

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

Doc Type: Working Group Document**Title: Revised proposal to encode the Cypro-Minoan script in the SMP of the UCS****Source: UC Berkeley Script Encoding Initiative (Universal Scripts Project)****Author: Michael Everson****Status: Liaison Contribution****Action: For consideration by JTC1/SC2/WG2 and UTC****Date: 2016-07-22****Replaces: N4715 (L2/16-089)**

1. Introduction. The Cypro-Minoan syllabary is an undeciphered syllabic script which was used on the island of Cyprus during the Late Bronze Age (*ca.* 1550–1050 BCE). Arthur Evans coined the term “Cypro-Minoan” in 1909 based on its visual similarity to Linear A on Minoan Crete, from which Cypro-Minoan is thought to be derived. The corpus of Cypro-Minoan comprises approximately 250 objects—such as clay balls, cylinders, and tablets and votive stands. Discoveries have been made at various sites around Cyprus, such as Enkomi, Kition, Kalavasso, and Palaepaphos. Discoveries have also been made in the ancient city of Ugarit on the Syrian coast and in Tiryns in Greece. In the Early Iron Age, Cypriots developed the Cypriot Syllabary from Cypro-Minoan. The Cypriot Syllabary was used to write Greek and Eteocypriot, and has been encoded already in the UCS.

2. Decipherment. The present state of Cypro-Minoan epigraphy is rather unpredictable. New analyses of the inscriptions may provide important changes in terms of the decipherment. The sign list, the basic repertoire of signs which are being worked on, however, is stable, and forms the basis of this proposal. Investigation continues into identifying which signs are variants of others. As consensus is reached among experts, annotations can be added, or a Unicode Technical Note can be created. The principle of taking a catalogue-based repertoire for encoding undeciphered and partially-deciphered scripts has long been established for the UCS (for example, Linear A, Phaistos Disc, Anatolian Hieroglyphs). The experts consulted have been informed about the nature of the UCS (permanent encoding, unchangeable names, informative notes) and are agreed that so long as the interpretation, the *meaning* of the signs is unaffected, a catalogue-based repertoire is safest, allowing for the digitization of the corpus of decipherment work, as well as enabling a normalization based on an eventual final decipherment.

3. Structure. The Cypro-Minoan script is undeciphered. Some, but not so many, characters are similar to characters in Linear A and B, but no reliable transliterations are sufficient to be definitive. The script appears generally to have left-to-right directionality (for a number of boustrophedon or right-to-left inscriptions, see e.g. Ferrara, vol. I, p. 209 sq.). Numbers are known, and are the same as in other Aegean scripts. Some basic punctuation has been identified. Students of Cypro-Minoan maintain with almost absolute certainty that the core of the script (i.e. discounting numbers and punctuation signs) is phonographic, with signs that represent sound. Each sign occurs in isolation as well as in sign-sequences. Moreover, judging by the number of signs, it is possible to say even prior to decipherment that the phonograms are almost certainly syllabograms representing open syllables, as is the case with the other syllabaries of the Aegean-Cypriot group.

4. Repertoire. Through the course of the history of the decipherment of the Cypro-Minoan script, a standardized catalogue of letters was drawn up by Émilie Masson. The “Masson set” of numbers 1–114 from Masson 1974 form the basis for the repertoire, supplemented by a number of additions from Olivier 2007. (See Figures 2a, 2b, and 2c for Masson’s charts, and Figures 3a, 3b, and 3c for Olivier’s.)

Masson’s original classification was divided into four groups, archaic CM, CM1, CM2, and CM3, based on what she considered to be developmental stages of the writing system. Consensus these days seems to be more agnostic and unifications across the columns tend to be proposed in moves toward decipherment. Such discussion is part and parcel of the discussion surrounding an eventual decipherment. In any case, in the figures below, Masson’s classifications will be seen. The 15 signs of Masson’s CM “archaic signs” repertoire chart (Figure 2d below) are not *per se* a part of this proposal. No scholar has requested it be included, because the analysis is not considered sound, and the Roman numerals I to XV she used are not a part of the general catalogue.

As mentioned above, the encoding proposed here is based on Masson’s standardized catalogue, despite the fact that several of the characters are now generally considered to be variants of each other. In Olivier 2007 the basic repertoire has been tentatively reduced from 114 to 96 characters in terms of the decipherment; in Ferrara 2012 a further reduction down to 74 characters has been proposed. Cross references for what might be considered to be “safe” variant identifications are given as informative comments in the names list. While Masson’s original unification of CM1, CM2, and CM3 form the basis of the characters CM001 through CM114. To this Olivier added CM012B; the other characters he identified which have been included in this proposal include logograms, punctuation, and the repertoire of the Enkomi tablet “ENKO Atab 001”. Other characters included by Olivier can be unified with existing numbers and punctuation from the Aegean Numbers block. It should be noted that while Olivier’s work (and re-working of Masson) is used more as a departing point for modern research, he nevertheless maintained the same catalogue numbers even where he suggested that some characters could be unified with others.

The encoding of the unified Masson characters will enable the representation of the history of Cypro-Minoan studies, where the catalogue entities have been distinguished in discussions of the decipherment. Scholars wishing to publish normalized texts will certainly wish to avoid the use of the “redundant” characters, or might choose to use them as indicative of the temporal or geographical provenance of a text. But documents relating to the decipherment itself distinguish them regularly, and that distinction must be maintained in plain text, particularly as it is not necessarily possible to rule out a distinction given the lack of a complete decipherment.

5. Character names. The character names for Cypro-Minoan are based on Masson’s catalogue, with numbers padded with one to two zeros where appropriate.

5.1 Recommendations for expansion. For future expansion based on newly-discovered characters, Cypro-Minoanists have two options: If the character is clearly based on an existing character, its catalogue number could be based on that with B, C, and so on appended. Other new signs could be added in the 200, 300, or 400 series; some have been added to these categories in this proposal. It can be recommended that in scholarly publications the CM- numbers be used for encoded characters, and *- or *CM- numbers be used in publications for new discoveries which have not been standardized in the UCS (to avoid confusion with encoded characters).

5.2 Cross-references in the names list. The cross references indicate the relationship of variant characters to the main character, such as U+12572 Φ CYPRO-MINOAN SIGN CM003 which has been identified as a variant of U+12571 Υ CYPRO-MINOAN SIGN CM002. This kind of annotation provides vital

information to the user of the names list, namely, guidance as to the proper character to be used for a normalized text, since the variant forms have been deemed obsolete. This is essential information which should be retained in the names list.

Again, the catalogue must be complete. Even if today we believe Φ that CM002 and Ψ CM003 can be unified, leaving a blank in the code chart for CM003 would serve no purpose, and the numbers would never be re-used for new characters, since there *is* an entity already known as CM003. The Cypro-Minoan corpus includes both the archaeological texts and the body of literature written about them. Moreover, unifications removing things from the catalogue are not safe.

6. Logograms. Olivier gives explicit catalogue numbers to two “logograms”, U+125E3 Ψ CYPRO-MINOAN SIGN CM201 and U+125E4 Δ CYPRO-MINOAN SIGN CM202, which have been included in this repertoire. Some scholars consider these possible abbreviations. The characters are rare, but are retained in this proposal because they are part of Olivier’s revision of Masson.

7. Numbers. Cypro-Minoan texts give a number 1, 10, and 100, which are identical to numbers common to the Aegean area. Olivier gives three “arithmograms”, which are here recommended to be unified with U+10107 \uparrow AEGEAN NUMBER ONE (\uparrow), U+10110 $-$ AEGEAN NUMBER TEN ($-$), and U+10119 \circ AEGEAN NUMBER ONE HUNDRED (\bullet).

8. Punctuation. Olivier gives three “stiktograms”, two of which are recommended to be unified with U+10100 \downarrow AEGEAN WORD SEPARATOR LINE (\downarrow) and U+10101 \bullet AEGEAN WORD SEPARATOR DOT (\bullet). The third of these is proposed here as U+125E5 \S CYPRO-MINOAN SIGN CM301, which is attested 21 times on the clay cylinder from Enkomi. And one additional character has been added, deriving from a clay tablet from Ugarit, where it is used 20 times, U+125E6 \S CYPRO-MINOAN SIGN CM302. Both are also attested elsewhere. Miguel Valério has suggested that \downarrow is used as a divider (but see Figure 13 where it is final), that \bullet acts as a kind of colon or full stop after groups of ten lines of text.

9. The Enkomi tablet “ENKO Atab 001”. In reviewing the publication of N4715, feedback from a number of scholars, including Maurizio Del Freo and Massimo Perna, made it clear that an encoding of Cypro-Minoan should include the 21 CM0 signs from the oldest Enkomi tablet. Del Freo said:

A number of them can be rather easily identified with CM1/2/3 signs; for other signs, though, identifications are arbitrary; finally, a certain number are certainly without parallels. Given the special status of the Enkomi tablet, we suggest to keep these signs separated from the others with cross-references to the relevant CM1/2/3 characters, when it is possible.

