Doc Type: **Working Group Document**
Title: **Final 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: **2020-07-14**
Replaces: **N4733R (L2/16-179R)), 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, tablets, and vases. Discoveries have been made at various sites around Cyprus, such as Enkomi, Kition, Kalavassos, and Palaepaphos. Discoveries have also been made in the ancient city of Ugarit on the Syrian coast and in Tiryns in Greece. During the Hellenization of the island in the Early Iron Age, the Cypro-Minoan syllabary was transformed into the Cypriot Syllabary. The Cypriot Syllabary was used to write Greek and Eteocypriot, and has been encoded already in the UCS.

2. Decipherment. Cypro-Minoan epigraphy is still being actively studied. 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 and in the Cypriot syllabary, 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 may be 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. Olivier 2007 (figs. 2–5) forms the basis for the repertoire. Though not definitive, it is the standard reference list used by experts today. The earlier work of Masson 1974 is included for historical reasons (figures 7a–7d). Olivier improved Masson's classification of the inscriptions into the four groups: CM0, CM1, CM2 and CM3. The proposed repertoire comprises signs from Cypro-Minoan 1, 2, and 3. Cypro-Minoan 1 (CM1) has the largest number of signs, but most inscriptions are short. CM2 encompasses four long inscriptions. It is relatively coherent in terms of glyph style, which can be described as "squarish". CM2 has a character count of some 1300–1500 signs. CM3 includes both short and long inscriptions, but some signs only occur once. Some CM3 shapes appear to be similar to those in CM2. The CM3 corpus is small and geographically based (i.e., finds are from Ras Shamra [Ugarit]).

5. Character names. The character names for Cypro-Minoan are based on Olivier'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 Recommendations for reduction. As scholars reach consensus on which characters are variants of other, encoded characters, annotations can be added to the names list. Because characters, once encoded, cannot be removed, annotations can provide guidance to users on which character should be used in normalized text (and which are deemed obsolete).

6. Logograms. Olivier gives explicit catalogue numbers to two "logograms", Ѱ CM201 and ⟁ CM202 (see Figure 2a). The characters appear in only one inscription, which is very fragmentary. They may be variants of existing signs and hence are not being proposed, though they were in earlier versions of this proposal.

7. Numbers ("Arithmograms"). Numbers are poorly attested in Cypro-Minoan texts. A separate document N5136 (L2/20-155) "Considerations regarding Cypro-Minoan and Aegean numbers" details a discussion of the issues surrounding numbers, which are left for further study.

8. Punctuation ("Stiktograms"). Olivier gives three "stiktograms", two of which are recommended to be unified with U+10100 ꓲ AEGEAN WORD SEPARATOR LINE (𐄀) and U+10101 • AEGEAN WORD SEPARATOR DOT (•). The third of these is proposed here as U+12760 Ϛ CYPRO-MINOAN SIGN CM301, which is attested in CM1 21 times on the clay cylinder ##0097 from Enkomi. And one additional character has been added from CM3, deriving from the clay tablet ##215 from Ugarit, where it is used 20 times: U+12761 Ϛ CYPRO-MINOAN SIGN CM302. Both are also attested elsewhere. Miguel Valério and others believe that ꓲ is used as a divider. Valério also describes U+12760 and U+12761 as paragraph or "entry markers" (Valério 2018). Markus Egetmeyer suggests CM301 U+12760 may be better described as a word divider, at least based on its occurrence in ##097, where it appears more often than the more usual word separator (U+10100), with CM301 even occurring twice in a single line (see figure 9b). See examples of punctuation in figures 8a–8e.

8.1. Issue: location of punctuation. Two columns in the SMP could be saved by placing the two stiktograms in the Aegean Numbers block, immediately following 10100 AEGEAN WORD SEPARATOR LINE,

10101 ᴀᴇɢᴇᴀɴ ᴡᴏʀᴅ sᴇᴘᴀʀᴀᴛᴏʀ ᴅᴏᴛ, and 10102 ᴀᴇɢᴇᴀɴ ᴄʜᴇᴄᴋ ᴍᴀʀᴋ, following a header "Cypro-Minoan punctuation" as 10103 ᴄʏᴘʀᴏ-ᴍɪɴᴏᴀɴ sɪɢɴ ᴄᴍ301 and 10104 ᴄʏᴘʀᴏ-ᴍɪɴᴏᴀɴ sɪɢɴ ᴄᴍ302.

9. The Enkomi tablet "ENKO Atab 001". The encoding of the 21 CM0 signs from the oldest Enkomi tablets are not being proposed at this point, but are left for further study. See Figure 1 for an image of this text.

