ISO/IEC JTC1/SC2/WG2 N4013R

L2/11-096R

2011-05-10

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

Doc Type: Working Group Document

Title: Proposal to encode additional Runic characters in the UCS

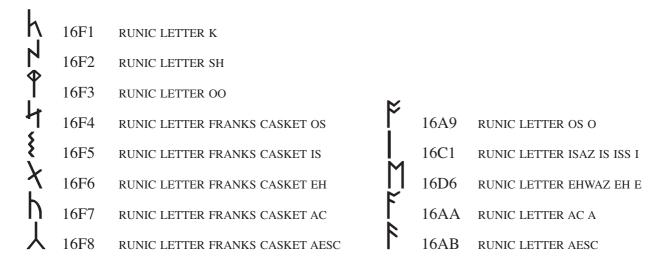
Source: Michael Everson and Andrew West

Status: Individual Contribution

Action: For consideration by JTC1/SC2/WG2 and UTC

Date: 2011-05-10

0. Introduction. A number of Runic characters should be encoded to fill gaps in the UCS. Three of them are found in the writings of J. R. R. Tolkien, and five of them are found on the Anglo-Saxon Franks Casket. If this proposal is accepted, the following characters will be added to the standard (since the Franks Casket characters replace original inherited runes, those are given on the right for comparison):



1. Tolkienian extensions. Although for The Lord of the Rings J. R. R. Tolkien devised and employed two writing systems, the featural Tengwar script and the runiform Cirth script, in *The Hobbit* and some of his other writings he made use of Old English runes. Owing to the importance of Tolkien as one of the major writers of the twentieth century and in particular to the scholarly attention given to his linguistic work, it is proposed here to add two character to the Runic block in order to enable his texts to be completely represented in the UCS.

The adaptation of the Runic alphabet Tolkien used for writing modern English is given here, in Latin alphabetical order (See Figure 2, 3, 4, 5).

The red characters k, k, k, and f oo are not encoded in the UCS; the blue characters k c and k, and \diamond ee are similar to k, sh, and oo. A variety of texts written by Tolkien make use of these letters. The titlepage text of The Hobbit reads:

PM HEBBIT ER PMRM FYM BELL FXFIY BMIX PM RMLERM EV F MYRY IETRYMW MRMM BW BILEE BEXXIYY EV HEBBITEY LEMKILMW VREM HIY MMMEIRY BW I R R TELIMY FYM KYBLIYMM BW XZRXM FLYMY FYM YYPIY LYW PE HOBBIT OR PERE AND BACK AGAIN BEIN PE RECORD OF A YÆRS IOURNEY MADE BY BILBO BAGGINS OF HOBBITON COMPILED FROM HIS MEMOIRS BY I R R TOLKIEN AND PUBLISHED BY GÆRGE ALLEN AND UNWIN LTD

In Thror's map the following text is given in "moon letters":

HOPEN BE PM XRME HOPEN BOTH PM PROSE SAFES FOR PM SMOOTH AND PIP SMISH BM STAND BY PE GREY STONE HWEN PE PRUSH KNOCKS AND THE SETTING SUN WITH THE LAST LIGHT OF DURINS DAY WILL SHINE UPON THE KEYHOLE

As is the following note by Thrór:

The \mathbb{N} sh and \P oo characters were used in a letter from Tolkien to Mrs Ferrer; see Figure 3.

2. Cryptogrammic Anglo-Saxon runes. The Franks Casket (or Auzon Runic Casket) is a small and beautiful chest made out of whalebone and dating to 8th century England. It presents a number of carved historical scenes alongside of which are extensive texts in Runes. On the right side of the casket, which appears to be an illustration of Sigurðr who slayed the dragon Fáfnir, a set of "cryptogrammic" Runes are used for the vowels. The ordinary rune vowels are used on the other three sides. The text on that side of the casket reads:

HXR HHH H&T LD H+ H L R MB X R X L

her hos sitæb on hærmbergæ

hXr... MR{X{b hPL H{R{ \chi R h h \chi X{ hXRh P

agl...drigiþ; swæ hiri erta egi sgraf

YNNM+ YNRXX N+M YX ↑4R+X

særden sorgæ and sefa tornæ

Here these "cryptogrammic" Runes are shown in red; note that M is the standard rune for e, rather than cryptogrammic λ e. Note too \mathbb{K} \widehat{fa} the ligature of \mathbb{K} f and \mathbb{K} a, where the latter is not the cryptogrammic \mathbb{K} a. These characters are analogous to the cryptogrammic letters encoded for Coptic (N2744, N). Although the Franks Casket is a single text, it is one of the most important Anglo Saxon texts, and runologists and Anglo-Saxonists need to be able to represent the text accurately, in plain text, just as Copticists can represent cryptogrammic letters in their texts. It would be wrong to consider the characters proposed here as mere "presentation forms" of the standard Runic characters; they fail the legibility test, for one thing.

