED TRANSPORTING MARKET     FE     (The instance shall not be used)       9     FARSE DOTTED TRANSPORTING MARKET     FE     (The instance shall not be used)       9     FARSE DOTTED TRANSPORTING MARKET     FE     FT     FE       9     FARSE DOTTED TRANSPORTING MARKET     FE     FT     FT       9     FARSE DOTTED TRANSPORTING MARKET     FT     FT     FT <td< td=""><td></td><td>RIGHT SUBSTITUTION BRACKET</td><td>5C 5D</td><td></td></td<>		RIGHT SUBSTITUTION BRACKET	5C 5D	
66         FALSED INTERPOLATION MARKER         FF         The position shall not be used)           67         COUNT TRANSPECTION MARKER         61         This position shall not be used)           68         CET TRANSPECTION MARKER         62         This position shall not be used)           68         CET TRANSPECTION MARKER         62         This position shall not be used)           69         LET TRANSPECTION MARKER         63         This position shall not be used)           60         LET TRANSPECTION MARKER         63         This position shall not be used)           60         LET TRANSPECTION MARKER         64         This position shall not be used)           61         This position shall not be used)         This position shall not be used)         64           61         This position shall not be used)         77         77         77           62         This position shall not be used)         77         77         77           63         This position shall not be used)         77         77         77         77           78         COUNTRANSA MARKER         77         77         77         77         77         77         77         77         77         77         77         77         77         77         77			5E	
98         DOTTED TRANSPOSITION MARKER         1         This position shall not be used)           98         LETT TRANSPOSITION MARKER         63         This position shall not be used)           98         PAISTIP SOURCE         64         This position shall not be used)           98         PAISTIP SOURCE         64         This position shall not be used)           98         PAISTIP SOURCE         64         This position shall not be used)           98         PAISTIP SOURCE         65         This position shall not be used)           99         PAISTIP SOURCE         65         This position shall not be used)           99         PAISTIP SOURCE         66         This position shall not be used)           99         PAISTIP SOURCE         68         This position shall not be used)           90         PAISTIP SOURCE         68         This position shall not be used)           90         PAISTIP SOURCE         68         This position shall not be used)           91         PAISTIP SOURCE         68         This position shall not be used)           91         PAISTIP SOURCE         68         This position shall not be used)           91         PAISTIP SOURCE         70         This position shall not be used)           91         PAISTI			5F	
99     LEFT TRANSPORTION BRACKET     82     This position shall not be used)       90     LEFT TRANSPORTION BRACKET     83     This position shall not be used)       90     LEFT TRANSPORTION BRACKET     84     This position shall not be used)       91     PARAGRAPHOS     96     This position shall not be used)       92     PARAGRAPHOS     96     This position shall not be used)       93     This position shall not be used)     97       94     PARAGRAPHOS     98     This position shall not be used)       94     This position shall not be used)     96     This position shall not be used)       94     This position shall not be used)     96     This position shall not be used)       95     This position shall not be used)     97     This position shall not be used)       96     This position shall not be used)     97     This position shall not be used)       97     This position shall not be used)     97     This position shall not be used)       98     This position shall not be used)     97     This position shall not be used)       99     PALMERANCKET     77     This position shall not be used)       99     PALMERANCKET     77     This position shall not be used)       99     PALMERANCKET     77     This position shall not be used)				
BB     FAISED SOLVARE     64     (This postion shall not be used)       CD     LERT FAISED CONACE     63     (This postion shall not be used)       CD     LERT FAISED CONACE     63     (This postion shall not be used)       CD     LERT FAISED CONACE     63     (This postion shall not be used)       CD     LERT FAISED CONACE     63     (This postion shall not be used)       CD     LERT FAISED CONACE     63     (This postion shall not be used)       CD     LERT FAISED CONACE     64     (This postion shall not be used)       CD     LERT FAISED CONACE     64     (This postion shall not be used)       CD     LERT FAISED CONACE     64     (This postion shall not be used)       CD     LERT FAISED CONACE     65     (This postion shall not be used)       CD     LERT FOR FAISE CONACE     65     (This postion shall not be used)       CD     LERT FOR FAISE CONACE     77     (This postion shall not be used)       CD     LERT FOR FAISE CONACE     77     (This postion shall not be used)       CD     LERT FOR FAISE CONACE     77     (This postion shall not be used)       CD     LERT FOR FAISE CONACE     77     (This postion shall not be used)       CD     LERT FOR FAISE CONACE     77     (This postion shall not be used)       CD <td< td=""><td></td><td></td><td>62</td><td></td></td<>			62	
GC     LETT FASED OMISSION BRACKET     65     (This postion shall no be used)       GC     FIGURE TABLED OMISSION BRACKET     66     (This postion shall no be used)       GC     FIGURE DARAGRAPHOS     66     (This postion shall no be used)       GC     FIGURE DARAGRAPHOS     66     (This postion shall no be used)       GC     FIGURE DARAGRAPHOS     68     (This postion shall no be used)       GC     FIGURE DARAGRAPHOS     68     (This postion shall no be used)       GC     FIGURE DARAGRAPHOS     68     (This postion shall no be used)       GC     FIGURE DARAGRAPHOS     68     (This postion shall no be used)       GC     FIGURE SALE     FIGURE SALE     FIGURE SALE       FIGURE SALE     FIGURE SALE     FIGURE SALE     FIGURE SALE <tr< td=""><td></td><td></td><td>63</td><td></td></tr<>			63	
00         FIGHT PARSED OMESCION BRACKET         66         (This postion shall not be used)           01         FUNCTIONAL CODE NARGERAPHOS         66         (This postion shall not be used)           01         FORKED FARAGRAPHOS         66         (This postion shall not be used)           01         FORKED FARAGRAPHOS         66         (This postion shall not be used)           01         FORKED FARAGRAPHOS         66         (This postion shall not be used)           02         FORKED FARAGRAPHOS         66         (This postion shall not be used)           04         FORKED FARAGRAPHOS         66         (This postion shall not be used)           04         FORKED FARAGRAPHOS         67         (This postion shall not be used)           04         FORKED FARAGRAPHOS         67         (This postion shall not be used)           04         FORKED FARAGRAPHOS         67         (This postion shall not be used)           04         FORKED FARAGRAPHOS         67         (This postion shall not be used)           05         FORKED FARAGRAPHOS         77         (This postion shall not be used)           05         FORKED FARAGRAPHOS         77         (This postion shall not be used)           06         FORKED FARAGRAPHOS         77         (This postion shall not be used)			65	