10. Glyphs. The representative glyphs are based on those in Olivier's charts, generally following his Cypro-Minoan 1 (CM1), unless no CM1 form exists, in which case it was taken from CM2 or CM3. For a second chart with typographically normalized glyphs by Michael Everson, see N5137 (L2/20-156) "Considerations regarding a normalized Cypro-Minoan reference font", where the glyphs conform to the typical representation of Linear B, Linear A, Cypriot, and Aegean number glyphs.

The change of one glyph from Olivier 2007 for U+1270C ᴄʏᴘʀᴏ-ᴍɪɴᴏᴀɴ sɪɢɴ ᴄᴍ013 (from ⸫ to ⸪), based on discussion at the Paris meeting, is still under discussion. (Discussion and analysis are presented in Valério 2013.)

11. Unicode Character Properties

```
12700;CYPRO-MINOAN SIGN CM001;Lo;0;L;;;;;N;;;;;
12701;CYPRO-MINOAN SIGN CM002;Lo;0;L;;;;;N;;;;;
12702;CYPRO-MINOAN SIGN CM004;Lo;0;L;;;;;N;;;;;
12703;CYPRO-MINOAN SIGN CM005;Lo;0;L;;;;;N;;;;;
12704;CYPRO-MINOAN SIGN CM006;Lo;0;L;;;;;N;;;;;
12705;CYPRO-MINOAN SIGN CM007;Lo;0;L;;;;;N;;;;;
12706;CYPRO-MINOAN SIGN CM008;Lo;0;L;;;;;N;;;;;
12707;CYPRO-MINOAN SIGN CM009;Lo;0;L;;;;;N;;;;;
12708;CYPRO-MINOAN SIGN CM010;Lo;0;L;;;;;N;;;;;
12709;CYPRO-MINOAN SIGN CM011;Lo;0;L;;;;;N;;;;;
1270A;CYPRO-MINOAN SIGN CM012;Lo;0;L;;;;;N;;;;;
1270B;CYPRO-MINOAN SIGN CM012B;Lo;0;L;;;;;N;;;;;
1270C;CYPRO-MINOAN SIGN CM013;Lo;0;L;;;;;N;;;;;
1270D;CYPRO-MINOAN SIGN CM015;Lo;0;L;;;;;N;;;;;
1270E;CYPRO-MINOAN SIGN CM017;Lo;0;L;;;;;N;;;;;
1270F;CYPRO-MINOAN SIGN CM019;Lo;0;L;;;;;N;;;;;
12710;CYPRO-MINOAN SIGN CM021;Lo;0;L;;;;;N;;;;;
12711;CYPRO-MINOAN SIGN CM023;Lo;0;L;;;;;N;;;;;
12712;CYPRO-MINOAN SIGN CM024;Lo;0;L;;;;;N;;;;;
12713;CYPRO-MINOAN SIGN CM025;Lo;0;L;;;;;N;;;;;
12714;CYPRO-MINOAN SIGN CM026;Lo;0;L;;;;;N;;;;;
12715;CYPRO-MINOAN SIGN CM027;Lo;0;L;;;;;N;;;;;
12716;CYPRO-MINOAN SIGN CM028;Lo;0;L;;;;;N;;;;;
12717;CYPRO-MINOAN SIGN CM029;Lo;0;L;;;;;N;;;;;
12718;CYPRO-MINOAN SIGN CM030;Lo;0;L;;;;;N;;;;;
12719;CYPRO-MINOAN SIGN CM033;Lo;0;L;;;;;N;;;;;
1271A;CYPRO-MINOAN SIGN CM034;Lo;0;L;;;;;N;;;;;
1271B;CYPRO-MINOAN SIGN CM035;Lo;0;L;;;;;N;;;;;
1271C;CYPRO-MINOAN SIGN CM036;Lo;0;L;;;;;N;;;;;
1271D;CYPRO-MINOAN SIGN CM037;Lo;0;L;;;;;N;;;;;
1271E;CYPRO-MINOAN SIGN CM038;Lo;0;L;;;;;N;;;;;
1271F;CYPRO-MINOAN SIGN CM039;Lo;0;L;;;;;N;;;;;
12720;CYPRO-MINOAN SIGN CM040;Lo;0;L;;;;;N;;;;;
12721;CYPRO-MINOAN SIGN CM041;Lo;0;L;;;;;N;;;;;
12722;CYPRO-MINOAN SIGN CM044;Lo;0;L;;;;;N;;;;;
12723;CYPRO-MINOAN SIGN CM046;Lo;0;L;;;;;N;;;;;
12724;CYPRO-MINOAN SIGN CM047;Lo;0;L;;;;;N;;;;;
12725;CYPRO-MINOAN SIGN CM049;Lo;0;L;;;;;N;;;;;
12726;CYPRO-MINOAN SIGN CM050;Lo;0;L;;;;;N;;;;;
12727;CYPRO-MINOAN SIGN CM051;Lo;0;L;;;;;N;;;;;
12728;CYPRO-MINOAN SIGN CM052;Lo;0;L;;;;;N;;;;;
12729;CYPRO-MINOAN SIGN CM053;Lo;0;L;;;;;N;;;;;
1272A;CYPRO-MINOAN SIGN CM054;Lo;0;L;;;;;N;;;;;
