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 define 21 variation sequences for Ogham letters**
Source:	**Andrew West**
Status:	**Individual Contribution**
Action:	**For consideration by JTC1/SC2/WG2 and UTC**
Date:	**2016-04-21**

1. Introduction

The Ogham block contains all the basic Ogham letters, but ancient Ogham inscriptions sometimes use unusual forms for some letters. This is particularly the case with Pictish Ogham inscriptions in Scotland. It is not clear whether such unusual letterforms are semantically or phonetically distinct from the ordinary letterforms or whether they are simply stylistic variants. However, scholars studying Ogham inscriptions do need to be able to represent significant variants in Unicode text, and font-switching is not an ideal solution. This document therefore proposes the definition of 21 standardized variation sequences for nine Ogham letters (9 with VS1, 9 with VS2, 2 with VS3, and 1 with VS4), as shown in Table 1.

For each base character that has one or more variants, VS1 (FE00) is used to define the standard glyph form given in the ISO/IEC 10646 and Unicode code charts, and VS2 (FE01) onwards are used to define variant forms.

Table 1: Proposed Variation Sequences

Base	VS	Glyph	Description
1687	FE00	ᚇ	OGHAM LETTER DAIR
1687	FE01	ᚇ	OGHAM LETTER RABBIT-EARED DAIR
1690	FE00	ᚐ	OGHAM LETTER AILM
1690	FE01	ᚐ	OGHAM LETTER ANGLED AILM

Base	VS	Glyph	Description
1690	FE02		OGHAM LETTER HAMMERHEAD AILM
1690	FE03		OGHAM LETTER S-SHAPED AILM
1691	FE00		OGHAM LETTER ONN
1691	FE01		OGHAM LETTER ANGLED ONN
1692	FE00		OGHAM LETTER UR
1692	FE01		OGHAM LETTER ANGLED UR
1693	FE00		OGHAM LETTER EADHADH
1693	FE01		OGHAM LETTER ANGLED EADHADH
1694	FE00		OGHAM LETTER IODHADH
1694	FE01		OGHAM LETTER ANGLED IODHADH
1694	FE02		OGHAM LETTER DIAGONAL IODHADH
1695	FE00		OGHAM LETTER EABHADH
1695	FE01		OGHAM LETTER DISJOINED EABHADH
1697	FE00		OGHAM LETTER UILLEANN
1697	FE01		OGHAM LETTER SEMICIRCULAR UILLEANN
1698	FE00		OGHAM LETTER IFIN
1698	FE01		OGHAM LETTER X-SHAPED IFIN

Angled Vowels

The strokes of Ogham vowels letters (U+1690 through U+1694) are normally either dot-shaped or bar-shaped, but as the two forms are not intermixed in the same inscription, this difference can be represented at the font level, and there is no need to define variation sequences for dot forms and bar forms of vowel letters.

The vowel letters in Scottish Ogham inscriptions are normally bar-shaped, but there are a number of Scottish Ogham inscriptions where bar-shaped and chevron-shaped vowel letters occur together (see Fig. 3, Fig. 4 and Fig. 7), and these should to be differentiated as variation sequences.

Hammerhead A

Hammerhead A is a relatively common variant form of the Ogham letter Ailm (U+1690), written as a single stroke crossing and perpendicular to the stemline, with a short horizontal line at the end of the bottom end (see Fig. 1 and Fig. 3). It is uncertain whether this letter represents a special phonetic value or whether it is a stylistic variant intended to make the letter more distinctive.

S-Shaped A

An S-shaped form of the Ogham letter Ailm (U+1690) occasionally occurs in Scottish Ogham inscriptions (see Fig. 2 and Fig. 3). In the *Auraicept na n-Éces* similar S-shaped strokes are used for the M-series of letters, but from context it is clear that the S-shaped stroke in the Scottish inscriptions must be a vowel, and as in two out of three cases this letter occurs between M and QQ, it would seem to be used to represent the *a* of *maqq* "son". However, it is uncertain whether this letter represents a special phonetic value or whether it is simply a stylistic variant intended to make the letter more distinctive.

Diagonal I

An unusual fomr of the letter Iodhadh (U+1694) with diagonal strokes is found on a single Scottish Ogham inscription a (see Fig. 5).

Rabbit-eared D

Rabbit-eared D is the name for a rare variant of the Ogham letter Dair (U+1687), written with the two strokes curving away in opposite directions like a pair of rabbit ears (see Fig. 3 and Fig. 4). In one inscription a pair of rabbit-eared D's are used contrastively with a pair of ordinary D's.

