PONOMAR PROJECT

Proposal to Encode the Typikon Symbols in Unicode

Yuri Shardt, Aleksandr Andreev

In Church Slavonic documents, for example, in the Orthodox Typikon, one encounters 5 common symbols that are used designate the rank of an ecclesiastical commemoration. Depending on the publisher and local convention, these symbols can be placed within the text or in the margins. Since the symbols cannot be considered to be characters, it is proposed that they be encoded in the "miscellaneous symbols" block of Unicode.

Based on the information in Chapter 47 of the Orthodox Typikon ((Тѷпїкон сі́єсть Оўстака (Tipikon siject' Ustav), 1954),(Тѷпїкон сі́єсть Оўстака (Tipikon sijest' Ustav), 1965)) and local convention, the desired symbols, their characteristics, and proposed encoding region are described in Table 1. Two examples of Chapter 47 of the Typikon are presented in Figure 1 and Figure 2. As well, extracts from the Orthodox Menologion, where theses symbols are used to rank the commemorations, are given in Figure 3, Figure 4, and Figure 6. As can be seen from the sample publications, these symbols can occur anywhere in the line.

Although some of the symbols have forms that are similar to other currently available symbols, the rendering of the symbols depends on the Typikon and the era. This can be best seen by comparing the symbols published by the Russian Orthodox Church and those used by the Slovak Byzantine Rite Church, which are shown in Figure 5. It can be seen that the type of cross used is different. Thus, it would be useful if irrespective of the symbol rendering, the commemoration type had the same Unicode location. This would allow easier searching and ranking of the commemorations.

Furthermore, in recent years, there has been a demand for Typikon symbols to be encoded as characters, both on the Internet and commercially. For example, the Orthodox Liturgical texts project (<u>http://www.orthlib.info/</u>) has digitised the Church Slavonic Orthodox Typikon and Menologion. Other projects, for example, <u>http://www.canto.ru/calendar</u> present Orthodox calendars for the current or upcoming year. Such projects have either used graphics for the Typikon symbols or have designed various non-Unicode compatible fonts. Finally, St. Innocent Press, a commercial publishing house, is planning to release a Liturgical Calendar for 2010 and will need a Unicode-compatible font that includes the Typikon symbols. Table 1: Summary of the Proposed Typikon Symbols for Encoding

Typical Typikon Symbol	Proposed Name	Proposed Location	Comments
(+)	Typikon Symbol Great Feast	U + 26D0	
÷	Typikon Symbol Vigil Service	U + 26D1	
+	Typikon Symbol Polyeleos	U + 26D2	This symbol is similar to $U + 2722$ (Four teardrop-spoked asterisk), but see the form used by the Slovak Church
E	Typikon Symbol Lower Rank	U + 26D3	(Figure 5). Absolutely unique symbol
*	Typikon Symbol Unmarked	U + 26D4	This symbol is similar to $U + 2734$ (Eight Pointed Black Star). This symbol is used in the Slavic tradition to denote commemorations that are otherwise unmarked.



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блиныха, и втородниныха приздникшка, и стыха.

Подоба́еття б'ёдатн, йкш пра́здницы раздітле́ни с8ть на Великіа, сре́дніа же й малыа.

Велицын оўбы праздницы хртывы, й бгороднчны, й предтечевы два: рождество й оўсткнове́ніе: й Сбонха верхо́вныха аплыва, петра й па́чла, йм8та знаменіа, крта шкр8же́на , ймже бдта́ніе й бса сл8жба праздника соверша́етса по оўста́в8.

Сре́днін же пра́здницы сты́хя йм8тя дытай би́ды, кртя ся полбкрбжіемя , ймже бдтийе соберша́етса, прилага́етса же й каншия бцы на оўтрени по оўста́бб. Дрбзін же кртя Еди́ня то́чію , ймже бдтвийе не соберша́етса. На бече́рни, Баже́ня мбжя, а-й антіфшия: й на ГДи воззва́хя, стіхи́ры на 5: Ш произбола же на й: й чте́ніа г, й на стіхо́вит. На оўтрени полбеле́й, й сболіе: каншия на й: й славосло́віе бели́кое: й прочам слбжба по оўста́бб.

Ма́лін же пра́здницы йм8тт дытай ви́ды три то́чки несоверше́ниш шкр8жены. Врасе́нт оўбш ви́дт ймЯ́щымя На бече́рни кадісма Збы́чнал: на Гди воззва́хт, стіхи́ры на 5. На оўтрени каншит на 5, й славосло́віе бели́кое: й про́чал сл8жба по оўста́б8. Че́рих же би́дт ймЯ́щымя С: то́чію на Гди воззба́хт, стіхи́ры на 5: на оўтрени ганши́я на 5. На літ8ргіи по чи́н8 оўста́ба. Не ймЯ́щымя же зна́меніл, стіхи́ры на F: канших же на оўтрени на Д.