Unicode Character Properties

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16F1;RUNIC LETTER K;Lo;0;L;;;;N;;;;
16F2;RUNIC LETTER SH;Lo;0;L;;;;N;;;
16F3;RUNIC LETTER OO;Lo;0;L;;;;N;;;
16F4;RUNIC LETTER FRANKS CASKET OS;Lo;0;L;;;;N;;;;
16F5;RUNIC LETTER FRANKS CASKET IS;Lo;0;L;;;;N;;;;
16F6;RUNIC LETTER FRANKS CASKET EH;Lo;0;L;;;;N;;;;
16F7;RUNIC LETTER FRANKS CASKET AC;Lo;0;L;;;;N;;;;
16F8;RUNIC LETTER FRANKS CASKET AC;Lo;0;L;;;;N;;;;
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Ordering

These characters should be inserted into the unified sort order for Runic as follows:

Figures

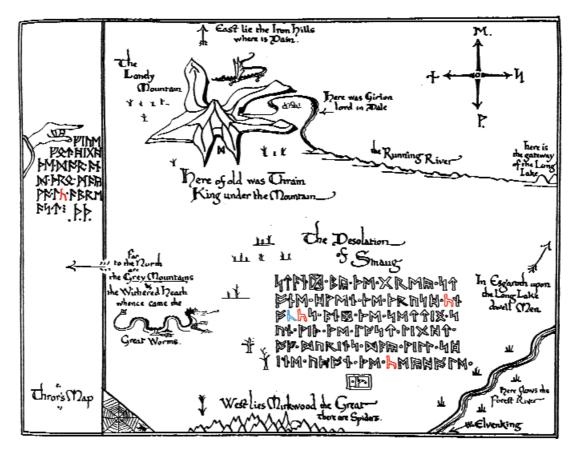


Figure 1. Thror's map showing the Tolkienian runic extensions.

PM-HXBBIM: MR: PMRM-N4M BRA - RXRI4 : BMIX - PM -MEMM-BIN-BINBW-BRXXIA-WEAK RM BRM BERRIARIES MASSIMA Leaf by Niggle On Fairy Stories Farmer Giles of Hair Farmer Glassel Ham The Homeocoming of Basel-stuoth The Lond of the Rings The Adventures of Tom Bondwald The Read Gree Ever On (with Howard Swann) Smith of Wootton Major The Hobbit WORKS PUBLISHED POSTHUMOUSLY SE PHALISHED POSTHUMOUS SE Gawain, Parel and Sir Older The Jother Christmas letters The Selmantlion Actures by JRR Tolkien Unfinished Joles The Letters of JRR Tolkien OR THERE AND BACK AGAIN BY J.R.R. TOLKIEN Finn and Hengest The Monsters and the Critics and Other Rossys Roverandom ILLUSTRATED BY ALAN LEE THE HISTORY OF MIDDLE-EARTH BY CHRISTOPHER TOTRIES l The Book of Lost Tales Part 1 If The Book of Lost Tides Part 2 III The Bene of Isol Bules Far 2 III The Lope of Beleviand IV The Shoping of Middle-earth The Lost Resed and Other Writings VI The Return of the Shadow VII The Tresson of bengard VIII The War of the Ring DX Sources Deleated X Morgeth's Ring XI The War of the Jewels XII The Peoples of Middle-earth HarperCollinsPublish MANAGE BUTTER TO THE HEBBUJAH: BAKINAM AKAM HIN-BULLI STATISTICAL TANGE R4M-EDBDIGHMM-BR-XZRXM-

Figure 2. Sample text showing Runic text on the title page of a recent edition of *The Hobbit*.



Figure 3. Letter from J. R. R. Tolkien to Mrs Ferrer, making use of RUNIC LETTER K (contrasting with RUNIC LETTER CEN) and RUNIC LETTER SH (contrasting with RUNIC LETTER SIGEL LONG-BRANCH-SOL S) and RUNIC LETTER OO (contrasting with RUNIC LETTER OTHALAN ETHEL O).



Figure 4. The right panel of the Franks Casket, showing the cryptogrammic runes.