1272B;CYPRO-MINOAN SIGN CM055;Lo;0;L;;;;;N;;;;;
1272C;CYPRO-MINOAN SIGN CM056;Lo;0;L;;;;;N;;;;;
1272D;CYPRO-MINOAN SIGN CM058;Lo;0;L;;;;;N;;;;;
1272E;CYPRO-MINOAN SIGN CM059;Lo;0;L;;;;;N;;;;;
1272F;CYPRO-MINOAN SIGN CM060;Lo;0;L;;;;;N;;;;;
12730;CYPRO-MINOAN SIGN CM061;Lo;0;L;;;;;N;;;;;
12731;CYPRO-MINOAN SIGN CM062;Lo;0;L;;;;;N;;;;;
12732;CYPRO-MINOAN SIGN CM063;Lo;0;L;;;;;N;;;;;
12733;CYPRO-MINOAN SIGN CM064;Lo;0;L;;;;;N;;;;;
12734;CYPRO-MINOAN SIGN CM066;Lo;0;L;;;;;N;;;;;
12735;CYPRO-MINOAN SIGN CM067;Lo;0;L;;;;;N;;;;;
12736;CYPRO-MINOAN SIGN CM068;Lo;0;L;;;;;N;;;;;
12737;CYPRO-MINOAN SIGN CM069;Lo;0;L;;;;;N;;;;;
12738;CYPRO-MINOAN SIGN CM070;Lo;0;L;;;;;N;;;;;
12739;CYPRO-MINOAN SIGN CM071;Lo;0;L;;;;;N;;;;;
1273A;CYPRO-MINOAN SIGN CM072;Lo;0;L;;;;;N;;;;;
1273B;CYPRO-MINOAN SIGN CM073;Lo;0;L;;;;;N;;;;;
1273C;CYPRO-MINOAN SIGN CM074;Lo;0;L;;;;;N;;;;;
1273D;CYPRO-MINOAN SIGN CM075;Lo;0;L;;;;;N;;;;;
1273E;CYPRO-MINOAN SIGN CM076;Lo;0;L;;;;;N;;;;;
1273F;CYPRO-MINOAN SIGN CM078;Lo;0;L;;;;;N;;;;;
12740;CYPRO-MINOAN SIGN CM079;Lo;0;L;;;;;N;;;;;
12741;CYPRO-MINOAN SIGN CM080;Lo;0;L;;;;;N;;;;;
12742;CYPRO-MINOAN SIGN CM081;Lo;0;L;;;;;N;;;;;
12743;CYPRO-MINOAN SIGN CM082;Lo;0;L;;;;;N;;;;;
12744;CYPRO-MINOAN SIGN CM083;Lo;0;L;;;;;N;;;;;
12745;CYPRO-MINOAN SIGN CM084;Lo;0;L;;;;;N;;;;;
12746;CYPRO-MINOAN SIGN CM085;Lo;0;L;;;;;N;;;;;
12747;CYPRO-MINOAN SIGN CM086;Lo;0;L;;;;;N;;;;;
12748;CYPRO-MINOAN SIGN CM087;Lo;0;L;;;;;N;;;;;
12749;CYPRO-MINOAN SIGN CM088;Lo;0;L;;;;;N;;;;;
1274A;CYPRO-MINOAN SIGN CM089;Lo;0;L;;;;;N;;;;;
1274B;CYPRO-MINOAN SIGN CM090;Lo;0;L;;;;;N;;;;;
1274C;CYPRO-MINOAN SIGN CM091;Lo;0;L;;;;;N;;;;;
1274D;CYPRO-MINOAN SIGN CM092;Lo;0;L;;;;;N;;;;;
1274E;CYPRO-MINOAN SIGN CM094;Lo;0;L;;;;;N;;;;;
1274F;CYPRO-MINOAN SIGN CM095;Lo;0;L;;;;;N;;;;;
12750;CYPRO-MINOAN SIGN CM096;Lo;0;L;;;;;N;;;;;
12751;CYPRO-MINOAN SIGN CM097;Lo;0;L;;;;;N;;;;;
12752;CYPRO-MINOAN SIGN CM098;Lo;0;L;;;;;N;;;;;
12753;CYPRO-MINOAN SIGN CM099;Lo;0;L;;;;;N;;;;;
12754;CYPRO-MINOAN SIGN CM100;Lo;0;L;;;;;N;;;;;
12755;CYPRO-MINOAN SIGN CM101;Lo;0;L;;;;;N;;;;;
12756;CYPRO-MINOAN SIGN CM102;Lo;0;L;;;;;N;;;;;
12757;CYPRO-MINOAN SIGN CM103;Lo;0;L;;;;;N;;;;;
12758;CYPRO-MINOAN SIGN CM104;Lo;0;L;;;;;N;;;;;
12759;CYPRO-MINOAN SIGN CM105;Lo;0;L;;;;;N;;;;;
1275A;CYPRO-MINOAN SIGN CM107;Lo;0;L;;;;;N;;;;;
1275B;CYPRO-MINOAN SIGN CM108;Lo;0;L;;;;;N;;;;;
1275C;CYPRO-MINOAN SIGN CM109;Lo;0;L;;;;;N;;;;;
1275D;CYPRO-MINOAN SIGN CM110;Lo;0;L;;;;;N;;;;;
1275E;CYPRO-MINOAN SIGN CM112;Lo;0;L;;;;;N;;;;;
1275F;CYPRO-MINOAN SIGN CM114;Lo;0;L;;;;;N;;;;;
12760;CYPRO-MINOAN SIGN CM301;Po;0;L;;;;;N;;;;;
12761;CYPRO-MINOAN SIGN CM302;Po;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 Freo, Maurizo. 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 Efstathios Raptou, *Palaepaphos-Skales. Tombs of the Late Cypriot IIIB and Cypro-Geometric periods (excavations of 2008 and 2011)*. Nicosia: 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.