Figure 1: Chapter 47 of the Typikon (Τϔηϊκοι είευτω θγειτακα (Tipikon sijest' Ustav), 1965). The desired symbols have been boxed.

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блуннув, й бгороднчныхв праздникшев, й стыхв.

Подобаеття ведати, гако праздницы разделени свть на великіт, средніть же й малыт.

Велницын оўбш праздницы хртовы, н бгороднчны, н пртечева два: ржтво н оусткновение: н Сбонхи верховныхи апливи, петра й пачла, ймыти знамениа, крти шкружени : наже батине н вса служба праздника совершается по оуставу.

Среднін же праздницы стыха ймвта двітма виды, крта са полвкрвжітема: 🐨 ймже бдітніе совершается: прилагается же й канших бібы на оўтрени по оуставв:

Арвія же кртя єдння точію 💠: ймже бдійніе не совершаєта. На вечерни, Баженя мяжя, а-й антіфшня: й на Гдн воззваха, стіхнры на 5: Ш пронзвола же на й: й чтеніж Г, й на стіховнь. На оўтрени полёелей, й сбліе, каншия на й: й славословіе великое: й прочаж сляжба по оўставя.

праздницы HM8TZ Малін LETANÀ внды трн πe ТОЧКН Kpacenz OVEW EHAZ нм8щыма HA вечерни ISA A ICMA OEPIAN: HA Ган воззвух, стіхнры на б. На оутренн KAHWHZ HA 5, й славословие великое: й прочал служба по очетаву. Черна же вида имещыма :: точію на Гди воззваха, стіхном на 5: на оутрени канших на 5. На літвогін нмещыми же знамения, стихноы чных оустава. Не по на Г: Каншина же на оутрени на Д.

Figure 2: Chapter 47 of a different Typikon (Тѷпїкон сієсть Оўставя (Tipikon siject' Ustav), 1954). The symbols have been boxed.

С. Ста́гw пррока заха́рін, отца чтна́гw іша́нна прте́чн.
 Ве́черя, обы́чная кадісма. На Гдн воззва́хя, стіхнры на 5, гла́ся д. Подобеня: Да́ля ссні зна́меніе: Ша́сть натка: Сла́ва,
 Діля ссні зна́меніе: Ша́сть от
 Белнікагш.

Figure 3: Extracts from the Menologion showing the use of some of the proposed symbols (Тѷпїкон сієсть Оу́стабя (Тірікоn sijest' Ustav), 1965).

А. Ф Нача́ло індікт лѣта. Й па́мать прпвнаг й. ⊕ Ржтво престы́а влицы на́шеа бци н присиодбы мрін. Б. ⓒ Зача́тіе сты́а а́нны, вегда зача́тъ престу́ю бця.

К. Ф Пріїбнаго й бгоноснаго Отца нашего бу: думіа великаго.

Figure 4: Extracts from the Menologion showing the use of the proposed symbols (Тѷпїкон сі́ссть Оу́стака (Tipikon siject' Ustav), 1954).

Vysvetlenie značiek pri sviatkoch:

Značky označujú význam jednotlivých sviatkov nasledovne: 💮 - veľký sviatok; 🔱 - polyjelejný (stredný) sviatok s bdením; 🗚 - polyjelejný (stredný) sviatok bez bdenia; 🕃 - šestiričný (malý) sviatok s veľkým slávoslovím; 🕃 šestiričný (malý) sviatok bez veľkého slávoslovia; dni bez značky.

Figure 5: Example of the Typikon symbols as used by the Slovak Byzantine Rite Church (Gajdoš, 2009).

ЖПамять святых отцев семи Вселенских Соборов. ЖИч. Феодота З
Анкирского и мцц. семи дев: Александры 🛒, Текусы 🛒, Клавдии 🛒, Фаины 🛒,
Евфрасии 📑, Матроны 📑 и Иулии 🚅 (303). 💥 Мчч. Петра 📑, Дионисия 📑, Андрея
🧃, Павла 🛒 и Христины 🛒 Лампсакииских (249-251). Прп. Макария 🧕 Алтайского
(1847).