OF     PARASHAPHOS     B8     (This postion shall not be used)       11     PUPPERD PARASHAPHOS     B8     (This postion shall not be used)       12     PUPPERD OFFICE     B8     (This postion shall not be used)       13     PUPPERD OFFICE     B8     (This postion shall not be used)       14     PUPWARDS ANCONA     B0     (This postion shall not be used)       15     PUPWARDS ANCONA     B7     (This postion shall not be used)       16     PUTED RICHT-PONTING ANGLE     F7     (This postion shall not be used)       17     PUMARDS ANCONA     B7     (This postion shall not be used)       18     PUMARDS ANCONA     F7     (This postion shall not be used)       19     PUMARDS ANCONA     72     (This postion shall not be used)       10     REAL PARASHAPASE BRACKET     73     (This postion shall not be used)       11     F0     PUMARDS ANCONA     74     (This postion shall not be used)       12     F1     F0     PUMARDS ANCONA     75     (This postion shall not be used)       13     This postion shall not be used)     76     (This postion shall not be used)       14     F1     DVM PARAFHARSE BRACKET     77     (This postion shall not be used)       15     This postion shall not be used)     76     (This postion shall not	0D	RIGHT RAISED OMISSION BRACKET	66	(This position shall not be used)
10     FORKED PARAGRAPHOS     60     (This position shall not be used)       11     FORKED PARAGRAPHOS     60     (This position shall not be used)       12     DOTTED OBELOS     60     (This position shall not be used)       13     DOTTED OBELOS     60     (This position shall not be used)       14     DOWNARDS AKODRA     60     (This position shall not be used)       15     DOTTED REACT-PATHOR ANALE     67     (This position shall not be used)       16     DOTTED REACT-PATHOR ANALE     67     (This position shall not be used)       17     DOUTED REACT-PATHOR ANALE     71     (This position shall not be used)       18     NUMETED INFINATIONE MARCET     73     (This position shall not be used)       19     NUMETED NET ANALES     74     (This position shall not be used)       10     LEFT NUM PARAFRANCE BRACKET     75     (This position shall not be used)       11     Intis position shall not be used)     76     (This position shall not be used)       21     This position shall not be used)     76     (This position shall not be used)       22     This position shall not be used)     76     (This position shall not be used)       23     This position shall not be used)     76     (This position shall not be used)       24     This position shall not be used)	0E		67	
12     HYPODUSTOLE     68     (This position shall not be used)       13     DDTTED OBELOX     60     (This position shall not be used)       14     DUPWARDS ANCORA     66     (This position shall not be used)       15     DUTE NEIGH-TAYNING ANGLE     67     (This position shall not be used)       16     DOTTED NEIGH-TAYNING ANGLE     70     (This position shall not be used)       17     DOUBLE OBLICUE HYPHEN     70     (This position shall not be used)       18     FLM BRANCH     71     (This position shall not be used)       19     PALM BRANCH     73     (This position shall not be used)       10     FLM FORM SCRET     76     (This position shall not be used)       11     FLM FORM SCRET     76     (This position shall not be used)       12     FTH position shall not be used)     77     (This position shall not be used)       13     FTH position shall not be used)     78     (This position shall not be used)       14     This position shall not be used)     76     (This position shall not be used)       15     This position shall not be used)     76     (This position shall not be used)       16     This position shall not be used)     76     (This position shall not be used)       17     This position shall not be used)     76     (This position			69	
13     DOTTED DELOS     6C     (This position shall not be used)       14     DOWNARDS AKCOA     6D     (This position shall not be used)       15     DOTTED INBORT-POINTING ANALE     6F     (This position shall not be used)       16     DOTTED INBORT-POINTING ANALE     6F     (This position shall not be used)       17     DOULE COBLIQUE WYPEIN     70     (This position shall not be used)       18     INVERTED INTERROBANG     71     (This position shall not be used)       19     INTE position shall not be used)     74     (This position shall not be used)       10     LET UW PARAPHASE BACKET     75     (This position shall not be used)       11     RIGHT LOW PARAPHASE BACKET     76     (This position shall not be used)       12     This position shall not be used)     73     (This position shall not be used)       23     (This position shall not be used)     73     (This position shall not be used)       24     (This position shall not be used)     76     (This position shall not be used)       25     (This position shall not be used)     70     (This position shall not be used)       26     (This position shall not be used)     70     (This position shall not be used)       27     (This position shall not be used)     70     (This position shall not be used)       26				
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17     DOUBLE OBLAUE HYPHEN     70     (This position shall not be used)       18     INVERTED INTERIORANC     71     (This position shall not be used)       19     PMENTED INTERIORANC     72     (This position shall not be used)       10     LEFT LOW PARAPHASE BACKET     73     (This position shall not be used)       11     Internet Tow PARAPHASE BACKET     73     (This position shall not be used)       12     Internet Tow PARAPHASE BACKET     74     (This position shall not be used)       13     (This position shall not be used)     74     (This position shall not be used)       24     (This position shall not be used)     76     (This position shall not be used)       25     (This position shall not be used)     76     (This position shall not be used)       26     (This position shall not be used)     76     (This position shall not be used)       27     (This position shall not be used)     76     (This position shall not be used)       28     (This position shall not be used)     76     (This position shall not be used)       29     (This position shall not be used)     76     (This position shall not be used)       29     (This position shall not be used)     76     (This position shall not be used)       29     (This position shall not be used)     77     (This position shall not be used				
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#### **A. Administrative** 1. Title