Disjoined E/K

In Irish Ogham inscriptions Ogham letter Eabhadh (U+1695) usually represents a consonant "k", especially as the first letter in the deictic particle *koi*. This letter also occurs in Scottish Ogham inscriptions, where it usually represents a vowel "e". In one Scottish inscription this letter occurs twice in two different forms, one shaped like an X and one shaped like > < (see Fig. 1). The X-shaped letter has been interpretted as a K or a P (U+1698) because it occurs immediately in front of an ordinary letter E; whereas the letter one shaped like > < has been interpretted as an E in the word CERROCCS "cross" (as a borrowing from Latin crux). This disjoined letter also occurs in at least one other Scottish Ogham inscription (see Fig. 2), and in one Irish Ogham inscription.

Semicircular Letter U

An inscription on a stone at Lunnasting in Shetland includes an unidentified letter written as a semicircle below the stemline (see Fig. 6). There is a small semicircle line faintly engraved inside the semicircle, but Forsyth suggests this may be an "initial guide-stroke lightly incised" rather than part of the letter. As the letter occurs between two consonants it has been taken to represent a vowel, but it is not clear what vowel it should represent. It has bees suggested that it is the epigraphic equivalent of the supplementary letter Uilleann ᚗ (U+1697) that is found in the manuscript tradition to represent the diphthong ui.

X-shaped Letter P

In the later manuscript tradition the supplementary letter Ifín ᚘ (U+1698) is used to represent the diphthong io. However, in some Ogham inscriptions in Ireland, Scotland, Wales and Cornwall an X-shaped form of this letter written below the stemline is used to represent the letter P in Latin and Pictish words (it is not used in inscriptions written in Primitive Irish) (see Fig. 8 and Fig. 9).

Double R Ligature

A crosshatched form of doubled Ogham letter Ruis (U+168F), made up of five diagonal strokes in one direction overlaid by five diagonal strokes in the other direction, occurs on a couple of Scottish inscriptions (see Fig. 1 and Fig. 5). We believe that this form can be represented as a ligature of U+168F and U+168F using Zero Width Joiner (i.e. as the sequence <168F 200D 168F>), and so no variation sequence is proposed for it.
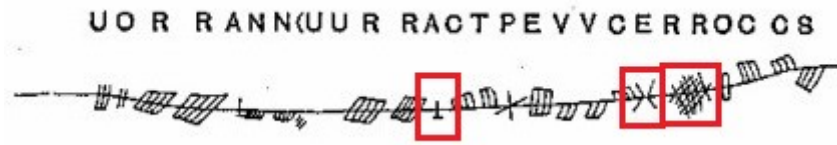
Double Dot Punctuation Mark

A few Scottish Ogham inscriptions show a double-dot punctuation mark, with one dot above the stemline and one dot below the stemline (see Fig. 2, Fig. 4 and Fig. 5).

This punctuation mark is probably influenced by Norse runic punctuation practice, and we suggest that this punctuation mark could be represented using U+16EC RUNIC MULTIPLE PUNCTUATION (which has a script property of Common).

2. Figures

Fig. 1: J. R. Allen and J. Anderson, *The Early Christian Monuments of Scotland* (Edinburgh, 1903) fig. 20
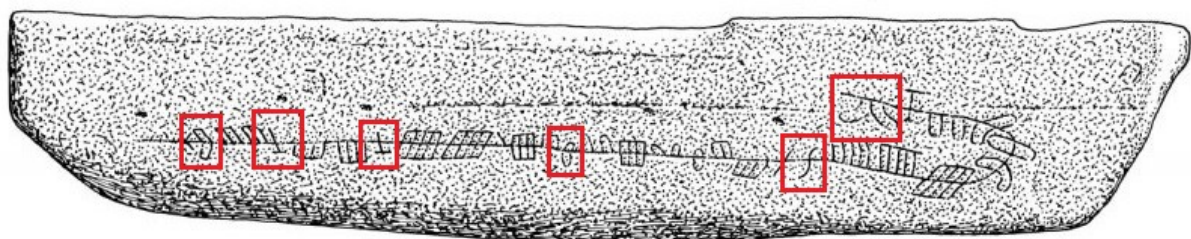

Hammerhead A, Disjoined E/K, and Crosshatched Double R ligature
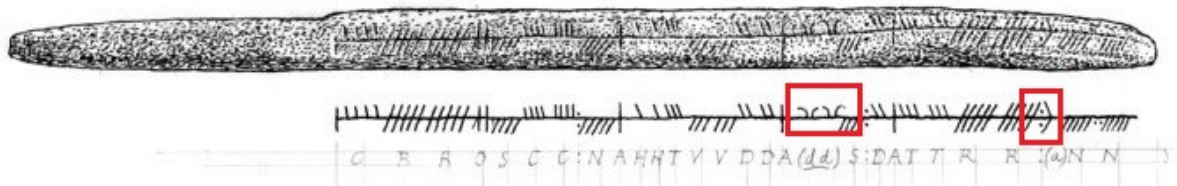
Fig. 2: Canmore SC 1134197 (https://canmore.org.uk/collection/1134197)