Jensen, Hans. 1969. *Die Schrift in Vergangenheit und Gegenwart*. 3., neubearbeitete und erweiterte Auflage. Berlin: VEB Deutscher Verlag der Wissenschaften.

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

Olivier, Jean-Pierre. 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, 9–60.

Valério, Miguel. 2013. "Problems of Cypro-Minoan Paleography: The Case of Sign Shapes 08, 13 and 78" in *Kadmos* 52(1): 111-134.

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

Valério, Miguel. 2016. Investigating the Signs and Sounds of Cypro-Minoan, Ph.D. diss., University of Barcelona.

13. Acknowledgements

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.

recto   *lat. dex.*
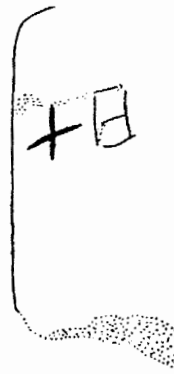
recto   *lat. dex.*

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.

Figure 2a sign list table (CM1):

Syllabograms		026		063		096	
001		027		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 2a. Sign list for CM1 from Olivier 2007. The stiktograms | and • are unified with common Aegean punctuation. The & is CM301 proposed in this document.

Figure 2b sign list table (CM2):

Syllabogrammes		037		079	
001		038		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 2b. 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		**Arithmogrammes**	
021		073		I	
023		074		X (ou C ?)	
025		075		**Stiktogrammes**	
027		082		ı	
028		087		·	
035		091		¶	
036		092			
037		094			

Figure 2c. 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 2d. Sign list of the Enkomi tablet "ENKO Atab 001" from Olivier 2007.

Figure 3.

	CM 1	CM 2	CM 3		CM 1	CM 2	CM 3
001				038			
004				044			
005				056			
006				069			
008				070			
009				075			
011				082			
013				087			
021				091			
023				092			
025				095			
027				096			
028				097			
035				102			
036				104			
037				110			

Figure 3. Common sign list from Olivier 2007.

Figure 4.

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

Figure 4. Comparison sign list from Olivier 2007.

UNIQUE TO CM1		UNIQUE TO CM2		UNIQUE TO CM3	
010					

Figure 5. Comparison sign list from Olivier 2007.

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	⊟	⊟	⑤
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 6. Standardized sign list from Ferrara 2012.

10

Figure 7a. Sign list from Masson 1974

Figure 7b. Sign list from Masson 1974

Figure 7c. Sign list from Masson 1974

Fig. 1. — Répertoire des signes archaïques.

Figure 7d. Chart of "archaic signs" I-XV from Masson 1974

##097. ENKO Arou 001 (CypMus 1619)

Cylindre d'argile (Ø *ca* 4,1 cm, h. *ca* 5,4 cm ; l. lignes *ca* 4,5 cm ; h. signes de *ca* 0,3 à 0,5 cm). Gravé.