Accordingly and on the basis of Olivier’s chart (Figure 3d), which improves definitively on Masson’s original CM0 chart (Figure 2d), these 21 characters are also proposed here as U+125E7 \S CYPRO-MINOAN SIGN CM401 through U+125FB \S CYPRO-MINOAN SIGN CM421. See Figure 1 for an image of this text.

10. Glyphs. The fonts used in this proposal were digitized by Michael Everson, based on glyphs in Masson 1974 with some additional material from Olivier 2007. Typographically rectified glyphs for Cypro-Minoan have not yet been developed. The kind of ductus information seen in Figure 12 could be useful in such work.

11. Unicode Character Properties

12570;CYPRO-MINOAN SIGN CM001;Lo;0;L; ; ; ; ;N; ; ; ;	12575;CYPRO-MINOAN SIGN CM006;Lo;0;L; ; ; ; ;N; ; ; ;
12571;CYPRO-MINOAN SIGN CM002;Lo;0;L; ; ; ; ;N; ; ; ;	12576;CYPRO-MINOAN SIGN CM007;Lo;0;L; ; ; ; ;N; ; ; ;
12572;CYPRO-MINOAN SIGN CM003;Lo;0;L; ; ; ; ;N; ; ; ;	12577;CYPRO-MINOAN SIGN CM008;Lo;0;L; ; ; ; ;N; ; ; ;
12573;CYPRO-MINOAN SIGN CM004;Lo;0;L; ; ; ; ;N; ; ; ;	12578;CYPRO-MINOAN SIGN CM009;Lo;0;L; ; ; ; ;N; ; ; ;
12574;CYPRO-MINOAN SIGN CM005;Lo;0;L; ; ; ; ;N; ; ; ;	12579;CYPRO-MINOAN SIGN CM010;Lo;0;L; ; ; ; ;N; ; ; ;
	1257A;CYPRO-MINOAN SIGN CM011;Lo;0;L; ; ; ; ;N; ; ; ;
	1257B;CYPRO-MINOAN SIGN CM012;Lo;0;L; ; ; ; ;N; ; ; ;
	1257C;CYPRO-MINOAN SIGN CM012B;Lo;0;L; ; ; ; ;N; ; ; ;

1257D;CYPRO-MINOAN	SIGN	CM013;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C0;CYPRO-MINOAN	SIGN	CM080;Lo;0;L; ; ; ; ; N; ; ; ; ;
1257E;CYPRO-MINOAN	SIGN	CM014;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C1;CYPRO-MINOAN	SIGN	CM081;Lo;0;L; ; ; ; ; N; ; ; ; ;
1257F;CYPRO-MINOAN	SIGN	CM015;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C2;CYPRO-MINOAN	SIGN	CM082;Lo;0;L; ; ; ; ; N; ; ; ; ;
12580;CYPRO-MINOAN	SIGN	CM016;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C3;CYPRO-MINOAN	SIGN	CM083;Lo;0;L; ; ; ; ; N; ; ; ; ;
12581;CYPRO-MINOAN	SIGN	CM017;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C4;CYPRO-MINOAN	SIGN	CM084;Lo;0;L; ; ; ; ; N; ; ; ; ;
12582;CYPRO-MINOAN	SIGN	CM018;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C5;CYPRO-MINOAN	SIGN	CM085;Lo;0;L; ; ; ; ; N; ; ; ; ;
12583;CYPRO-MINOAN	SIGN	CM019;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C6;CYPRO-MINOAN	SIGN	CM086;Lo;0;L; ; ; ; ; N; ; ; ; ;
12584;CYPRO-MINOAN	SIGN	CM020;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C7;CYPRO-MINOAN	SIGN	CM087;Lo;0;L; ; ; ; ; N; ; ; ; ;
12585;CYPRO-MINOAN	SIGN	CM021;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C8;CYPRO-MINOAN	SIGN	CM088;Lo;0;L; ; ; ; ; N; ; ; ; ;
12586;CYPRO-MINOAN	SIGN	CM022;Lo;0;L; ; ; ; ; N; ; ; ; ;	125C9;CYPRO-MINOAN	SIGN	CM089;Lo;0;L; ; ; ; ; N; ; ; ; ;
12587;CYPRO-MINOAN	SIGN	CM023;Lo;0;L; ; ; ; ; N; ; ; ; ;	125CA;CYPRO-MINOAN	SIGN	CM090;Lo;0;L; ; ; ; ; N; ; ; ; ;
12588;CYPRO-MINOAN	SIGN	CM024;Lo;0;L; ; ; ; ; N; ; ; ; ;	125CB;CYPRO-MINOAN	SIGN	CM091;Lo;0;L; ; ; ; ; N; ; ; ; ;
12589;CYPRO-MINOAN	SIGN	CM025;Lo;0;L; ; ; ; ; N; ; ; ; ;	125CC;CYPRO-MINOAN	SIGN	CM092;Lo;0;L; ; ; ; ; N; ; ; ; ;
1258A;CYPRO-MINOAN	SIGN	CM026;Lo;0;L; ; ; ; ; N; ; ; ; ;	125CD;CYPRO-MINOAN	SIGN	CM093;Lo;0;L; ; ; ; ; N; ; ; ; ;
1258B;CYPRO-MINOAN	SIGN	CM027;Lo;0;L; ; ; ; ; N; ; ; ; ;	125CE;CYPRO-MINOAN	SIGN	CM094;Lo;0;L; ; ; ; ; N; ; ; ; ;
1258C;CYPRO-MINOAN	SIGN	CM028;Lo;0;L; ; ; ; ; N; ; ; ; ;	125CF;CYPRO-MINOAN	SIGN	CM095;Lo;0;L; ; ; ; ; N; ; ; ; ;
1258D;CYPRO-MINOAN	SIGN	CM029;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D0;CYPRO-MINOAN	SIGN	CM096;Lo;0;L; ; ; ; ; N; ; ; ; ;
1258E;CYPRO-MINOAN	SIGN	CM030;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D1;CYPRO-MINOAN	SIGN	CM097;Lo;0;L; ; ; ; ; N; ; ; ; ;
1258F;CYPRO-MINOAN	SIGN	CM031;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D2;CYPRO-MINOAN	SIGN	CM098;Lo;0;L; ; ; ; ; N; ; ; ; ;
12590;CYPRO-MINOAN	SIGN	CM032;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D3;CYPRO-MINOAN	SIGN	CM099;Lo;0;L; ; ; ; ; N; ; ; ; ;
12591;CYPRO-MINOAN	SIGN	CM033;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D4;CYPRO-MINOAN	SIGN	CM100;Lo;0;L; ; ; ; ; N; ; ; ; ;
12592;CYPRO-MINOAN	SIGN	CM034;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D5;CYPRO-MINOAN	SIGN	CM101;Lo;0;L; ; ; ; ; N; ; ; ; ;
12593;CYPRO-MINOAN	SIGN	CM035;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D6;CYPRO-MINOAN	SIGN	CM102;Lo;0;L; ; ; ; ; N; ; ; ; ;
12594;CYPRO-MINOAN	SIGN	CM036;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D7;CYPRO-MINOAN	SIGN	CM103;Lo;0;L; ; ; ; ; N; ; ; ; ;
12595;CYPRO-MINOAN	SIGN	CM037;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D8;CYPRO-MINOAN	SIGN	CM104;Lo;0;L; ; ; ; ; N; ; ; ; ;
12596;CYPRO-MINOAN	SIGN	CM038;Lo;0;L; ; ; ; ; N; ; ; ; ;	125D9;CYPRO-MINOAN	SIGN	CM105;Lo;0;L; ; ; ; ; N; ; ; ; ;
12597;CYPRO-MINOAN	SIGN	CM039;Lo;0;L; ; ; ; ; N; ; ; ; ;	125DA;CYPRO-MINOAN	SIGN	CM106;Lo;0;L; ; ; ; ; N; ; ; ; ;
12598;CYPRO-MINOAN	SIGN	CM040;Lo;0;L; ; ; ; ; N; ; ; ; ;	125DB;CYPRO-MINOAN	SIGN	CM107;Lo;0;L; ; ; ; ; N; ; ; ; ;
12599;CYPRO-MINOAN	SIGN	CM041;Lo;0;L; ; ; ; ; N; ; ; ; ;	125DC;CYPRO-MINOAN	SIGN	CM108;Lo;0;L; ; ; ; ; N; ; ; ; ;
1259A;CYPRO-MINOAN	SIGN	CM042;Lo;0;L; ; ; ; ; N; ; ; ; ;	125DD;CYPRO-MINOAN	SIGN	CM109;Lo;0;L; ; ; ; ; N; ; ; ; ;
1259B;CYPRO-MINOAN	SIGN	CM043;Lo;0;L; ; ; ; ; N; ; ; ; ;	125DE;CYPRO-MINOAN	SIGN	CM110;Lo;0;L; ; ; ; ; N; ; ; ; ;
1259C;CYPRO-MINOAN	SIGN	CM044;Lo;0;L; ; ; ; ; N; ; ; ; ;	125DF;CYPRO-MINOAN	SIGN	CM111;Lo;0;L; ; ; ; ; N; ; ; ; ;
1259D;CYPRO-MINOAN	SIGN	CM045;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E0;CYPRO-MINOAN	SIGN	CM112;Lo;0;L; ; ; ; ; N; ; ; ; ;
1259E;CYPRO-MINOAN	SIGN	CM046;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E1;CYPRO-MINOAN	SIGN	CM113;Lo;0;L; ; ; ; ; N; ; ; ; ;
1259F;CYPRO-MINOAN	SIGN	CM047;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E2;CYPRO-MINOAN	SIGN	CM114;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A0;CYPRO-MINOAN	SIGN	CM048;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F0;CYPRO-MINOAN	SIGN	CM208;Po;0;L; ; ; ; ; N; ; ; ; ;
125A1;CYPRO-MINOAN	SIGN	CM049;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F1;CYPRO-MINOAN	SIGN	CM209;Po;0;L; ; ; ; ; N; ; ; ; ;
125A2;CYPRO-MINOAN	SIGN	CM050;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E3;CYPRO-MINOAN	SIGN	CM201;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A3;CYPRO-MINOAN	SIGN	CM051;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E4;CYPRO-MINOAN	SIGN	CM202;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A4;CYPRO-MINOAN	SIGN	CM052;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E5;CYPRO-MINOAN	SIGN	CM301;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A5;CYPRO-MINOAN	SIGN	CM053;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E6;CYPRO-MINOAN	SIGN	CM302;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A6;CYPRO-MINOAN	SIGN	CM054;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E7;CYPRO-MINOAN	SIGN	CM401;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A7;CYPRO-MINOAN	SIGN	CM055;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E8;CYPRO-MINOAN	SIGN	CM402;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A8;CYPRO-MINOAN	SIGN	CM056;Lo;0;L; ; ; ; ; N; ; ; ; ;	125E9;CYPRO-MINOAN	SIGN	CM403;Lo;0;L; ; ; ; ; N; ; ; ; ;
125A9;CYPRO-MINOAN	SIGN	CM057;Lo;0;L; ; ; ; ; N; ; ; ; ;	125EA;CYPRO-MINOAN	SIGN	CM404;Lo;0;L; ; ; ; ; N; ; ; ; ;
125AA;CYPRO-MINOAN	SIGN	CM058;Lo;0;L; ; ; ; ; N; ; ; ; ;	125EB;CYPRO-MINOAN	SIGN	CM405;Lo;0;L; ; ; ; ; N; ; ; ; ;
125AB;CYPRO-MINOAN	SIGN	CM059;Lo;0;L; ; ; ; ; N; ; ; ; ;	125EC;CYPRO-MINOAN	SIGN	CM406;Lo;0;L; ; ; ; ; N; ; ; ; ;
125AC;CYPRO-MINOAN	SIGN	CM060;Lo;0;L; ; ; ; ; N; ; ; ; ;	125ED;CYPRO-MINOAN	SIGN	CM407;Lo;0;L; ; ; ; ; N; ; ; ; ;
125AD;CYPRO-MINOAN	SIGN	CM061;Lo;0;L; ; ; ; ; N; ; ; ; ;	125EE;CYPRO-MINOAN	SIGN	CM408;Lo;0;L; ; ; ; ; N; ; ; ; ;
125AE;CYPRO-MINOAN	SIGN	CM062;Lo;0;L; ; ; ; ; N; ; ; ; ;	125EF;CYPRO-MINOAN	SIGN	CM409;Lo;0;L; ; ; ; ; N; ; ; ; ;
125AF;CYPRO-MINOAN	SIGN	CM063;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F0;CYPRO-MINOAN	SIGN	CM410;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B0;CYPRO-MINOAN	SIGN	CM064;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F1;CYPRO-MINOAN	SIGN	CM411;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B1;CYPRO-MINOAN	SIGN	CM065;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F2;CYPRO-MINOAN	SIGN	CM412;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B2;CYPRO-MINOAN	SIGN	CM066;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F3;CYPRO-MINOAN	SIGN	CM413;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B3;CYPRO-MINOAN	SIGN	CM067;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F4;CYPRO-MINOAN	SIGN	CM414;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B4;CYPRO-MINOAN	SIGN	CM068;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F5;CYPRO-MINOAN	SIGN	CM415;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B5;CYPRO-MINOAN	SIGN	CM069;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F6;CYPRO-MINOAN	SIGN	CM416;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B6;CYPRO-MINOAN	SIGN	CM070;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F7;CYPRO-MINOAN	SIGN	CM417;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B7;CYPRO-MINOAN	SIGN	CM071;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F8;CYPRO-MINOAN	SIGN	CM418;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B8;CYPRO-MINOAN	SIGN	CM072;Lo;0;L; ; ; ; ; N; ; ; ; ;	125F9;CYPRO-MINOAN	SIGN	CM419;Lo;0;L; ; ; ; ; N; ; ; ; ;
125B9;CYPRO-MINOAN	SIGN	CM073;Lo;0;L; ; ; ; ; N; ; ; ; ;	125FA;CYPRO-MINOAN	SIGN	CM420;Lo;0;L; ; ; ; ; N; ; ; ; ;
125BA;CYPRO-MINOAN	SIGN	CM074;Lo;0;L; ; ; ; ; N; ; ; ; ;	125FB;CYPRO-MINOAN	SIGN	CM421;Lo;0;L; ; ; ; ; N; ; ; ; ;
125BB;CYPRO-MINOAN	SIGN	CM075;Lo;0;L; ; ; ; ; N; ; ; ; ;			
125BC;CYPRO-MINOAN	SIGN	CM076;Lo;0;L; ; ; ; ; N; ; ; ; ;			
125BD;CYPRO-MINOAN	SIGN	CM077;Lo;0;L; ; ; ; ; N; ; ; ; ;			
125BE;CYPRO-MINOAN	SIGN	CM2D0;Lo;0;L; ; ; ; ; N; ; ; ; ;			
125BF;CYPRO-MINOAN	SIGN	CM2D1;Lo;0;L; ; ; ; ; N; ; ; ; ;			

