

BEACH RESORT & SPA



THE STORY
BEHIND
THE SYMBOLS

We would like to welcome you to the AVRA IMPERIAL BEACH RESORT & SPA and hope you enjoy a pleasant stay.

The AVRA IMPERIAL BEACH RESORT & SPA is located in Kolymbari, in western Crete, an historically important part of the island. It is just short distance away from the Gonia Monastery and the Orthodox Academy of Crete.

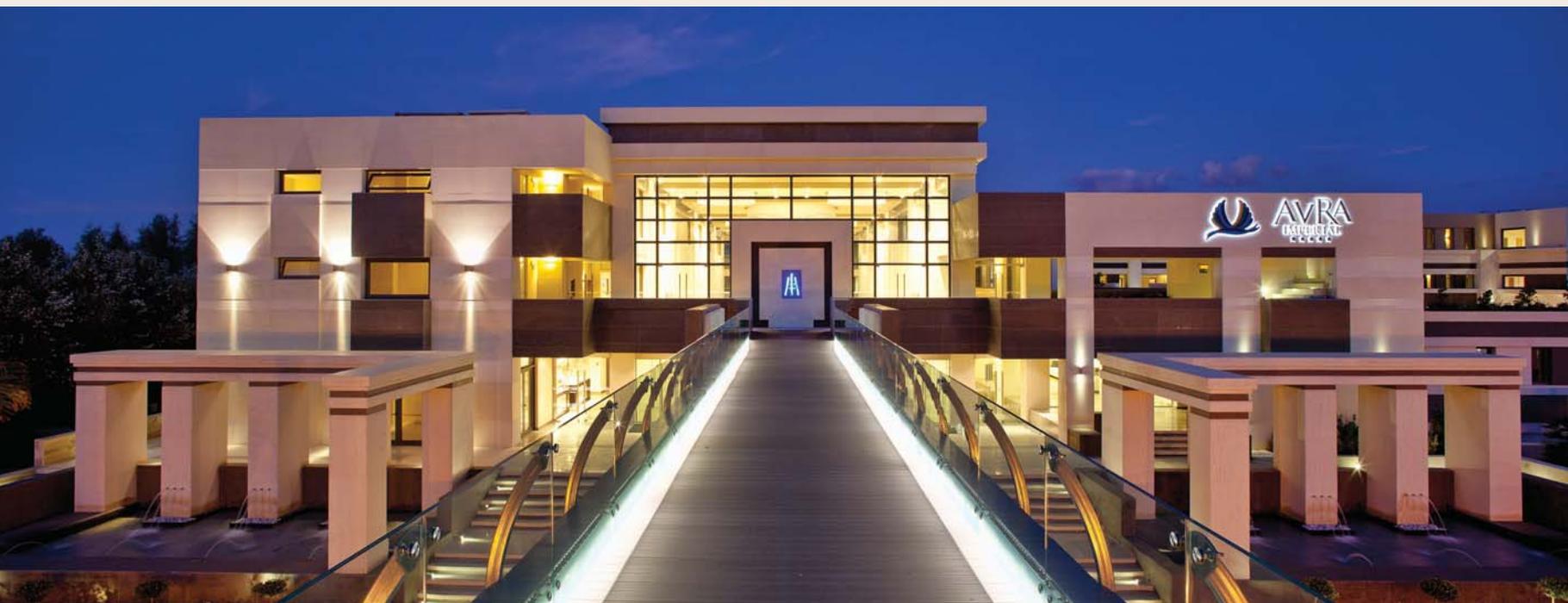
Its architecture is inspired by the structural features of the Minoan palaces. As you will notice, engraved symbols are to be found all over the hotel, both inside and in the surrounding grounds. These symbols are the letters of the Linear B Script, which was the written language of the Minoans and Mycenaeans, and is the first known written language, not only of the wider geographical region of Greece, but also of Europe.