Semicircular U, Hammerhead A, Disjoined E/K, S-shaped A, and Double-dot punctuation

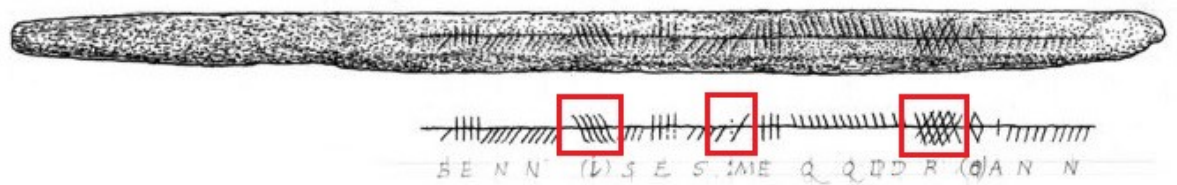Fig. 3: Canmore SC 1080221 (https://canmore.org.uk/collection/1080221)

Bound ogham showing Hammerhead A (three examples), S-shaped A, Rabbit-eared D (upside down at the right end of the inscription), and angled vowels
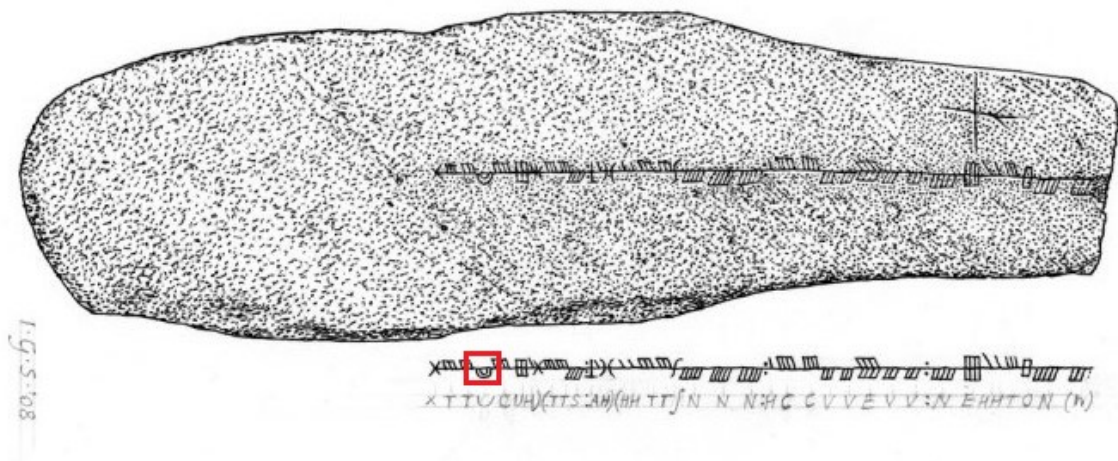
Fig. 4: Canmore SC 1132448 (https://canmore.org.uk/collection/1132448)

Pair of Rabbit-eared D, Angled letter A, and Double-dot punctuation mark

Fig. 5: Canmore SC 1132449 (https://canmore.org.uk/collection/1132449)

Diagonal I, Crosshatched double R ligature, and Double-dot punctuation mark

Fig. 6: Canmore SC 1134197 (https://canmore.org.uk/collection/1134197)

Semicircular letter Uilleann

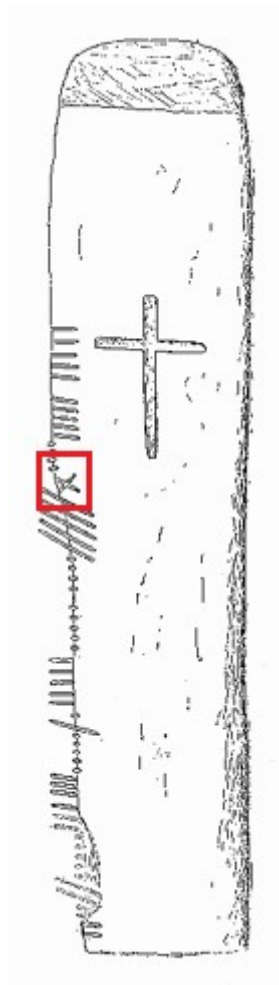Fig. 7: Bornais Bone Plaque

Straight vowel (E) and angled vowel (I) together

Fig. 8: R. A. S. Macalister *Inscriptionum Insularum Celticarum* (1945) #327

X-shaped letter P

Fig. 9: R. A. S. Macalister *Inscriptionum Insularum Celticarum* (1945) #231

X-shaped letter P

3. Bibliography

J. R. Allen and J. Anderson. *The Early Christian Monuments of Scotland.* Edinburgh, 1903.

R. A. S. Macalister, Corpus *Inscriptionum Insularum Celticarum* Vol. I. Dublin: Stationery Office, 1945.