12. Bibliography

- Davis, Brent, Joseph Maran, Soňa Wirghová. 2014. "A new Cypro-Minoan inscription from Tiryns: TIRY Avas 002" in *Kadmos* 53(1-2): 91–109.
- Del Frio, Maurizio. 2010. "Bibliografia" in *Studi Micenei ed Egeo-Anatolici*. 52:305-313.
- Duhoux, Yves. 2009. "The Cypro-Minoan Tablet No. 1885 (Enkomi): an Analysis", in *Kadmos* 48, pp. 5–38
- Egetmeyer, Markus. 2014. "Sur l'état de la recherche en écriture chypro-minoenne", *Res Antiquae* 11, p. 231-248.
- Egetmeyer, Markus. 2016. "A bronze bowl from Palaepaphos-Skales with a new Cypro-Minoan inscription from the Cypro-Geometric I period", in: Vassos Karageorghis and Efsthathios Raptou, *Palaepaphos-Skales. Tombs of the Late Cypriot IIB and Cypro-Geometric periods (excavations of 2008 and 2011)*. Nikosia: The Cyprus Institute, 2016, Appendix V, 131-136 and plate LXX.
- Ferrara, Silvia. 2012. *Cypro-Minoan Inscriptions. Vol. 1, Analysis*. Oxford: Oxford University Press.

Hirschfeld, Nicolle. 2010. "Cypro-Minoan", in *The Oxford Handbook of the Bronze Age Aegean (ca. 300–100 BC)*. Ed. Eric H. Cline. Oxford: Oxford University Press.

Masson, Émilie. 1974. *Cyprominoica. Répertoires, documents de Ras Shamra, essais d'interprétation*. Göteborg: Paul Åströms Förlag.

Olivier, J.-P. 2007. *Édition holistique des textes chypro-minoens*. Pisa-Rome. Known as "HoChyMin".

Steele, Philippa M. 2013. "The Cypro-Minoan Corpus", in *Linguistic History of Ancient Cyprus*. Cambridge: Cambridge University Press.

Valério, Miguel. 2014. "Seven uncollected Cypro-Minoan inscriptions" in *Kadmos* 53: 111–127.