So that we can explore this a little further and provide you with a more complete understanding of the subject, we have asked for the help of an expert in the field: Dr. Minas D. Tsikritsis, Professor of Computer Science and noted Researcher of Aegean Scripts, who will describe the Minoan scripts in the text which follows. We would like to express our sincerest appreciation for his assistance.

Hopefully, the publication you hold in your hands will serve to transport you to the enchanting world of the most ancient written language in Europe!



Athina P. Chaniotaki
Managing Director



FOREWORD

The occasion which prompted the writing of this short text was a television interview about the technology and written languages of the Minoan civilization. The owners of Avra Imperial Beach Resort & Spa happened to see the interview, and asked me to visit the hotel. When I arrived at Avra Imperial, I was impressed by all the Linear B symbols engraved on the floors, walls, and all around the hotel. If one looks carefully, one will also notice the subtle references to the 'Minoan' style in its architectural features.

So I would suggest that guests take advantage of their vacation time at the hotel and immerse themselves in the experience of the earliest syllabic script in Europe, particularly since the history of the written language of today's European civilization begins with the Minoan script.

Visitors may ask the hotel staff to transcript your name in Linear B, or read the brief note on Aegean scripts, and also take the opportunity to examine the various inscriptions around the hotel, and learn a little about the first written European language during their vacation.



Dr. Minas D. Tsikritsis

Professor of Computer Science
Researcher of Aegean Scripts

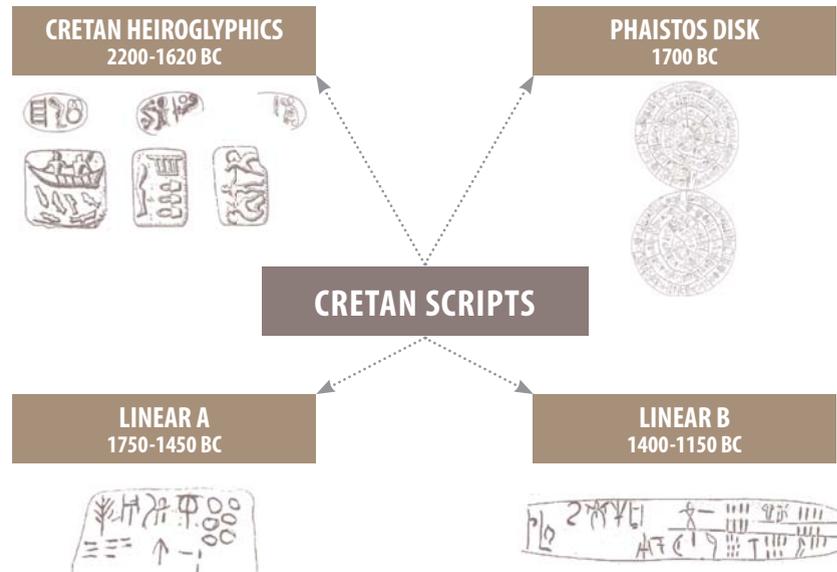




INTRODUCTION

The invention of writing in Crete seems to have been dictated by the need to service the administrative functions of the culture, as indicated by the accounting tablets and other financial records, as well as for ceremonial communications which were engraved on votive offering tables.

According to archaeological evidence, during the Minoan and Mycenaean civilizations three syllabic writing systems¹ were developed, which facilitated, for a period lasting about a millennium, the written communication between “protoliterate” Aegean communities. The various scripts dating back to the period between 2200 and 1150 BC can be identified and classified as shown in the following table:



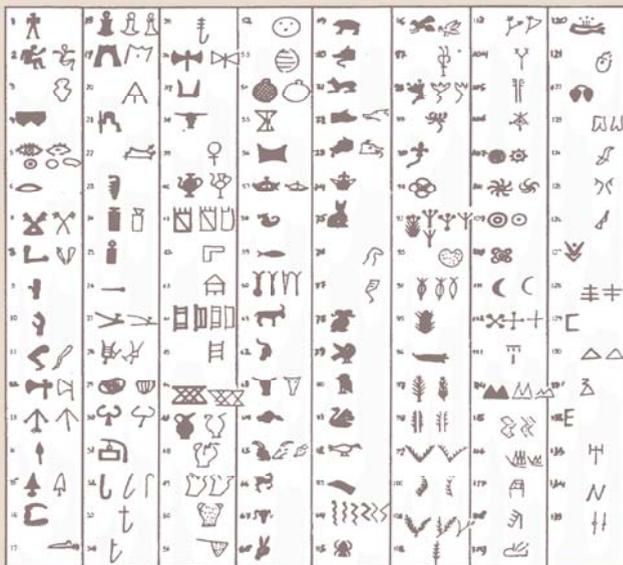
CRETAN HIEROGLYPHICS

Cretan hieroglyphs are composed of a combination of a few repeated root words and syllables, each of which is represented by an image. This script is primarily seen on sealstones and clay tablets² which came from excavations at Knossos, as well as from twenty-nine other sites on the island. These inscriptions are thought to contain economic references (to titles, property ownership, transactions etc), but may also have been of religious importance. The sealstones were mainly used for administrative purposes, to protect and guarantee the authenticity of stamped items or products.



¹ Evans, in the *Scripta Minoa*, makes a distinction in the hieroglyphic scripts of civilizations that developed in Crete between 2200 and 1200 BC between the script types Linear A and Linear B. Evans, Arthur J., “*Scripta Minoa I*”.

² Of the total of 331 objects with Cretan hieroglyph inscriptions, 136 are seals and 122 are tablets.



CRETAN HIEROGLYPHS AND PROTOLITERATE SIGNS

LINEAR A

Archaeological artifacts bearing Linear A inscriptions number 1,440, including 20 found outside Crete. Of 178 syllabic letters, about 50 are similar to those of Linear B, but only 5 of these could with any certainty be identified as corresponding directly to Linear B symbols or the Cypro-Minoan syllabary system.

After the deciphering of Linear B, efforts to decipher Linear A multiplied in the hope that the phonetic values of the symbols in the two scripts would not prove to be substantially different. The difficulties which objectively arose with the decryption of a syllabic, and therefore an incomplete, free form script, naturally led to the alleged identification in Linear A texts of words from Semitic (H. Gordon³), Luwian (L. Palmer⁴), Proto-Indo-European (Vl. Georgiev⁵), Hittite (S. Davis⁶) or Hittite-Luwian languages. The publications of Paul Faure⁷ are the exception, in that he identifies Greek words which are inscribed on fibulae (pins or brooches), as I have mentioned in my book⁸ on the Linear A script.

For my book "Linear A - A Contribution to the Understanding of an Aegean Script", I undertook the study of a total of 55 inscriptions on tablets and other artifacts and 830 of the 1,020 engraved sealstones. This quantity corresponds to 65% of all 1,430 documented Linear A inscriptions.

³ Gordon Cyrus H., "Atti e Memorie..." P.III 1, p57-64, Roma, 1967.

⁴ Palmer L.R., The Interpretation of Mycenaean Greek texts, Oxford Press 1969.

⁵ Georgiev V.I., Introduzione alla storia delle lingue Indoeuropee, Roma 1966.

⁶ Davis S., "Atti e Memorie..." P.III 1, p14-20, Roma, 1967.

⁷ Faure, P. "Three inscribed fibulae from Minoan Crete", Ephemera "Mediterranean", 20/12/1996.

⁸ Tsikritsis, M. "Linear A - A Contribution to the Understanding of an Aegean Script", Pub. Vikelaia Municipal Library, Heraklion 2001.





Based on the known dialects in historical times, Linear B, as we shall see, can be classified morphologically, phonologically and syntactically in the same category as Arcadian or Arcado-Cypriot, whilst in Linear A words can be distinguished which probably belong to an early Aeolian dialect with elements of the Arcadian. Something similar probably occurs in Cyprus. Indeed, an engraved inscription on a bronze obelos from a tomb at Skales, Palaepaphos is in Cypriot-Minoan script. The word *o-pe-le-ta-u* (= Opheltas) can be identified on it, a type of Arcado-Cypriot dialect. The form of the word *o-pe-le-ta-u*, which is the genitive case of the name *o-pe-le-ta* in the Arcadian dialect, has a different ending than would be expected in the Mycenaean script, which would take the form *o-pe-le-ta-o*.