### Proposal to encode additional Cyrillic characters in the BMP of the UCS

2. Requester's name

### UC Berkeley Script Encoding Initiative (Universal Scripts Project)

3. Requester type (Member body/Liaison/Individual contribution)

Liaison contribution.

### 4. Submission date

2006-12-26

5. Requester's reference (if applicable)

6. Choose one of the following:

6a. This is a complete proposal

Yes.

6b. More information will be provided later **No.** 

## **B.** Technical – General

1. Choose one of the following:

1a. This proposal is for a new script (set of characters)

No.

1b. Proposed name of script

1c. The proposal is for addition of character(s) to an existing block

Yes and also new blocks

1d. Name of the existing block

Cyrillic, Cyrillic Supplementary, Cyrillic Extended-A, Cyrillic Extended-B, Cyrillic Extended-C, Supplementary Punctuation

2. Number of characters in proposal

108 (1, 16, 10, 55, 24, 2).

3. Proposed category (A-Contemporary; B.1-Specialized (small collection); 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)

### Category A.

4a. Is a repertoire including character names provided?

Yes.

4b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?

Yes.

4c. Are the character shapes attached in a legible form suitable for review?

Yes.

5a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard? **Michael Everson.** 

5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:

### Michael Everson, Fontographer.

6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

Yes.

6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? **Yes.** 

7. 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. 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/Public/UNIDATA/UnicodeCharacterDatabase.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

See above.

# **C.** Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

Yes, some of the characters have. See N3184.

2a. 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.

2b. If YES, with whom?

David Birnbaum (University of Pittsburgh), Ralph Cleminson (University of Portsmouth), Ivan Derzhanski (Bulgarian Academy of Sciences), Vladislav Dorosh (irmologion.ru), Alexej Kryukov (Moscow State University), Sorin Paliga (University of Bucharest), Klaas Ruppel (Research Institute for the Languages of Finland)

2c. If YES, available relevant documents

**Co-authors** 

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

Slavicists, Uralicists, Turkicists, Caucasianists, and other scholars and people interested in Slavonic ecclesiastics.

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

### Used historically and liturgically.

4b. Reference

5a. Are the proposed characters in current use by the user community?

Yes. 5b. If YES, where?

## Scholarly and religious publications.

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

Yes.

6b. If YES, is a rationale provided?

Yes.

### 6c. If YES, reference

#### Accordance with the Roadmap. Keep with other Cyrillic characters.

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

No.

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

No.

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

No.

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

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

Yes. 10b. If YES, is a rationale for its inclusion provided?

Yes.

10c. If YES, reference

### See discussion at QA and WE.

11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?

No.

11b. If YES, is a rationale for such use provided?

11c. If YES, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

No.

11e. If YES, reference

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

No.

12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

No.

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?