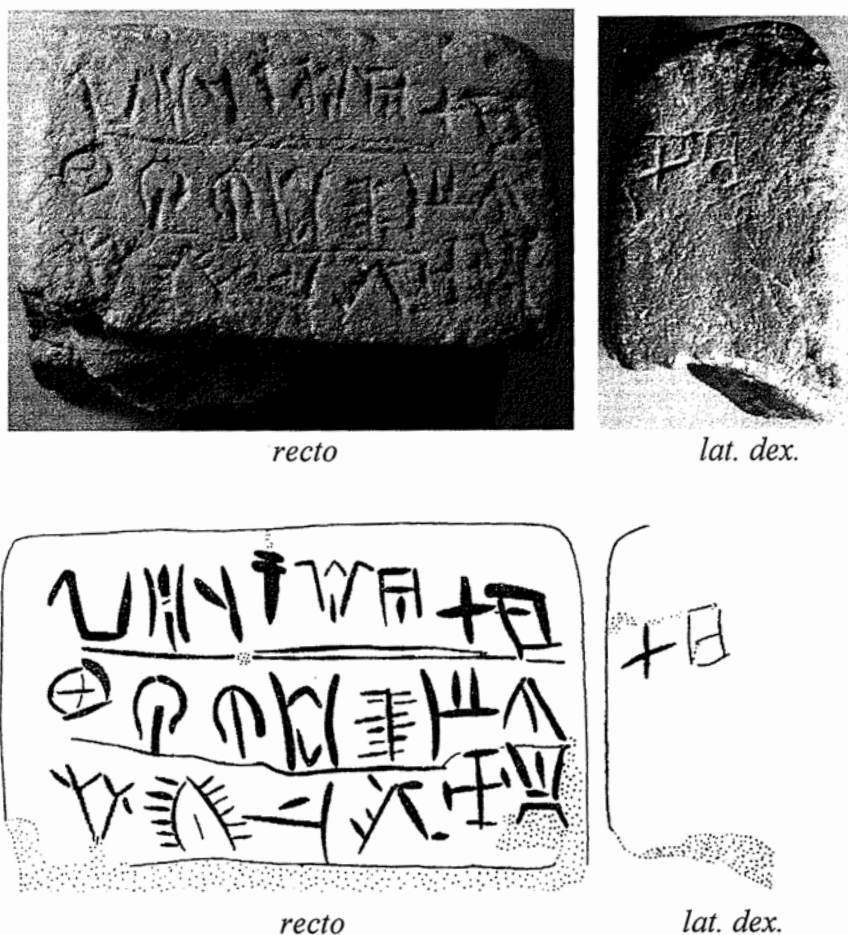
13. Acknowledgements

This project was made possible in part by a grant from the U.S. National Endowment for the Humanities, which funded the Universal Scripts Project (part of the Script Encoding Initiative at UC Berkeley). Any views, findings, conclusions or recommendations expressed in this publication do not necessarily reflect those of the National Endowment for the Humanities.

Figures

001. ENKO Atab 001 (CypMus 1885)

Tablette d'argile fragmentaire (ca 7,7 x [5,8] x 3,5 cm ; l. lignes ca 6,3 cm ; h. signes de ca 0,7 à 1 cm). Gravé.



Dessin Godart & Sacconi 1979
(corrigé d'après Masson É. 1969 et révisions JPO 2001 et 2005 ; échelle ca. 1 : 1).

Figure 1. The Enkomi tablet referred to in §9 above, “##001. ENKO Atab 001”, from Olivier 2007.

	CM 1	CM 2	CM 3		CM 1	CM 2	CM 3
1	I	I	I	21	∧ () ∧	∧	
2	⊥ ⊥			22			∪
3			∅	23	∧ ∨	∪	∪
4	⊥ ⊥	⊥	⊥	24	∪ ∪	∪	
5	⊥ ⊥	⊥	⊥ ⊥	25	∪ ∪	∪	∪
6	⊥ ⊥	⊥	⊥ ⊥	26	∪ ∪		
7	⊥ ⊥			27	∪ ∪ ∪	∪	∪
8	⊥ ⊥	⊥	⊥	28	∪ ∪	∪	∪
9	⊥ ⊥	⊥	⊥	29	∪	∪	
10		⊥		30		∪	
11		∪		31	∪		
12	∪	∪		32	∪		
13	∪ ∪			33		∪	
14	∪ ∪			34	∪ ∪		
15	∪ ∪			35	∪ ∪	∪ ∪	∪ ∪ ∪
16	∪ ∪			36	∪ ∪	∪ ∪	∪ ∪ ∪
17	∪ ∪	∪		37	∪ ∪	∪ ∪	∪ ∪ ∪
18	∪ ∪			38	∪ ∪	∪ ∪	∪ ∪ ∪
19	∪ ∪		∪	39	∪ ∪		
20			∪	40			∪

Figure 2a. Sign list from Masson 1974

	CM 1	CM 2	CM 3		CM 1	CM 2	CM 3
41	∪ ∪ ∪			61	∪ ∪	∪	
42	∪ ∪			62		∪	
43	∪ ∪		∪	63	∪ ∪		
44	∪ ∪	∪	∪	64	∪ ∪		
45	∪ ∪			65		∪	
46	∪ ∪			66		∪	
47		∪		67	∪ ∪ ∪		
48	∪ ∪	∪		68	∪ ∪	∪ ∪	
49		∪		69	∪ ∪	∪ ∪	
50	∪ ∪		∪	70	∪ ∪	∪	∪ ∪
51		∪	∪	71		∪	∪ ∪
52		∪		72		∪	
53	∪ ∪	∪		73	∪ ∪ ∪		∪ ∪
54		∪		74	∪	∪	∪
55	∪ ∪	∪		75	∪	∪	∪
56		∪	∪	76		∪	
57	∪	∪	∪	77	∪ ∪		
58		∪		78	∪	∪	
59	∪ ∪	∪ ∪		79		∪ ∪	
60		∪		80		∪	

Figure 2b. Sign list from Masson 1974

	CM 1	CM 2	CM 3		CM 1	CM 2	CM 3
81	𐀀	𐀁		101	𐀂 𐀃 𐀄		
82	𐀅			102	𐀆 𐀇	𐀈	𐀉
83	𐀊			103	𐀋 𐀌		𐀍
84	𐀎			104	𐀏 𐀐	𐀑	𐀒 𐀓 𐀔
85	𐀕 𐀖 𐀗			105			𐀘
86	𐀙			106	𐀚		
87	𐀛 𐀜	𐀝	𐀞	107	𐀟 𐀠 𐀡 𐀢	𐀣	
88	𐀤 𐀥 𐀦			108	𐀧 𐀨		
89		𐀩 𐀪		109	𐀫 𐀬	𐀭	
90		𐀮		110	𐀯 𐀰 𐀱		𐀲
91	𐀳 𐀴 𐀵		𐀶 𐀷	111	𐀸 𐀹		
92	𐀺		𐀻 𐀼	112	𐀽 𐀾		
93		𐀿 𐁀		113	𐁁 𐁂		
94			𐁃 𐁄 𐁅	114	𐁆 𐁇 𐁈		
95	𐁉	𐁊 𐁋	𐁌 𐁍				
96	𐁎 𐁏 𐁐	𐁑 𐁒 𐁓	𐁔 𐁕				
97	𐁖 𐁗 𐁘 𐁙	𐁚	𐁛 𐁜				
98	𐁝 𐁞		𐁟 𐁠				
99	𐁡 𐁢 𐁣		𐁤 𐁥				
100			𐁦 𐁧				

Figure 2c. Sign list from Masson 1974

5	+	I	⋄
6	⊕	II	⊗
7	⊖	III	⊕
8	⊗	IV	⊖
23	⊘	V	⊗
27	⊙	VI	⊘
44	⊚	VII	⊙
57	⊛	VIII	⊚
66	⊜	IX	⊛
82	⊝	X	⊜
95	⊞	XI	⊝
97	⊟	XII	⊞
102	⊠	XIII	⊟
104	⊡	XIV	⊠
108	⊢	XV	⊡

Fig. 1. — Répertoire des signes archaïques.

Figure 2d. Chart of “archaic signs” I-XV from Masson 1974

Syllabograms	026		063		096	
001	I		064		097	
002		028		067	099	
004		030		068	101	
005		033		069	102	
006		034		070	103	
007		035		072	104	
008		036		073	107	
009		037		075	108	
011		038		081	109	
012		039		082	110	
012b		041		083	112	
013		044		084	114	
015		046		085	Logograms	
017		050		086	201	
019		053		087	202	
021		055		088	Aritmograms	
023		056		091	1	
024		059		092	10	
025		061		095	100 ?	
Stiktograms						

Figure 3a. Sign list for CM1 from Olivier 2007. The arithmograms 1, 10, and 100 are unified with common Aegean numbers. The stiktograms | and • are unified with common Aegean punctuation. The & is cm301 proposed in this document.

Syllabogrammes	037		079	
001	I		080	
004		044	081	
005		047	082	
006		049	087	
008		051	089	
009		052	090	
010		054	091	
011		056	092	
012		059	095	
013		060	096	
017		061	097	
021		062	102	
023		064	104	
024		066	107	
025		068	110	
027		069	Stiktogrammes	
028		070		
029		072		
030		074		
033		075		
035		076		
036		078		

Figure 3b. Sign list for CM2 from Olivier 2007.