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along the top, down the right side, along the bottom where the
 runes are upside down, and finishes going upwards on the left-
 hand side. A unique feature of the inscription on this side of
 the casket is its use of the following arbitrary vowel-runes:
                ha, Læ, Xe, {i, 40.
 Normal vowel-runes occur only twice in the main inscription:
 Me in særden, and Ma in the ligature & fa in sefa, where Napier
 preferred to read sefu. In the three short words carved in runes
 within the figure-panel itself, however, the normal vowel-runes
 only are employed. These words will be considered later. The
 main inscription reads:
              HXRHHHHITLPHYHLRMBXRXLD
              herhossitæponhærmbergæ a
                  11X
                  gl ..
   Right side: MR{X{P4P }
              drigipswæ
             H { R { X R ↑ h X X { 4 X R h F 4 L R M M X 4
  Bottom:
              hiri erta e gi s grafsærd ens
                  HRXIN
                  orgæa
  Left side: XM4X # 14 R X 1
             nd sefatornæ
This may be transcribed into three lines of alliterative verse:
             her hos sitæþ on hærmbergæ
             agl.. drigip; swæ hiri erta egi sgraf,
             særden sorgæ and sefa tornæ.
The interpretation of these lines, however, is beset with diffi-
culties, and a fresh study of them must be reserved for another
occasion. The most plausible rendering hitherto advanced is:
    Here the horse stands above the mound of woe,
    It suffers tribulation; just as to her Erta appointed anxiety,
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Figure 5. Description of the text of the right panel of the Franks Casket from Ralph Warren Victor Elliott's *Runes: An introduction* (Manchester University Press, 1959; 2nd edition, 1989), giving a transcription and transliteration of the text.

A grave of grief, in sorrow and anguish of heart.

	16A	16B	16C	16D	16E	16F
0	16A0	†	16C0	1600	16E0	ф 16F0
1	P	R		1	*	h
2	16A1	16B1	16C1	16D1	16E1	16F1
3	16A2	16B2	16C2	16D2	16E2	16F2
4	16A3	16B3	16C3	16D3	16E3	16F3
5	16A4	1684	1604	16D4	16E4	16F4
6	16A5 þ	16B5	16C5	16D5	16E5	16F5
7	16A6 Þ	16B6	16C6	16D6	16E6	16F6
8	16A7	16B7	16C7	16D7	16E7	16F7
	16A8	16B8	16C8	16D8	16E8	16F8
9	16A9 Y	16B9	16C9	16D9	16E9 1 4	
Α	16AA	16BA	16CA	16DA	16EA	
В	16AB	16BB	16CB	16DB	● 16EB	
С	\$	* 16BC	16CC	16DC	• • 16EC	
D	 16AD	16BD	L 16CD	X 16DD	16ED	
E	4	+	\	M	1	
F	16AE	16BE	16CE	16DE	16EE	
	16AF	16BF	16CF	16DF	16EF	U

Date: 2011-05-10

Letters RUNIC LETTER FEHU FEOH FE F 16A0 16A1 RUNIC LETTER V 16A2 RUNIC LETTER URUZ UR U 16A3 RUNIC LETTER YR 16A4 RUNIC LETTER Y 16A5 RUNIC LETTER W 16A6 RUNIC LETTER THURISAZ THURS THORN \rightarrow 00FE **b** latin small letter thorn 16A7 RUNIC LETTER ETH 16A8 RUNIC LETTER ANSUZ A 16A9 RUNIC LETTER OS O 16AA RUNIC LETTER AC A 16AB RUNIC LETTER AESC 16AC RUNIC LETTER LONG-BRANCH-OSS O RUNIC LETTER SHORT-TWIG-OSS O 16AD 16AE RUNIC LETTER O 16AF RUNIC LETTER OE 16B0 RUNIC LETTER ON 16B1 RUNIC LETTER RAIDO RAD REID R 16B2 RUNIC LETTER KAUNA 16B3 RUNIC LETTER CEN 16B4 RUNIC LETTER KAUN K RUNIC LETTER G 16B5 16B6 RUNIC LETTER ENG 16B7 RUNIC LETTER GEBO GYFU G 16B8 RUNIC LETTER GAR 16B9 RUNIC LETTER WUNJO WYNN W \rightarrow 01BF p latin letter wynn 16BA RUNIC LETTER HAGLAZ H 16BB RUNIC LETTER HAEGL H 16BC RUNIC LETTER LONG-BRANCH-HAGALL H RUNIC LETTER SHORT-TWIG-HAGALL H 16BD 16BE RUNIC LETTER NAUDIZ NYD NAUD N 16BF RUNIC LETTER SHORT-TWIG-NAUD N 16C0 RUNIC LETTER DOTTED-N 16C1 RUNIC LETTER ISAZ IS ISS I 16C2 RUNIC LETTER E 16C3 RUNIC LETTER JERAN J 16C4 RUNIC LETTER GER 16C5 RUNIC LETTER LONG-BRANCH-AR AE 16C6 RUNIC LETTER SHORT-TWIG-AR A 16C7 RUNIC LETTER IWAZ EOH 16C8 RUNIC LETTER PERTHO PEORTH P 16C9 RUNIC LETTER ALGIZ EOLHX 16CA RUNIC LETTER SOWILO S 16CB RUNIC LETTER SIGEL LONG-BRANCH-SOL S 16CC RUNIC LETTER SHORT-TWIG-SOL S 16CD RUNIC LETTER C 16CE RUNIC LETTER Z 16CF RUNIC LETTER TIWAZ TIR TYR T 16D0 RUNIC LETTER SHORT-TWIG-TYR T 16D1 RUNIC LETTER D 16D2 RUNIC LETTER BERKANAN BEORC BJARKAN B 16D3 RUNIC LETTER SHORT-TWIG-BJARKAN B 16D4 RUNIC LETTER DOTTED-P 16D5 RUNIC LETTER OPEN-P Μ 16D6 RUNIC LETTER EHWAZ EH E 16D7 RUNIC LETTER MANNAZ MAN M 16D8 RUNIC LETTER LONG-BRANCH-MADR M 16D9 RUNIC LETTER SHORT-TWIG-MADR M 16DA RUNIC LETTER LAUKAZ LAGU LOGR L 16DB RUNIC LETTER DOTTED-L 16DC RUNIC LETTER INGWAZ 16DD RUNIC LETTER ING Ŵ 16DE RUNIC LETTER DAGAZ DAEG D