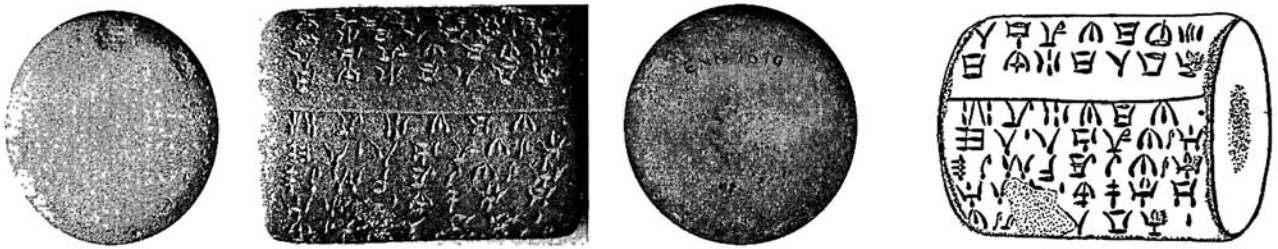
Dessin Masson É. 1971c et Masson É. 1973a (échelle *ca* 1 : 1).

Figure 8a. Examples of paragraph marker U+12760 ("&") from ##0097 (Olivier 2007)

Sequence dividers	Entry marker (ENKO Arou 001 ##097)	Entry marker (RASH Atab 004 ##215)	"CM 2" punkt-mark

Figure 8b. Summary of punctuation marks from Valério 2018

Dessin Masson É. 1978a, fig. 11 (échelle *ca* 1 : 1).

Figure 8c. Examples of word separator line 'l' and dot from ##207 (Olivier 2007)
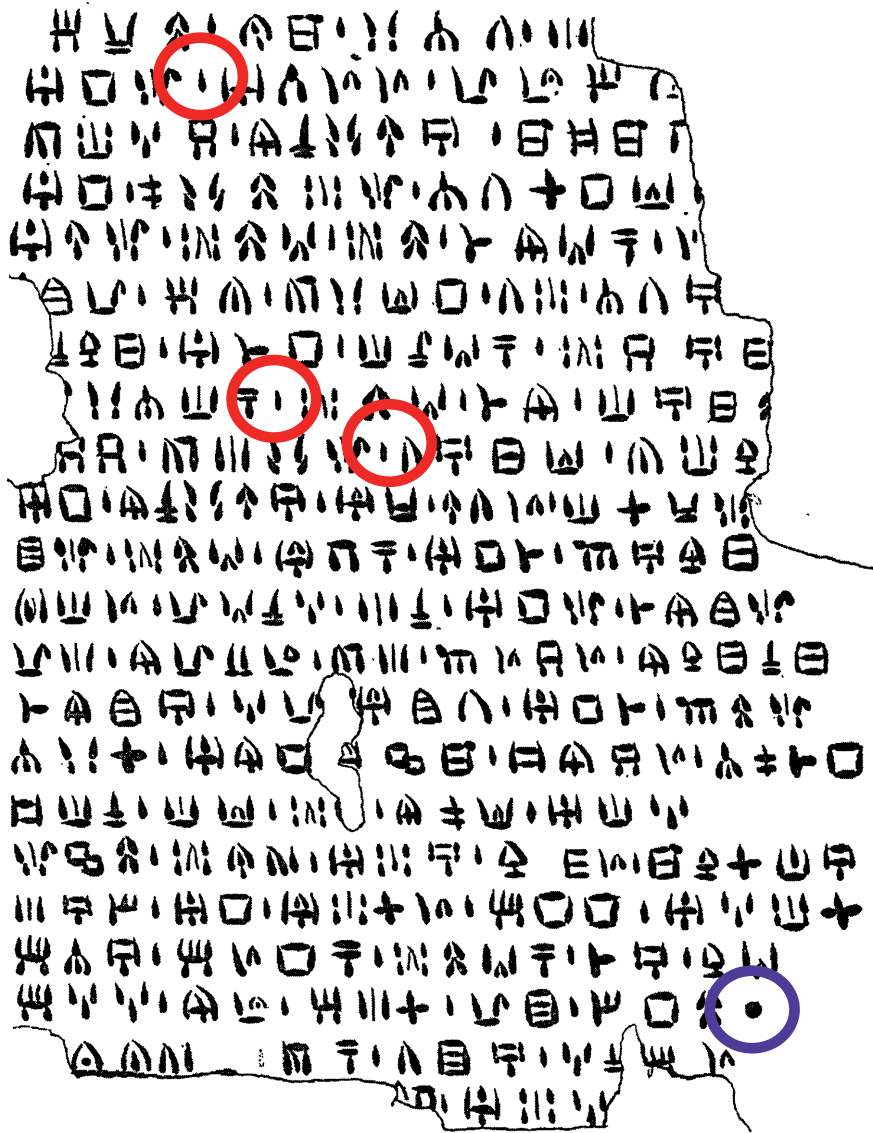
Figure 8d. Examples of word separator line 'l' and dot from ##208 (Olivier 2007)

215. RASH Atab 004.A (DamMus 0.52.88)

Tablette d'argile opistographe (*ca* 5,8 x 6,8 x 1,7 cm ; l. lignes de *ca* 2,25 à 5,5 cm ; h. signes de *ca* 0,35 à 0,5 cm). Gravé.