Syllabogrammes	038		095	
001		040		096
002		044		097
004		050		098
005		051		099
006		053		100
007		055		102
008		056		103
009		058		104
011		069		105
013		070		110
019		071		Arithmogrames
021		073		l
023		074		X (ou C ?)
025		075		Stiktogrammes
027		082		
028		087		
035		091		
036		092		
037		094		

Figure 3c. Sign list for CM3 from Olivier 2007.

01		08		15	
02		09		16	
03		10		17	
04		11		18	
05		12		19	
06		13		20	
07		14		21	

Figure 3d. Sign list of the Enkomi tablet “ENKO Atab 001” from Olivier 2007.

COMMON TO ALL SIGNARIES

	CM 1	CM 2	CM 3		CM 1	CM 2	CM 3
001	I	I	I	038	MI	MI	MI
004	T	T	T	044	F	F	F
005	+	+	+	056	W	W	W
006	+	+	+	069	B	B	B
008	F	F	F	070	B	B	B
009	±	±	±	075	B	B	B
011	S	S	S	082	Y	Y	Y
013	T	T	T	087	Y	Y	Y
021	∩	∩	∩	091	Y	Y	Y
023	∩	∩	∩	092	Y	Y	Y
025	A	A	A	095	Y	Y	Y
027	A	A	A	096	Y	Y	Y
028	↑	↑	↑	097	H	H	H
035	MI	MI	MI	102	F	F	F
036	MI	MI	MI	104	F	F	F
037	MI	MI	MI	110	F	F	F

Figure 4. Common sign list from Olivier 2007.

	CM 1	CM 2	CM 3		CM 1	CM 2	CM 3		CM 1	CM 2	CM 3
001	I	I	I	040	...	...	...	079	...	MI	...
002	I	...	...	041	Δ	...	...	080	...	MI	...
004	T	T	T	044	F	F	F	081	MI	MI	...
005	+	+	+	046	W	...	...	082	Y	Y	Y
006	+	+	+	047	...	MI	...	083	Y	...	...
007	+	...	+	049	...	Y	...	084	Y	...	...
008	F	F	F	050	W	...	W	085	B	...	...
009	±	±	±	051	...	W	W	086	Y	...	...
010	...	±	...	052	...	!!	...	087	Y	Y	Y
011	S	S	S	053	W	...	W	088	Y	...	...
012	∩	∩	...	054	...	Y	...	089	...	Y	...
012b	∩	...	...	055	W	...	W	090	...	Y	...
013	T	T	T	056	W	MI	MI	091	Y	Y	Y
015	∩	...	...	058	...	...	...	092	Y	Y	Y
017	Y	Y	...	059	Y	Y	...	094	...	...	...
019	Y	...	Y	060	...	Y	...	095	B	B	B
021	∩	∩	∩	061	Y	W	...	096	F	F	F
023	∩	∩	∩	063	Y	...	...	097	H	H	H
024	∩	∩	...	062	...	MI	...	098	...	...	Y
025	A	A	A	064	Y	...	...	099	Y	...	Y
026	A	...	...	066	...	Y	...	100	...	...	Y
027	A	A	A	067	Y	...	...	101	Y	...	...
028	↑	↑	↑	068	H	H	...	102	Y	Y	Y
029	...	∩	...	069	B	B	S	103	MI	...	MI
030	∩	∩	...	070	B	B	B	104	Y	Y	Y
033	∩	∩	...	071	...	...	...	105	...	...	Y
034	Y	...	...	072	B	B	...	107	Y	Y	...
035	MI	MI	MI	073	B	...	B	108	Y	...	...
036	MI	MI	MI	074	...	A	B	109	Y	...	...
037	MI	MI	MI	075	...	B	B	110	Y	MI	MI
038	MI	MI	MI	076	...	B	...	112	Y	...	...
039	Y	...	...	078	...	Y	...	114	Y	...	...

Figure 5. Comparison sign list from Olivier 2007.

UNIQUE TO CM1		UNIQUE TO CM2		UNIQUE TO CM3	
012b	𐎡	010	𐎡	040	𐎡
015	𐎢	029	𐎢	058	𐎢
026	𐎣	047	𐎣	071	𐎣
034	𐎤	049	𐎤	094	𐎤
039	𐎥	052	𐎥	098	𐎥
041	𐎦	054	𐎦	100	𐎦
046	𐎧	060	𐎧	105	𐎧
063	𐎨	062	𐎨		
067	𐎩	066	𐎩		
083	𐎪	076	𐎪		
084	𐎫	078	𐎫		
085	𐎬	079	𐎬		
086	𐎭	080	𐎭		
088	𐎮	089	𐎮		
101	𐎯	090	𐎯		
108	𐎰				
109	𐎱				
112	𐎲				
114	𐎳				

Figure 6. Comparison sign list from Olivier 2007.

ENKO Abou 084

𐎡 𐎢 𐎣 𐎤 𐎥

𐎡	𐎢	𐎣	𐎤	𐎥	𐎦
𐎧	𐎨	𐎩	𐎪	𐎫	𐎬
<u>102</u>	087	107	097	|	004
Cf. ENKO Abou 052 (102-087-107-097, 039) e HALA Abou 001 (102-087-107-097-082-008).					

Figure 7. Discussions of signs from a clay *boule* from Enkomi, comparing them with signs from Hala Sultan Tekke.

TABLE 5.10 A tentative standardized sign repertoire.

Masson's Sign no.	CM 1	CM 2	CM 3	Masson's Sign no.	CM 1	CM 2	CM 3
001	I	I	I	058	—	—	⤵
002	⊥	—	⊥	059	⊥	⊥	—
004	⊥	⊥	⊥	061	⊥	⊥	—
005	⊥	⊥	⊥	064	⊥	⊥	—
006	⊥	⊥	⊥	067 ¹¹⁰	⊥	—	—
007	⊥	—	⊥	068	⊥	⊥	—
008	⊥	⊥	⊥	069	⊥	⊥	⊥
009	⊥	⊥	⊥	070	⊥	⊥	⊥
011	⊥	⊥	⊥	071	—	—	⊥
012	⊥	⊥	—	072	⊥	⊥	—
013	⊥	⊥	⊥	073	⊥	—	⊥
015	⊥	—	—	075	⊥	⊥	⊥
017	⊥	⊥	—	076	—	⊥	—
019	⊥	—	⊥	078	—	⊥	—
021	⊥	⊥	⊥	079	—	⊥	—
023	⊥	⊥	⊥	080	—	⊥	—
024	⊥	⊥	—	081	⊥	⊥	—
025	⊥	⊥	⊥	082	⊥	⊥	⊥
027	⊥	⊥	⊥	083	⊥	—	—
028	⊥	⊥	⊥	084	⊥	—	—
030	⊥	⊥	—	085	⊥	—	—
033	⊥	⊥	—	086	⊥	—	—
034	⊥	—	—	087	⊥	⊥	⊥
035	⊥	⊥	⊥	088	⊥	—	—
036	⊥	⊥	⊥	091	⊥	⊥	⊥
037	⊥	⊥	⊥	092	⊥	⊥	⊥
038	⊥	⊥	⊥	095	⊥	⊥	⊥
040	—	—	⊥	096	⊥	⊥	⊥
044	⊥	⊥	⊥	097	⊥	⊥	⊥
046	⊥	—	—	099	⊥	—	⊥
047	—	⊥	—	102	⊥	⊥	⊥
049	—	⊥	—	103	⊥	—	⊥
050	⊥	—	⊥	104	⊥	⊥	⊥
051	—	⊥	⊥	105	—	—	⊥
053	⊥	—	⊥	107	⊥	⊥	—
055	⊥	—	⊥	110	⊥	⊥	⊥
056	⊥	⊥	⊥	114	⊥	—	—

Figure 8. Standardized sign list from Ferrara 2012.

Pour finir, prenons seulement une autre séquence de cette inscription, la première dans la ligne B.14, une des lignes qui présentent clairement la structure 'X + WQ/051-028 + Y'. Cette séquence WQWQWQ/104-009-055-009-070 présente cinq signes, dont quatre différents, le signe W/009 étant répété. Les deux signes W/104-009 du CM 3 au début figuraient déjà plus haut (8.) dans CM 1 WQWQ/104-009-006-009 (##084. ENKO Abou 80) et leur lecture comme *i-li* peut être considérée comme une hypothèse sérieuse. Comme le signe W/009 est répété et le dernier signe Q/070 peut être lu comme *ki*, on arrive naturellement – sans aller au-delà des correspondances évidentes entre syllabaire chypro-minoen et syllabaire chypro-grec – à une lecture *i-li--li-ki*. Puis, comme nous sommes peut-être dans une liste de noms, on aurait affaire au premier anthroponyme de la formule onomastique. De nouveau, nous pourrions ainsi retrouver le premier élément *i-li* « dieu ». Il n'est maintenant qu'un petit pas, fait en premier par Claudio Saporetti, de supposer pour *-li-ki* une lecture *ma-li-ki/mi-li-ki* et de considérer l'ensemble comme un anthroponyme sémitique *i-li-ma-li-ki/i-li-mi-li-ki* « Malik/Milik est (mon) dieu ». En outre, la même séquence WQWQ/055-009-070 se retrouve comme 'second' élément de la séquence WQWQWQ/082-058-055-009-070 dans la dernière ligne de l'inscription (B.19). Plus important encore, un tel nom sémitique *ilmk* est bien connu, notamment par un scribe ougaritique *lli-ma/ilku*⁷⁴.