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16DF
         RUNIC LETTER OTHALAN ETHEL O
16E0
          RUNIC LETTER EAR
16E1
          RUNIC LETTER IOR
16E2
          RUNIC LETTER CWEORTH
16E3
          RUNIC LETTER CALC
16E4
          RUNIC LETTER CEALC
         RUNIC LETTER STAN
16E5
      \downarrow
16E6
          RUNIC LETTER LONG-BRANCH-YR
          RUNIC LETTER SHORT-TWIG-YR
16E7
16E8
          RUNIC LETTER ICELANDIC-YR
         RUNIC LETTER Q
16E9
16EA
         RUNIC LETTER X
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Punctuation

16EB • RUNIC SINGLE PUNCTUATION
16EC • RUNIC MULTIPLE PUNCTUATION
16ED • RUNIC CROSS PUNCTUATION

Golden number runes

Tolkienian extensions

16F1	h	RUNIC LETTER K
	· i	
16F2	۲	RUNIC LETTER SH
16F3	Ŷ	RUNIC LETTER OO
		HOINE EET IEH OO

Cryptogrammic letters

Date: 2011-05-10

•	• .	_
16F4	4	RUNIC LETTER FRANKS CASKET OS
16F5		RUNIC LETTER FRANKS CASKET IS
16F6	X	RUNIC LETTER FRANKS CASKET EH
16F7	þ	RUNIC LETTER FRANKS CASKET AC
16F8	人	RUNIC LETTER FRANKS CASKET AESC

A. Administrative

1. Title

Proposal to encode additional Runic characters in the UCS.

2. Requester's name

Michael Everson and Andrew West

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

Individual contribution.

4. Submission date

2011-05-10

- 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

B. Technical - General

1. Choose one of the following:

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

Proposed name of script

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

1c. Name of the existing block

Runic.

2. Number of characters in proposal

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 B.1.

4. Is a repertoire including character names provided?

4a. If YES, are the names in accordance with the "character naming guidelines"

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

5. Fonts related:

5a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?

Michael Everson.

5b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):

Michael Everson, Fontographer.

6. References:

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

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

7. Special encoding issue: 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. Unicode character properties above.

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.

See above.

C. Technical - Justification

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

2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

Yes. The proposers are users of the Runic script.

2a. If YES, available relevant documents

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

Runologists, Anglo-Saxonists, Tolkienists.

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

Relatively rare.

4b. Reference

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

Yes.

5b. If YES, where?

In texts dealing with the Franks Casket and the linguistic works of J. R. R. Tolkien.

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

Yes.

6a. If YES, is a rationale provided?

Yes.

6b. If YES, reference

Contemporary use and accordance with the Roadmap.

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

Yes.

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?

No.

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

10c. If YES, reference

11a. Does the proposal include use of combining characters and/or use of composite sequences?

Yes.

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

No.

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?