RASH Atab 004.A
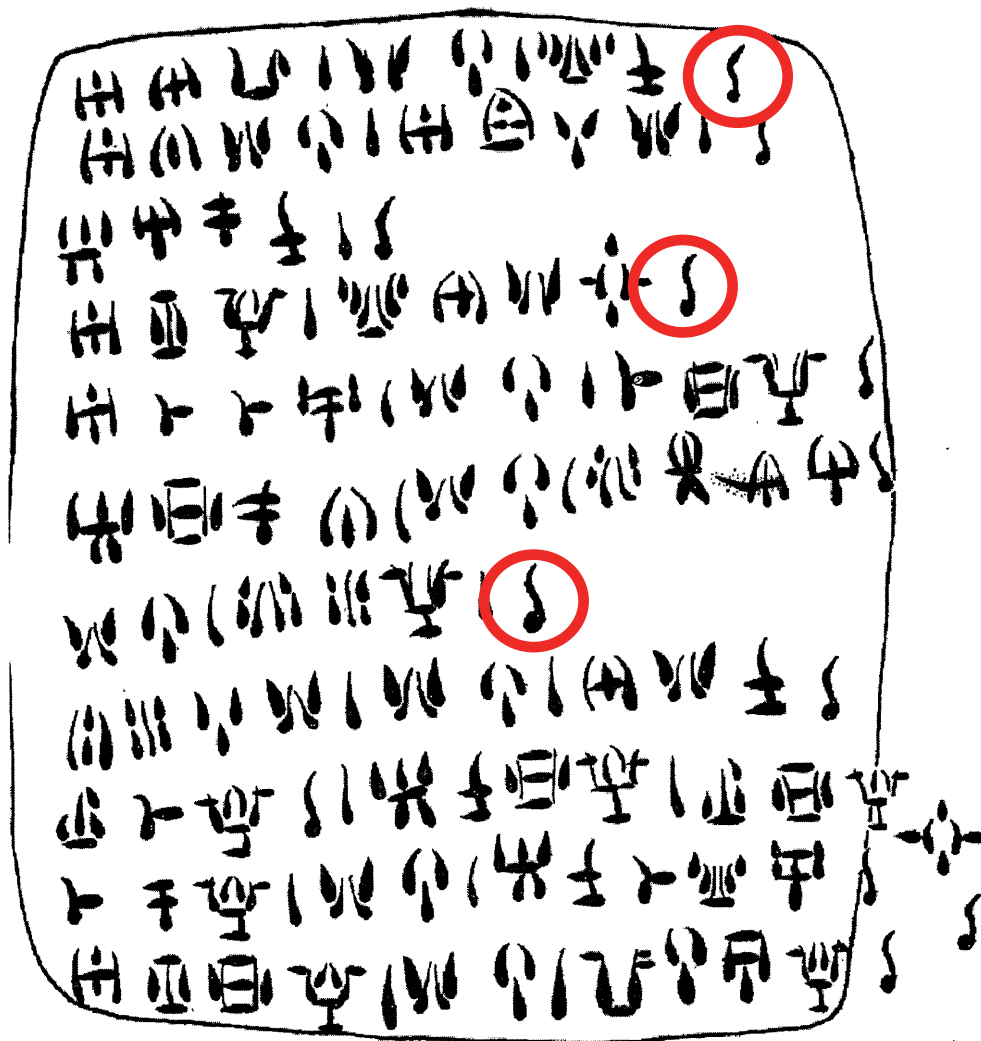
Dessin Masson É. 1974a, fig. 16 (échelle *ca* 2 : 1).