Figure 9. Sample text showing in-line usage of Cypro-Minoan characters, from Egetmeyer 2014.

Comme il ne suffit pas de regarder le total des signes utilisés, M. Egetmeyer⁵⁰ a essayé de résumer notre connaissance actuelle des écritures chypro-minoennes à partir des tableaux de signes établis par Olivier. Dans ce résumé sont pris en compte deux de trois processus, l'addition et la réduction de signes, un troisième, la substitution d'une valeur de signe, restant indétectable tant qu'on ne peut pas lire les signes :

- **CM 1** présente 72 signes : 1 I, 2 F, 4 T, 5 +, 6 †, 7 ‡, 8 †, 9 †, 11 f, 12 †, 12b †, 13 †, 15 †, 17 †, 19 †, 21 †, 23 †, 24 †, 25 †, 26 †, 27 †, 28 †, 30 †, 33 †, 34 †, 35 †, 36 †, 37 †, 38 †, 39 †, 41 †, 44 †, 46 †, 50 †, 53 †, 55 †, 56 ? (seulement ##128), 59 †, 61 †, 63 ? (seulement ##149-151), 64 †, 67 †, 68 †, 69 †, 70 †, 72 †, 73 †, 75 †, 81 †, 82 †, 83 †, 84 †, 85 †, 86 †, 87 †, 88 †, 91 †, 92 †, 95 †, 96 †, 97 †, 99 †, 101 †, 102 †, 103 †, 104 †, 107 †, 108 †, 109 †, 110 †, 112 †, 114 †.
- **CM 2** présente 61 signes, conservant 44 signes du CM 1 : 1, 4, 5, 6, 8, 9, 11, 12, 13, 17, 21, 23, 24, 25, 27, 28, 30, 33, 35, 36, 37, 38, 44, 56 †, 59, 61, 64, 68, 69, 70, 72, 75, 81, 82, 87, 91, 92, 95, 96, 97, 102, 104, 107, 110 ;
- excluant par une réforme de réduction 28 signes du CM 1 : 2, 7, 12b, 15, 19, 26, 34, 39, 41, 46, 50, 53, 55, 63, 67, 73, 83, 84, 85, 86, 88, 99, 101, 103, 108, 109, 112, 114 ;
- ajoutant par une réforme d'addition 17 signes absents du CM 1 : 10 †, 29 †, 47 †, 49 †, 51 †, 52 †, 54 †, 60 †, 62 †, 66 †, 74 †, 76 †, 78 †, 79 †, 80 †, 89 †, 90 †.
- **CM 3** présente 50 signes, mais n'est probablement pas complet, conservant 41 signes du CM 1 : 1, 2, 4, 5, 6, 7, 8, 9, 11, 13, 19, 21, 23, 25, 27, 28, 35, 36, 37, 38, 44, 50, 53, 55, 56 † (~ CM 2), 69, 70, 73, 75, 82, 87, 91, 92, 95, 96, 97, 99, 102, 103, 104, 110 ;
- excluant par une réforme de réduction 31 signes du CM 1 : 12, 12b, 15, 17, 24, 26, 30, 33, 34, 39, 41, 46, 59, 61, 63, 64, 67, 68, 72, 81, 83, 84, 85, 86, 88, 101, 107, 108, 109, 112, 114 ;
- ajoutant par une réforme d'addition 9 signes absents du CM 1 (dont deux pourtant présents en CM 2 !?) : 40 †, 51 † (~ CM 2), 58 †, 71 †, 74 † (~ CM 2), 94 †, 98 †, 100 †, 105 †.

C'est cette fragmentation d'un matériel déjà très réduit, qui de plus se distingue profondément à la fois du système donneur (le linéaire A) comme du système receveur (le syllabaire chypro-grec), qui fait comprendre qu'on n'a pas réussi à pénétrer ces textes.

Figure 10. Sample text showing in-line usage of Cypro-Minoan characters in a discussion of the sign list, from Egetmeyer 2014.

Dimensions: Unreported
 Chronology: Late Cypriot II
 Context: Area D, Cellar (Settlement)



Fig. 7. Photograph (no scale) by Benson and Masson (1960: Pl. 36)



Fig. 8. Drawing in Daniel (1941: 273, fig. 13:1), reproduced in scale approx. 1:1

Transcription: 13/78-25-23[

Epigraphic remarks: Signs incised before firing. In the case of the first sign, the level of brightness in the photograph published by Benson and O. Masson makes it hard to verify Daniel's interpretation. The consequence is that his drawing implies sign 13/78 (𐎓)¹⁵ but leaves open the possibility that we have a broken 46 (𐎓) or 47 (𐎓). The photograph appears to show no fracture in this part of the handle, which would strengthen the former option, but this can only be established through an autopsy of the object.

Figure 11. Sample text showing in-line usage of Cypro-Minoan characters, from Valério 2014.

054) and CM 110/CG *ku* (LAB 081) (Olivier 2012, 19, 25). At least for the first one, such a relationship even to Linear A and B seems, however, not to be excluded. One can thus reasonably propose also a syllabic reading of the inscription:

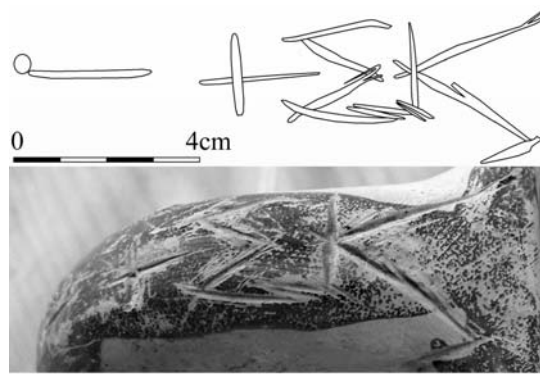
CM: 𐎓 𐎓 𐎓 𐎓 𐎓 | | | | 𐎓 | 𐎓
 CG: * 𐎓 𐎓 𐎓 𐎓 | | | | * | 𐎓
 102-109-004-013-023 '4' 110 | 023
a-wa-ta-to-ti 4 ku | ti

The contemporary Opheltas inscription from the same cemetery, #170. PPAP Mins 001, runs as follows:

𐎓 𐎓 𐎓 𐎓
 𐎓 𐎓 𐎓 𐎓
 064-011-024-004-012
 Greek genitive *o-pe-le-ta-u /Op^heltau/*

The inscriptions have only one sign in common, CM 004 *ta* 𐎓, because the reading CM 012 for the last sign has finally been rejected here for the new inscription.

Figure 12. Sample text showing in-line usage of Cypro-Minoan characters alongside Cypriot (called Cypro-Greek here) in a discussion of decipherment, from Egetmeyer 2016.



Ductus

In many cases, the marks left by the engraving tool reveal the or
The most probable ductus is shown in Fig. 4.



Fig. 4: Most probable ductus of TIRY Avas 002. Drawing: B. Davis

3.3 Text

The transnumeration³³ of the signs in the inscription is as follows:

087-050-005-|

This sequence is not attested elsewhere in the Cypro-Minoan corpus.

The normalized transcription is shown in Fig. 1.



Fig. 1: Normalized transcription. Drawing: B. Davis

The final sign is a *stiktogram*, a mark of punctuation – in this case, an end-of word marker.

Figure 13. Cup handle with sketch, proposed stroke order, and normalized transcription of Cypro-Minoan characters on a jug handle, from Davis et al 2014.

Again, for the relationship between sign 59 \cup and sign 87 \cup , there seem to be problems of correspondences. Graphically sign 87 \cup would be a clear *épine* variant of sign 59 \cup , but the sequences in which these two signs appear bear no correspondence. Sign 60 \cup is present only in the Enkomi tablet material (CM2). It occurs in final or penultimate position, marking a clear suffix. Its conjunction with sign 59 \cup is recurrent: on tablet 53.5 (##209) in the word-sequences $\cup\cup\cup\cup$ (lines 4 and 5 verso), $\cup\cup\cup\cup$ (line 7 verso), and $\cup\cup\cup\cup$ (line 22 verso), on tablet 20.01 $\cup\cup\cup\cup$ (line 7 recto), $\cup\cup\cup\cup$ (line 9, second column, recto), and on tablet 1687 $\cup\cup\cup\cup$ (line 2 verso). In the light of this, word-sequences such as $\cup\cup\cup\cup$ (20.01, line 8 recto), $\cup\cup\cup\cup$ (53.5, line 17 verso), and $\cup\cup\cup\cup$ (1687, line 13 recto) may suggest a correspondence between 60 \cup as the *épine*-free variant of sign 87 \cup .