Figure 6: Example of the use of the unmarked commemoration sign (Examples boxed). (Russian Orthodox Church, 2009)

References

Gajdoš, M. (2009, July 2). Katolícky kalendár byzantského obradu (jul 2009). Retrieved July 28, 2009, from Unofficial Slovak Bzyantine Rite Church Site: http://www.grkat.nfo.sk/kalendar/index.html Russian Orthodox Church. (2009, мая 18). 18 мая 2009 года. Retrieved October 12, 2009, from Правславный Церковный календарь: htt://days.pravoslavie.ru/Days/20090518.htm *Тёпікон си́етть Фу́ставя (Tipikon siject' Ustav)* (Reprint of 1905 Typikon ed.). (1954). Moscow, Russia, USSR. *Тёпікон си́етть Фу́ставя (Tipikon sijest' Ustav)* (Reprint of 1905 Typikon ed.). (1965). Graz,

Austria: Akademischen Druk.

ISO/IEC JTC 1/SC 2/WG 2 PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646 ¹ Please fill all the sections A, B and C below. Please read Principles and Procedures Document (P & P) from <u>http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html</u> for guidelines and details before filling this form. Please ensure you are using the latest Form from <u>http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html</u> .					
See also http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html for latest Roadmaps.					
A. Administrative					
1. Title: Proposal to Encode the Typikon Symbols in Unicode 2. Requester's name: Yuri Shardt, Aleksandr Andreev					
3. Requester type (Member body/Liaison/Individual contribution): Individual Contribution					
4. Submission date: August 18, 2009					
5. Requester's reference (if applicable):					
6. Choose one of the following: This is a complete proposal:					
(or) More information will be provided later:					
B. Technical – General					
1. Choose one of the following:					
a. This proposal is for a new script (set of characters): NO					
Proposed name of script:					
b. The proposal is for addition of character(s) to an existing block: YES Name of the existing block: Miscellaneous Symbols					
2. Number of characters in proposal: 5					
3. Proposed category (select one from below - see section 2.2 of P&P document):					
A-Contemporary B.1-Specialized (small collection) Yes B.2-Specialized (large collection) C-Major extinct D-Attested extinct E-Minor extinct F-Archaic Hieroglyphic or Ideographic G-Obscure or questionable usage symbols					
4. Is a repertoire including character names provided? YES					
a. If YES, are the names in accordance with the "character naming guidelines"					
in Annex L of P&P document? YES b. Are the character shapes attached in a legible form suitable for review? YES					
5. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard? <u>Yuri Shardt</u>					
If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools					
used: Hirmos Ponomar v.3 (contact Yuri Shardt at <u>yuri.shardt@ualberta.ca</u> for the font)					
6. References:					
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? <u>YES</u> b. Are published examples of use (such as samples from newspapers, magazines, or other sources)					
of proposed characters attached?					
7. Special encoding issues:					
Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?					
presentation, solung, searching, indexing, transiteration etc. (if yes please enclose information):					
8. Additional Information:					
Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see http://www.unicode.org for such information on other scripts. Also					
needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.					

¹ Form number: N3152-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	NO
If YES explain	
2. Has contact been made to members of the user community (for example: National Body,	VEO
user groups of the script or characters, other experts, etc.)?	YES
If YES, with whom? Members of the Orthodox publishing community	<u>/</u>
If YES, available relevant documents:	
3. Information on the user community for the proposed characters (for example:	
	>200 million
Reference: http://en.wikipedia.org/wiki/Orthodox_Church	
4. The context of use for the proposed characters (type of use; common or rare)	common
Reference:	
5. Are the proposed characters in current use by the user community?	YES
If YES, where? Reference: In publications of the Typikon and Menologic	วท
6. After giving due considerations to the principles in the P&P document must the proposed character	ers be entirely
in the BMP?	NO
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scatter	ed)? YES
8. Can any of the proposed characters be considered a presentation form of an existing	,
character or character sequence?	NO
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
9. Can any of the proposed characters be encoded using a composed character sequence of either	
existing characters or other proposed characters?	NO
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
10. Can any of the proposed character(s) be considered to be similar (in appearance or function)	
to an existing character?	YES
If YES, is a rationale for its inclusion provided?	YES
11. Does the proposal include use of combining characters and/or use of composite sequences?	NO
If YES, is a rationale for such use provided?	110
If YES, reference:	
Is a list of composite sequences and their corresponding glyph images (graphic symbols) prov	idod2
If YES, reference:	
12. Does the proposal contain characters with any special properties such as	<u>.</u>
control function or similar semantics?	NO
If YES, describe in detail (include attachment if necessary)	
	· · · · · · · · · · · · · · · · · · ·
	NO
If YES, is the equivalent corresponding unified ideographic character(s) identified?	
If YES, reference:	
l	