Figure 8e. Examples of U+12761 CYPRO-MINOAN SIGN CM302 from ##215 (Olivier 2007)

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 + ⊔◊/051-028 + Y'. Cette séquence ⨅/104-009-055-009-070 présente cinq signes, dont quatre différents, le signe /009 étant répété. Les deux signes /104-009 du CM 3 au début figuraient déjà plus haut (8.) dans CM 1 /104-009-006-009 (##084. ENKO Abou 80) et leur lecture comme *i-li* peut être considérée comme une hypothèse sérieuse. Comme le signe /009 est répété et le dernier signe /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 /055-009-070 se retrouve comme 'second' élément de la séquence /082-058-055-009-070 dans la dernière ligne de l'inscription (B.19). Plus important encore, un tel nom sémitique *ilmlk* est bien connu, notamment par un scribe ougaritique *Ili-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. Egetmeyer[50] 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 Ι, 2 ⊻, 4 ⊢, 5 ✛, 6 ⧻, 7 ⧻, 8 ⅂, 9 ⅄, 11 ∫, 12 ⌠, 12b ⋏, 13 ⊤, 15 ◊, 17 ⌐ⁿ, 19 ⋌, 21 ∩, 23 ⋀, 24 ⋒, 25 ⋒, 26 △, 27 ⋔, 28 ↑, 30 ⋏, 33 ⋏, 34 ↘, 35 ϟ!, 36 ⊎, 37 ⊍, 38 ⋒, 39)⌇, 41 ⋀, 44 ⊬, 46)ʜ, 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)ⵊ, 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 (🜨)[15] but leaves open the possibility that we have a broken 46 (🜨) or 47 (🜨). 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:

<div align="center">

CM: 𐜼 ⸔ ⸔ ⊢ ⊰ Λ | | | | 𐜼 | Λ
CG: ✳ ✳ ⊢ 𝌆 ⋔ | | | | ⋇ | ⋔
102-109-004-<u>013</u>-023 '4' 110 | 023
a-wa-ta-<u>to</u>-ti 4 *ku* | *ti*

</div>

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

<div align="center">

𐙽 𝼎 𐙼 ⊢ 𝼁
𐙽 𝼎 𐙼 ⊢ 𝼁
064-011-024-004-012
Greek genitive *o-pe-le-ta-u* /Op^heltau/

</div>

 The inscriptions have only one sign in common, CM 004 *ta* ⊢, 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.
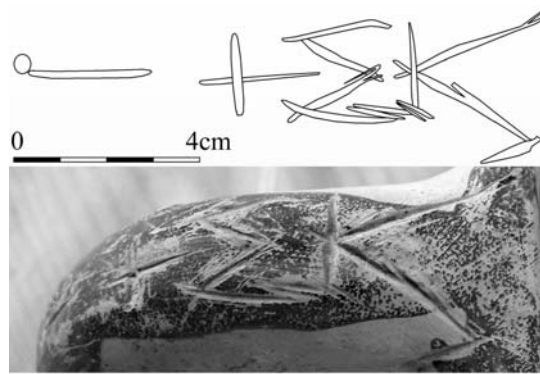
Ductus

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 transnumeration[33] 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. Per Valério, the stroke with dot is an example of CM302.

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.

The distribution of inscriptions on the island is illustrated in full in Map 1. At Enkomi itself, texts appear over almost the whole

Map 1 The distribution of Cypro-Minoan on Cyprus

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 15. The distribution of Cypro-Minoan script on Cyprus, from Steele 2013.

	1270	1271	1272	1273	1274	1275	1276
0	12700	12710	12720	12730	12740	12750	12760
1	12701	12711	12721	12731	12741	12751	12761
2	12702	12712	12722	12732	12742	12752	
3	12703	12713	12723	12733	12743	12753	
4	12704	12714	12724	12734	12744	12754	
5	12705	12715	12725	12735	12745	12755	
6	12706	12716	12726	12736	12746	12756	
7	12707	12717	12727	12737	12747	12757	
8	12708	12718	12728	12738	12748	12758	
9	12709	12719	12729	12739	12749	12759	
A	1270A	1271A	1272A	1273A	1274A	1275A	
B	1270B	1271B	1272B	1273B	1274B	1275B	
C	1270C	1271C	1272C	1273C	1274C	1275C	
D	1270D	1271D	1272D	1273D	1274D	1275D	
E	1270E	1271E	1272E	1273E	1274E	1275E	
F	1270F	1271F	1272F	1273F	1274F	1275F	

Signs

12700		CYPRO-MINOAN SIGN CM001
12701		CYPRO-MINOAN SIGN CM002
12702		CYPRO-MINOAN SIGN CM004
12703		CYPRO-MINOAN SIGN CM005