The comparison of Cypriot-Minoan with Linear A has led to the conclusion that the relationship between these two scripts is much stronger than the one between Linear A and Linear B. Thus the connection between Linear A and Cypriot-Minoan is now considered a strong one.

LINEAR B

The Linear B numerical system

When Arthur Evans discovered the Linear B tablets (1902), the first thing revealed was the numerical system of the Mycenaean. He demonstrated that it was a decimal system, which recognized units, tens, hundreds, thousands and tens of thousands, as can be seen in the table below:

NUMBER	SYMBOL	APPLICATION EXAMPLES
1		"1244" in Linear B: 
10	—	
100	○	
1.000	⊙	"23/5/2014" in Linear B: 
10.000	⊕	



Michael Ventris
aged 14 years

A few years before the decryption

Michael Ventris was born in 1922 in England, and he was 14 years old when he came into contact with the Linear B inscriptions. He first saw the tablets on a school trip to the British Museum in London in 1936, escorted by his teacher of Ancient Greek, the philologist Patrick Hunter. At the museum, the man who excavated Knossos, Arthur Evans, then aged 81, gave a talk on the Minoan civilization, and showed some of the tablets. His teacher heard Ventris ask Evans: "Did you say that they haven't been decrypted?". This meeting seems to have been enough to awaken a dream in young Ventris that would eventually solve the mystery of the script he had seen in the museum.

The Ancient Greek lessons he took in school played a vital role in the decryption process. 18 years later, after he had solved the mystery of Linear B, in communication with his teacher, Hunter, about the Greek he had deciphered, he said: "It was not exactly the Greek you taught me, I'm afraid!".

The matters recorded on the Linear B tablets reveal a meticulous palatial bureaucracy, where the palace administration recorded everything it did or failed to do. Some of the items include:

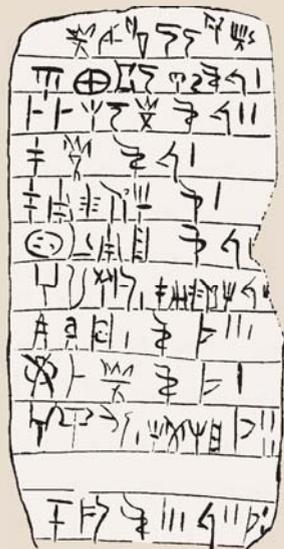
- goods and produce collected by the palace
- shortfalls and debtors exempted from payment
- military equipment in the storehouses (swords, spears, arrows etc)
- everyday objects (furniture, pottery vessels etc)
- various forms of landholding
- work teams - men and women with place names
- total numbers of livestock, mainly sheep and goats, belonging to the palace.

Powerful evidence of the Greek language in Linear B is considered to be the fact that texts referring to votive offerings to deities contain familiar nouns clearly recognizable as important names in subsequent historical times: *ε-λε-υ-τι-για* = Eleuthia (at Amnisos), *α-τα-να-πο-τι-νι-για* = Athena-Mistress, *ε-νυ-βα-λι-γιο* = Enyalios, *πο-σε-δα-ο-νε* = Poseidaonei, *δι-βε* = Diwei (Dias-Zeus), *ε-κο-το* = Hector etc.

Tablet showing votive offerings of oil from Knossos (KN Fp 1+31)

This tablet is inscribed with details of votive offerings of oil to various deities. The specific inscription is of interest because, on the one hand, it gives us a picture of the metric system of the Mycenaeans and the method of counting up from smaller to larger units, and on the other hand, it indicates the deities who are the recipients of the offerings.

The text also identifies the month in which the transaction took place, and gives a list of recipients with the corresponding quantity of oil received by each and, lastly, the total quantity of oil distributed.