Figure 14. Sample text showing in-line usage of Cypro-Minoan characters, from Ferrara 2012. The discussion shows the difficulty of establishing identity and difference in terms of statistical analysis of sign frequency and distribution in an undeciphered script.

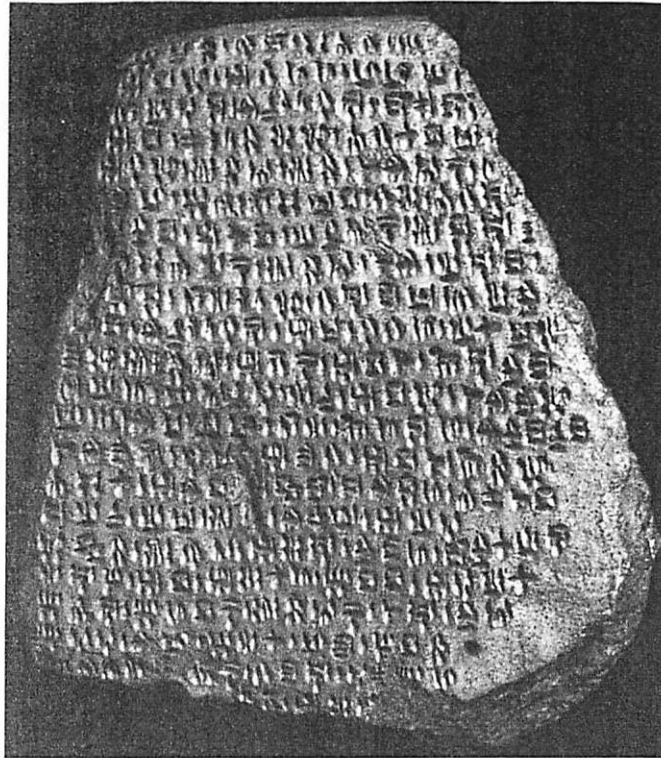
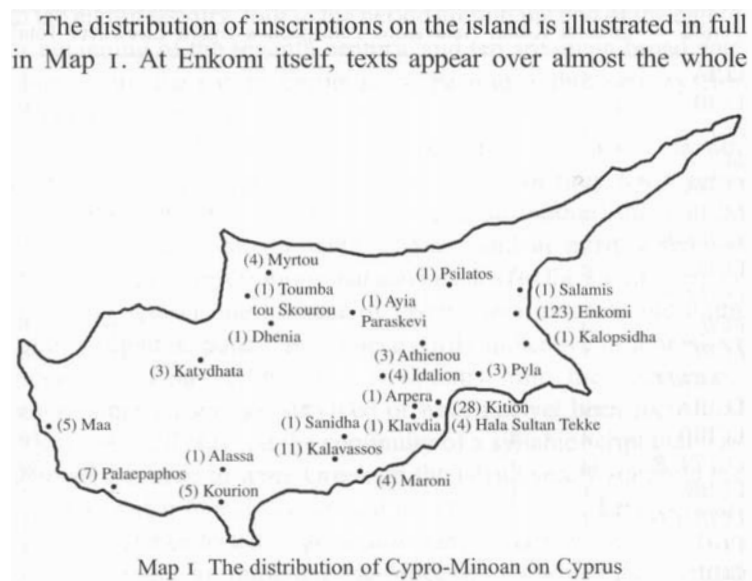













































































































































Figure 28.1. Enkomi tablet 1687 (obverse) (photograph courtesy of Joanna Smith).

Figure 15. Tablet 1687 from Enkomi. (“##208. ENKO Atab 003”), an important lengthy text in an early form of Cypro-Minoan script, from Hirschfeld 2010.







chronological span, from the CMO tablet (##001) and clay ‘weight’ (##095) of perhaps the fifteenth century and long cylinder inscription (##097) probably of the fourteenth century down to a clay ball dated to the end of LCIII, probably the mid eleventh century (##020). The CM2 tablets were also found at Enkomi, alongside a large number of ‘CM1’ inscriptions, demonstrating that at this location alone there seem to have been two writing traditions co-existing for a period of time, perhaps representing two different linguistic groups occupying the same site (see further sections I.1.D and I.1.E).

Figure 16. The distribution of Cypro-Minoan script on Crete, from Steele 2013.



	1257	1258	1259	125A	125B	125C	125D	125E	125F
0	 12570	 12580	 12590	 125A0	 125B0	 125C0	 125D0	 125E0	 125F0
1	 12571	 12581	 12591	 125A1	 125B1	 125C1	 125D1	 125E1	 125F1
2	 12572	 12582	 12592	 125A2	 125B2	 125C2	 125D2	 125E2	 125F2
3	 12573	 12583	 12593	 125A3	 125B3	 125C3	 125D3	 125E3	 125F3
4	 12574	 12584	 12594	 125A4	 125B4	 125C4	 125D4	 125E4	 125F4
5	 12575	 12585	 12595	 125A5	 125B5	 125C5	 125D5	 125E5	 125F5
6	 12576	 12586	 12596	 125A6	 125B6	 125C6	 125D6	 125E6	 125F6
7	 12577	 12587	 12597	 125A7	 125B7	 125C7	 125D7	 125E7	 125F7
8	 12578	 12588	 12598	 125A8	 125B8	 125C8	 125D8	 125E8	 125F8
9	 12579	 12589	 12599	 125A9	 125B9	 125C9	 125D9	 125E9	 125F9
A	 1257A	 1258A	 1259A	 125AA	 125BA	 125CA	 125DA	 125EA	 125FA
B	 1257B	 1258B	 1259B	 125AB	 125BB	 125CB	 125DB	 125EB	 125FB
C	 1257C	 1258C	 1259C	 125AC	 125BC	 125CC	 125DC	 125EC	
D	 1257D	 1258D	 1259D	 125AD	 125BD	 125CD	 125DD	 125ED	
E	 1257E	 1258E	 1259E	 125AE	 125BE	 125CE	 125DE	 125EE	
F	 1257F	 1258F	 1259F	 125AF	 125BF	 125CF	 125DF	 125EF	

