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

**Doc Type: Working Group Document** 

Title: Final proposal to encode Aegean scripts in the UCS

Source: Deborah Anderson and Michael Everson

**Status:** Expert Contribution

Action: For consideration by JTC1/SC2/WG2

Date: 1999-01-23

## A. Administrative

#### 1. Title

Final proposal to encode Aegean scripts in the UCS

## 2. Requester's name

Deborah Anderson and Michael Everson

#### 3. Requester type

**Expert contribution** 

## 4. Submission date

2001-10-03

## 5. Requester's reference

Replaces N2327. This proposal corrects two glyphs, character names and adds additional background information about Cypriot.

## 6a. Completion

This is a complete proposal.

## 6b. More information to be provided?

No.

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

## 1a. New script? Name?

Yes. Aegean Numbers, Cypriot Syllabary, Linear B Syllabary, and Linear B Ideograms.

## 1b. Addition of characters to existing block? Name?

No.

## 2. Number of characters

324. Aegean Numbers (57), Cypriot Syllabary (55), Linear B Syllabary (88), and Linear B Ideograms (124).

## 3. Proposed category

Category C

## 4. Proposed level of implementation and rationale

Level 1 because they are non-combining.

## 5a. Character names included in proposal?

Yes

## 5b. Character names in accordance with guidelines?

Yes

## 5c. Character shapes reviewable?

Yes

## 6a. Who will provide computerized font?

Michael Everson, Everson Typography

## 6b. Font currently available?

Yes

#### 6c. Font format?

TrueType

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

Yes.

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

No.

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

No.

## C. Technical -- Justification

#### 1. Contact with the user community?

Yes. Yves Duhoux (Département d'Études grecques, latines et orientales, Faculté de Philosophie et Lettres, Université Catholique de Louvain), Jean-Pierre Olivier (Fonds National Belge de la Recherche Scientifique), John Bennet (Oxford), Tom Palaima (University of Texas at Austin), and José Melena (Universidad del País Vasco).

## 2. Information on the user community?

Scholars.

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

The Cypriot and Linear B scripts were used to write early forms of Greek. The Aegean numbers were used throughout the Aegean, also by Linear A users.

## 3b. Reference

## 4a. Proposed characters in current use?

Yes.

#### 4b. Where?

Scholarly contexts.

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

No.

#### 5b. Rationale

Accordance with the Roadmap.

## 6. Should characters be kept in a continuous range?

Yes.

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

No.

7b. Where?

7c. Reference

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

No.

8b. Where?

8c. Reference

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

No

9b. List of composite sequences and their corresponding glyph images provided?

No.

10. Characters with any special properties such as control function, etc. included?

No.

## Proposal.

#### Linear B.

The script called Linear B is a syllabic writing system which was used on the island of Crete (and parts of the nearby mainland) to write the oldest recorded variety of the Greek language. Linear B clay tablets predate Homeric Greek by some 700 years, the latest being from the mid- to late 13th century BCE. Major

archaeological sites include Knossos, first uncovered in about 1900 by Sir Arthur Evans, and a major site near Pylos on the mainland. The majority of inscriptions currently known are inventories of commodities and accounting records.

The script resisted early attempts at decipherment, but it finally yielded to the efforts of Michael Ventris, an architect and amateur decipherer. Ventris' breakthrough in decipherment came after the realization that the language might be Greek, and not (as had been previously thought) a completely unknown language. Ventris formed an alliance with John Chadwick, and decipherment proceeded quickly. Ventris and Chadwick published a joint paper in 1953.

Linear B was written from left to right with no non-spacing marks or other complications. The script consists mainly of a number of phonetic signs representing the combination of a consonant and vowel. There are about 60 known phonetic signs, a few signs that seem to be mainly free variants (Chadwick's optional signs), a few unidentified signs, numerals, and a number of ideographic signs which were used mainly as counters for commodities. Some ligatures formed from combinations of syllables were apparently used as well. Chadwick gives several examples of these ligatures, the most common of which are included in this encoding. Other ligatures should be represented using ZERO-WIDTH JOINER.

## Cypriot.

The Cypriot syllabary was used to write the Cypriot dialect of Greek from about 800 to 200 BCE. It is related to Linear B and Cypro-Minoan, the latter being a script used for language still unidentified. Interpretation has been aided by the fact that, as it died out, inscriptions were carved using both the Greek alphabet and the Cypriot syllabary. Unlike Linear B and Cypro-Minoan, the Cypriot syllabary was usually written right-to-left. Word breaks can be indicated, though dividers are also used between larger word groups. Although both Linear B and the Cypriot syllabary were used to write Greek dialects, Linear B provides for a more highly abbreviated spelling. Structurally, the Cypriot syllabary consists of combinations of up to twelve initial consonants and five different vowels. Long and short vowels are not distinguished. The Cypriot syllabary distinguishes among a different set of initials than Linear B; for example, unlike Linear B, Cypriot has maintained a distinction between L and R, though not between D and T. Not all of the 60 possible consonant-vowel combinations are represented. As with Linear B, the Cypriot syllabary is well-understood and documented.

## Aegean Numbers.

Those signs used to denote Aegean whole numbers (U+ 10107 to U+10133) derive from the non-Greek Linear A script. The signs are used in Linear B. The Cypriot syllabary appears to use the same system – at least the signs appear in extant texts for the lower digits. For measurements of agricultural and industrial products, Linear B uses three series of signs: liquid measures, dry measures, and weights. No set of signs for linear measurement has yet been found. Liquid and dry measures share the same symbols for the two smaller subunits; the system of weights retains its own unique subunits. Though several of the signs originate in Linear A, the measuring system of Linear B differs from that of Linear A. Linear B relies on units and subunits, much like the imperial "quart", "pint", and "cup", whereas Linear A uses whole numbers and fractions. The absolute values of the measurements have not yet been completely agreed upon.

## **Bibliography**

Bennett, Emmett L. (1996). "Aegean Scripts." In *The World's Writing Systems*, edited by Peter T. Daniels and William Bright. Oxford: University Press.

Chadwick, John. (1970). The Decipherment of Linear B. Second Edition. Cambridge: University Press.

Chadwick, John. (1987). Linear B and Related Scripts. Berkeley: University of California Press.

Hooker, J. T. (1980). *Linear B: An Introduction*. Bristol, Bristol Classics Press.

Masson, Olivier. (1983). Les inscriptions chypriotes syllabiques. Paris: Editions E. de Boccard.

Sampson, Geoffrey. Writing Systems; a linguistic introduction.

Ventris, Michael, and Chadwick, John. (1973). *Documents in Mycenaean Greek*. 2nd edition. Cambridge: University Press.

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**Row 100: LINEAR B SYLLABARY** 

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## **Row 100: LINEAR B SYLLABARY**

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**Row 100: AEGEAN NUMBERS; Row 108: CYPRIOT SYLLABARY** 

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## **Row 100: AEGEAN NUMBERS; Row 108: CYPRIOT SYLLABARY**

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