<i>de-u-ki-jo meno</i>				
<i>di-ka-ta-jo di-we</i>	7 oil	1		
<i>da-da-re-jo-de</i>	7 oil	2		
<i>pa-de</i>	7 oil	1		
<i>pa-si te-o-i</i>	7 oil	1		
<i>qe-ra-si-ja</i>	7 oil	1		
<i>a-mi-ni-so pa-si-te-o-i</i>	7 oil	2		
<i>e-ri-nu</i>	7 oil		> 4	
<i>47-da-de</i>	7 oil		> 1	
<i>a-ne-mo i-je-re-ja</i>	7 oil		> 4	
<i>to-so</i>	7 oil	3	2	> 2

The translation of the text is:

the 'Deukio' month (sent)			
(temple) Diktaiou Dias	oil		1
(location) Daidoleionde	oil		2
(nearest location)	oil		1
pansi-theois (pan-theon) (to all of the gods)	oil		1
Therasia (the Goddess Artemis)	oil		1
(sent to) Amnisos, for all of the gods	oil		2
Erinis (Peace)	oil		> 3
47-da-de	oil		> 1
Priestess of the Winds	oil		> 4
this much	oil	3	and 2 and > 2

The Linear B tablets provide us with much information about the political, social and economic organization of the Mycenaeans. Some of the members of the upper social hierarchy are the following:

Φάναξ - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: The supreme ruler, the sovereign (king) - holder of the highest political, military and judicial authority, regulating the economic life of the state.

Λαφαγέτας - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: This title was probably given to the commander responsible for supervision of artisans, who was also a royal landowner.

Ε-πε-τα - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: The word 'heqetai' indicates those attendants or companions of the king, who had chariots at their disposal.

Τε-ρε-τα - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: The word 'telestas' probably indicates a religious title.

Κο-ρε-τε - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: The word 'koreter' or 'prokoreter' may refer to a kind of local official or mayor, as we would say today.

Μο-ρο-πα - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: The word 'moiroqas' is believed to be associated with an indefeasible share holder, possibly a landowner.

The tablets of Pylos list 10 'moroqa' by name, as having a strength equivalent to numbers of persons in multiples of 10. Each soldier is referenced in relation to their equipment as 'ένχεια χαλκάρεα' (with armor) and their small swords were known as **πα-κα-να** - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$ (φάσγανα).

With regard to the institution of land tenure, two forms of land holding and two categories of land can be distinguished:

ke-ke-me-na - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: (κεκείμενα), leased fields/estates collectively owned and belonging in all probability, to the community or municipality (δήμος) - **damo**.

ke-ti-me-na - $\overline{\text{𐀓}}\overline{\text{𐀓}}\overline{\text{𐀓}}$: (κτιμένα), areas that were privately owned, maybe by the 'telestas'.

A large proportion of the records are associated with livestock production. Especially at Knossos, mention is made of many goats and sheep, valuable for the production of wool and skins (parchment). Oxen are of particular importance to the economy of the time. They were commonly called 'εργάται' (workers) and were yoked for ploughing. They were often given names such as Celaeno, Oinops, Xouthos, Stomargos etc. Hunters are mentioned as **ku-na-ke-ta** (κυναγέται) who make use of hunting dogs, **ku-ne** (κύνας=canis).

The degree of labour specialization which emerges from the daily records in the tablets of Pylos and Knossos is impressive; the various professions include: **a-ra-ka-te-ja** - ηλακάτεια (etym. αλάκατη (distaff) = spinners), **a-re-pa-zo-o** - αλειφαζών (etym. verb αλείφω = spread with - unguent boilers/perfumers), **i-to-we-sa** - ιστεια (etym. ιστός (thread) = weavers), **i-ja-te** - ιατήρ (= doctor), **ka-na-pe-wo** - κναφείς (= wool bleachers), **ka-ke-u** - χαλκείς (= bronze smiths), **ku-ru-so-wo-ko** - χρυσουργοί (= goldsmiths), **ma-ti-jo** - μαλθείς (= (ship's) caulkers), **na-u-do-mo** - ναύδομοι (= ship builders/carpenters), **pe-ki-ti-ra2** - πέκτριαι (= wool carders (women)), **ri-ne-ja** - λίνεια (= linen/flax workers), **te-ko-to-ne** - τέκτονες (= carpenters), **to-ko-do-mo** - τοικοδόμοι (= builders/masons), **to-ko-so-wo-ko** - τοξοφοργοί (= bow makers).