Signs from Masson's list



12570	𐀀	CYPRO-MINOAN SIGN CM001	125A5	𐀁	CYPRO-MINOAN SIGN CM053
12571	𐀁	CYPRO-MINOAN SIGN CM002	125A6	𐀂	CYPRO-MINOAN SIGN CM054
12572	𐀂	CYPRO-MINOAN SIGN CM003	125A7	𐀃	CYPRO-MINOAN SIGN CM055
		→ 12571 𐀁 cypro-minoan sign cm002	125A8	𐀄	CYPRO-MINOAN SIGN CM056
12573	𐀃	CYPRO-MINOAN SIGN CM004	125A9	𐀅	CYPRO-MINOAN SIGN CM057
12574	𐀄	CYPRO-MINOAN SIGN CM005			→ 125C2 𐀆 cypro-minoan sign cm082
12575	𐀅	CYPRO-MINOAN SIGN CM006	125AA	𐀆	CYPRO-MINOAN SIGN CM058
12576	𐀆	CYPRO-MINOAN SIGN CM007	125AB	𐀇	CYPRO-MINOAN SIGN CM059
12577	𐀇	CYPRO-MINOAN SIGN CM008	125AC	𐀈	CYPRO-MINOAN SIGN CM060
12578	𐀈	CYPRO-MINOAN SIGN CM009	125AD	𐀉	CYPRO-MINOAN SIGN CM061
12579	𐀉	CYPRO-MINOAN SIGN CM010	125AE	𐀊	CYPRO-MINOAN SIGN CM062
1257A	𐀊	CYPRO-MINOAN SIGN CM011			• reversed with 063 in Olivier (figure 6 in N4715)
1257B	𐀋	CYPRO-MINOAN SIGN CM012	125AF	𐀋	CYPRO-MINOAN SIGN CM063
1257C	𐀌	CYPRO-MINOAN SIGN CM012B			• reversed with 062 in Olivier (figure 6 in N4715)
1257D	𐀍	CYPRO-MINOAN SIGN CM013	125B0	𐀌	CYPRO-MINOAN SIGN CM064
1257E	𐀎	CYPRO-MINOAN SIGN CM014	125B1	𐀍	CYPRO-MINOAN SIGN CM065
		→ 1257B 𐀋 cypro-minoan sign cm012			→ 125B0 𐀌 cypro-minoan sign cm064
1257F	𐀏	CYPRO-MINOAN SIGN CM015	125B2	𐀎	CYPRO-MINOAN SIGN CM066
12580	𐀐	CYPRO-MINOAN SIGN CM016	125B3	𐀏	CYPRO-MINOAN SIGN CM067
		→ 125C2 𐀆 cypro-minoan sign cm082	125B4	𐀐	CYPRO-MINOAN SIGN CM068
12581	𐀑	CYPRO-MINOAN SIGN CM017	125B5	𐀑	CYPRO-MINOAN SIGN CM069
12582	𐀒	CYPRO-MINOAN SIGN CM018	125B6	𐀒	CYPRO-MINOAN SIGN CM070
		→ 12583 𐀓 cypro-minoan sign cm019	125B7	𐀓	CYPRO-MINOAN SIGN CM071
12583	𐀓	CYPRO-MINOAN SIGN CM019	125B8	𐀔	CYPRO-MINOAN SIGN CM072
12584	𐀔	CYPRO-MINOAN SIGN CM020	125B9	𐀕	CYPRO-MINOAN SIGN CM073
		→ 12583 𐀓 cypro-minoan sign cm019	125BA	𐀖	CYPRO-MINOAN SIGN CM074
12585	𐀕	CYPRO-MINOAN SIGN CM021	125BB	𐀗	CYPRO-MINOAN SIGN CM075
		→ 1257F 𐀏 cypro-minoan sign cm015	125BC	𐀘	CYPRO-MINOAN SIGN CM076
12586	𐀖	CYPRO-MINOAN SIGN CM022	125BD	𐀙	CYPRO-MINOAN SIGN CM077
		→ 12585 𐀕 cypro-minoan sign cm021			→ 125BB 𐀗 cypro-minoan sign cm075
12587	𐀗	CYPRO-MINOAN SIGN CM023	125BE	𐀚	CYPRO-MINOAN SIGN CM078
12588	𐀘	CYPRO-MINOAN SIGN CM024	125BF	𐀛	CYPRO-MINOAN SIGN CM079
12589	𐀙	CYPRO-MINOAN SIGN CM025	125C0	𐀜	CYPRO-MINOAN SIGN CM080
1258A	𐀚	CYPRO-MINOAN SIGN CM026	125C1	𐀝	CYPRO-MINOAN SIGN CM081
1258B	𐀛	CYPRO-MINOAN SIGN CM027	125C2	𐀞	CYPRO-MINOAN SIGN CM082
1258C	𐀜	CYPRO-MINOAN SIGN CM028	125C3	𐀟	CYPRO-MINOAN SIGN CM083
1258D	𐀝	CYPRO-MINOAN SIGN CM029	125C4	𐀠	CYPRO-MINOAN SIGN CM084
1258E	𐀞	CYPRO-MINOAN SIGN CM030	125C5	𐀡	CYPRO-MINOAN SIGN CM085
1258F	𐀟	CYPRO-MINOAN SIGN CM031	125C6	𐀢	CYPRO-MINOAN SIGN CM086
12590	𐀠	CYPRO-MINOAN SIGN CM032	125C7	𐀣	CYPRO-MINOAN SIGN CM087
12591	𐀡	CYPRO-MINOAN SIGN CM033	125C8	𐀤	CYPRO-MINOAN SIGN CM088
12592	𐀢	CYPRO-MINOAN SIGN CM034	125C9	𐀥	CYPRO-MINOAN SIGN CM089
12593	𐀣	CYPRO-MINOAN SIGN CM035	125CA	𐀦	CYPRO-MINOAN SIGN CM090
12594	𐀤	CYPRO-MINOAN SIGN CM036	125CB	𐀧	CYPRO-MINOAN SIGN CM091
12595	𐀥	CYPRO-MINOAN SIGN CM037	125CC	𐀨	CYPRO-MINOAN SIGN CM092
12596	𐀦	CYPRO-MINOAN SIGN CM038	125CD	𐀩	CYPRO-MINOAN SIGN CM093
12597	𐀧	CYPRO-MINOAN SIGN CM039			→ 125CC 𐀨 cypro-minoan sign cm092
12598	𐀨	CYPRO-MINOAN SIGN CM040	125CE	𐀪	CYPRO-MINOAN SIGN CM094
12599	𐀩	CYPRO-MINOAN SIGN CM041	125CF	𐀫	CYPRO-MINOAN SIGN CM095
1259A	𐀪	CYPRO-MINOAN SIGN CM042	125D0	𐀬	CYPRO-MINOAN SIGN CM096
		→ 12597 𐀧 cypro-minoan sign cm039	125D1	𐀭	CYPRO-MINOAN SIGN CM097
1259B	𐀫	CYPRO-MINOAN SIGN CM043	125D2	𐀮	CYPRO-MINOAN SIGN CM098
		→ 125A7 𐀃 cypro-minoan sign cm055	125D3	𐀯	CYPRO-MINOAN SIGN CM099
1259C	𐀬	CYPRO-MINOAN SIGN CM044	125D4	𐀰	CYPRO-MINOAN SIGN CM100
1259D	𐀭	CYPRO-MINOAN SIGN CM045	125D5	𐀱	CYPRO-MINOAN SIGN CM101
		→ 1259C 𐀬 cypro-minoan sign cm044	125D6	𐀲	CYPRO-MINOAN SIGN CM102
1259E	𐀮	CYPRO-MINOAN SIGN CM046	125D7	𐀳	CYPRO-MINOAN SIGN CM103
1259F	𐀯	CYPRO-MINOAN SIGN CM047	125D8	𐀴	CYPRO-MINOAN SIGN CM104
125A0	𐀰	CYPRO-MINOAN SIGN CM048	125D9	𐀵	CYPRO-MINOAN SIGN CM105
		→ 125C2 𐀆 cypro-minoan sign cm082	125DA	𐀶	CYPRO-MINOAN SIGN CM106
125A1	𐀱	CYPRO-MINOAN SIGN CM049	125DB	𐀷	CYPRO-MINOAN SIGN CM107
125A2	𐀲	CYPRO-MINOAN SIGN CM050	125DC	𐀸	CYPRO-MINOAN SIGN CM108
125A3	𐀳	CYPRO-MINOAN SIGN CM051	125DD	𐀹	CYPRO-MINOAN SIGN CM109
125A4	𐀴	CYPRO-MINOAN SIGN CM052	125DE	𐀺	CYPRO-MINOAN SIGN CM110
			125DF	𐀻	CYPRO-MINOAN SIGN CM111

- 125E0  CYPRO-MINOAN SIGN CM112
 125E1  CYPRO-MINOAN SIGN CM113
 → 12596  cypro-minoan sign cm038
 125E2  CYPRO-MINOAN SIGN CM114

Logograms





















- 125E3  CYPRO-MINOAN SIGN CM201
 125E4  CYPRO-MINOAN SIGN CM202

Punctuation

- 125E5  CYPRO-MINOAN SIGN CM301
 • tentatively identified as a conjunction
 125E6  CYPRO-MINOAN SIGN CM302
 • tentatively identified as an end-of-section sign

Signs from the Enkomi tablet ENKO

Atab 001

- 125E7  CYPRO-MINOAN SIGN CM401
 125E8  CYPRO-MINOAN SIGN CM402
 125E9  CYPRO-MINOAN SIGN CM403
 125EA  CYPRO-MINOAN SIGN CM404
 125EB  CYPRO-MINOAN SIGN CM405
 125EC  CYPRO-MINOAN SIGN CM406
 125ED  CYPRO-MINOAN SIGN CM407
 125EE  CYPRO-MINOAN SIGN CM408
 125EF  CYPRO-MINOAN SIGN CM409
 125F0  CYPRO-MINOAN SIGN CM410
 125F1  CYPRO-MINOAN SIGN CM411
 125F2  CYPRO-MINOAN SIGN CM412
 125F3  CYPRO-MINOAN SIGN CM413
 125F4  CYPRO-MINOAN SIGN CM414
 125F5  CYPRO-MINOAN SIGN CM415
 125F6  CYPRO-MINOAN SIGN CM416
 125F7  CYPRO-MINOAN SIGN CM417
 125F8  CYPRO-MINOAN SIGN CM418
 125F9  CYPRO-MINOAN SIGN CM419
 125FA  CYPRO-MINOAN SIGN CM420
 125FB  CYPRO-MINOAN SIGN CM421

A. Administrative

1. Title

Proposal to encode the Cypro-Minoan script in the SMP of the UCS

2. Requester's name

UC Berkeley Script Encoding Initiative (Universal Scripts Project); author: Michael Everson

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

Liaison contribution.

4. Submission date

2016-07-22

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)

Yes.

1b. Proposed name of script

Cypro-Minoan.

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

No.

1d. Name of the existing block

2. Number of characters in proposal

140.

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 D.

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 and FontLab.

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

Yes, see bibliography above.

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, see above.

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.

No.

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?

Maurizio Del Freo, Yves Duhoux, Markus Egetmeyer, Silvia Ferrara, Nicolle Hirschfeld, Massimo Perna, Joanna Smith, Miguel Valério.

2c. 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?

Specialists and students of Cypriot epigraphy and Aegean prehistory.

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

Fairly rare as these things go.

4b. Reference

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

Yes.

5b. If YES, where?

By scholars worldwide.

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

No.

6b. If YES, is a rationale provided?

6c. If YES, reference

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 (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?