12704		CYPRO-MINOAN SIGN CM006
12705		CYPRO-MINOAN SIGN CM007
12706		CYPRO-MINOAN SIGN CM008
12707		CYPRO-MINOAN SIGN CM009
12708		CYPRO-MINOAN SIGN CM010
12709		CYPRO-MINOAN SIGN CM011
1270A		CYPRO-MINOAN SIGN CM012
1270B		CYPRO-MINOAN SIGN CM012B
1270C		CYPRO-MINOAN SIGN CM013
1270D		CYPRO-MINOAN SIGN CM015
1270E		CYPRO-MINOAN SIGN CM017
1270F		CYPRO-MINOAN SIGN CM019
12710		CYPRO-MINOAN SIGN CM021
12711		CYPRO-MINOAN SIGN CM023
12712		CYPRO-MINOAN SIGN CM024
12713		CYPRO-MINOAN SIGN CM025
12714		CYPRO-MINOAN SIGN CM026
12715		CYPRO-MINOAN SIGN CM027
12716		CYPRO-MINOAN SIGN CM028
12717		CYPRO-MINOAN SIGN CM029
12718		CYPRO-MINOAN SIGN CM030
12719		CYPRO-MINOAN SIGN CM033
1271A		CYPRO-MINOAN SIGN CM034
1271B		CYPRO-MINOAN SIGN CM035
1271C		CYPRO-MINOAN SIGN CM036
1271D		CYPRO-MINOAN SIGN CM037
1271E		CYPRO-MINOAN SIGN CM038
1271F		CYPRO-MINOAN SIGN CM039
12720		CYPRO-MINOAN SIGN CM040
12721		CYPRO-MINOAN SIGN CM041
12722		CYPRO-MINOAN SIGN CM044
12723		CYPRO-MINOAN SIGN CM046
12724		CYPRO-MINOAN SIGN CM047
12725		CYPRO-MINOAN SIGN CM049
12726		CYPRO-MINOAN SIGN CM050
12727		CYPRO-MINOAN SIGN CM051
12728		CYPRO-MINOAN SIGN CM052
12729		CYPRO-MINOAN SIGN CM053
1272A		CYPRO-MINOAN SIGN CM054
1272B		CYPRO-MINOAN SIGN CM055
1272C		CYPRO-MINOAN SIGN CM056
1272D		CYPRO-MINOAN SIGN CM058
1272E		CYPRO-MINOAN SIGN CM059
1272F		CYPRO-MINOAN SIGN CM060
12730		CYPRO-MINOAN SIGN CM061
12731		CYPRO-MINOAN SIGN CM062
12732		CYPRO-MINOAN SIGN CM063
12733		CYPRO-MINOAN SIGN CM064
12734		CYPRO-MINOAN SIGN CM066
12735		CYPRO-MINOAN SIGN CM067
12736		CYPRO-MINOAN SIGN CM068
12737		CYPRO-MINOAN SIGN CM069
12738		CYPRO-MINOAN SIGN CM070
12739		CYPRO-MINOAN SIGN CM071
1273A		CYPRO-MINOAN SIGN CM072
1273B		CYPRO-MINOAN SIGN CM073
1273C		CYPRO-MINOAN SIGN CM074
1273D		CYPRO-MINOAN SIGN CM075
1273E		CYPRO-MINOAN SIGN CM076
1273F		CYPRO-MINOAN SIGN CM078
12740		CYPRO-MINOAN SIGN CM079
12741		CYPRO-MINOAN SIGN CM080
12742		CYPRO-MINOAN SIGN CM081
12743		CYPRO-MINOAN SIGN CM082
12744		CYPRO-MINOAN SIGN CM083
12745		CYPRO-MINOAN SIGN CM084
12746		CYPRO-MINOAN SIGN CM085
12747		CYPRO-MINOAN SIGN CM086
12748		CYPRO-MINOAN SIGN CM087
12749		CYPRO-MINOAN SIGN CM088
1274A		CYPRO-MINOAN SIGN CM089
1274B		CYPRO-MINOAN SIGN CM090
1274C		CYPRO-MINOAN SIGN CM091
1274D		CYPRO-MINOAN SIGN CM092
1274E		CYPRO-MINOAN SIGN CM094
1274F		CYPRO-MINOAN SIGN CM095
12750		CYPRO-MINOAN SIGN CM096
12751		CYPRO-MINOAN SIGN CM097
12752		CYPRO-MINOAN SIGN CM098
12753		CYPRO-MINOAN SIGN CM099
12754		CYPRO-MINOAN SIGN CM100
12755		CYPRO-MINOAN SIGN CM101
12756		CYPRO-MINOAN SIGN CM102
12757		CYPRO-MINOAN SIGN CM103
12758		CYPRO-MINOAN SIGN CM104
12759		CYPRO-MINOAN SIGN CM105
1275A		CYPRO-MINOAN SIGN CM107
1275B		CYPRO-MINOAN SIGN CM108
1275C		CYPRO-MINOAN SIGN CM109
1275D		CYPRO-MINOAN SIGN CM110
1275E		CYPRO-MINOAN SIGN CM112
1275F		CYPRO-MINOAN SIGN CM114

Punctuation

12760		CYPRO-MINOAN SIGN CM301
12761		CYPRO-MINOAN SIGN CM302

A. Administrative

1. Title

Final 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

2020-07-14

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

98.

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, Markus Egetmeyer, Massimo Perna, 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?