The Phaistos Disk

The famous Phaistos Disk was discovered by L. Pernier at the palace which it is named after. It is a ceramic disc 17 cm in diameter, containing 45 different figurative points on each side, organized in five spirals. These symbols are shown in the table below:

1		10		19		28		37	
2		11		20		29		38	
3		12		21		30		39	
4		13		22		31		40	
5		14		23		32		41	
6		15		24		33		42	
7		16		25		34		43	
8		17		26		35		44	
9		18		27		36		45	



The two sides of the Phaistos Disk

Each symbol is imprinted with a type of stamp. The skill of the craftsman in utilizing all of the available disk space bears witness to considerable experience in the work. The direction of reading of the symbols is from left to right. The spiral arrangement of the script is considered to allow entry of as much information as possible in the least possible space, just like today's data discs (CD/DVD-Rom). At the same time, the spiral may be charged with metaphysical significance (e.g. the symbolism of a labyrinth).

The different ways of reading the script (counterclockwise or clockwise) force the engravers of Cretan hieroglyphs to indicate the start of reading with the symbol x at the beginning of the first syllable or to indicate the starting point with larger sized symbols. The only findings, which contain correlations with most symbols on the tablet, are inscribed on a double-headed axe found at Arkalohori and an inscription from Mallia.

The table below shows only those areas on the disc which contain the same words regardless of the way in which the disk is read:

TABLE OF CORRESPONDING WORDS ON THE PHAISTOS DISK		
AREA	WORDS ON DISK	CODIFICATION
A 21		01a 28
A 15		01a 28
A 31		38 03 10
A 28		38 03 10
A 3		07a 45 29
B 20		07a 45 29
A 16		26a 31 12 02
A 19		26a 31 12 02
A 22		26a 31 12 02
B 21		08a 07 36 29 22
B 26		08a 07 36 29 22
A 20		18 23 10 25 27 02
A 14		18 23 10 25 27 02
A 29		21 37 35 27 27 12 02
A 17		21 37 35 27 27 12 02

TABLE SHOWING INFLECTIONAL MORPHOLOGY OF WORDS READING FROM THE CENTER OF THE DISK		
AREA	INFLECTIONAL WORD FORM	CODIFICATION
A 30		01 13
A 26		01 13 12 02
A 1		18a 01 13 12 02
B 8		18 01 13 07 15
B 7		33 39 01 13
A 17		21 37 35 27 27 12 02
A 23		27 18 32 14 27 12 02
B 30		07a 45
B 24		07a 45 07
A 3		07a 45 29
B 20		07a 45 29
A 6		12 07 45 27
B 2		35 07 45 27
B 18		08a 07 36 29
B 21		08a 07 36 29 22
B 26		08a 07 36 29 22
A 4		34 29 29
B 29		25 23 34 29
A 22		25 23 34 27

However, due to its specific placement on the disk it is possible that one of the trisyllabic words may also represent the name Phaistos (*pa-i-to*) with the most likely word being located in the center of side A.

Observations on the lexicon of the Disk

Deciphering the disk is extremely difficult terrain in the field of Aegean script studies. The study of it demands a very good knowledge of the Cretans scripts¹¹ and the cultural context of the time. The aspiring codebreaker must experiment with many possible combinations of syllabic values and when a strong relationship between signifiers and the signified appears, then it is likely that the best possible interpretation of the Disk will have been reached.

¹¹ In addition, we suggest reading the book: "The Phaistos Disk - A Guide to Decryption", M. Tsikritsis, Heraklion 2006.





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