

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

Doc Type: Working Group Document**Title: Proposal to encode Egyptian Hieroglyphs in the SMP of the UCS****Source: SEI****Authors: Michael Everson and Bob Richmond****Status: Liaison Contribution****Action: For consideration by JTC1/SC2/WG2 and UTC****Replaces: N1636, N1944, L2/05-311, N3181, N3183****Date: 2007-04-02**

1. Summary. Efforts to encode Hieroglyphs in Unicode go back a long time; see Everson 1997, Everson 1999, Cook *et al* 2005, Everson and Richmond 2006. Most recently the authors have collaborated to create a source database called *UniKemet* containing 1,063 characters from Gardiner's sign-lists and related sources, together with a font based on Bob Richmond's *InScribe* font which we have used to create the proposed code table given in this document, using the code table formatting tool Unibook (<http://www.unicode.org/unibook>). In the process we identified a number of issues that needed to be resolved before a complete proposal could be submitted to the Unicode Technical Committee and ISO/IEC JTC1/SC2/WG2. Those issues were discussed at a symposium on the use of IT in Egyptology which took place early August 2006, where the content of the character set was agreed as proposed here.

2. Introduction. Hieroglyphic writing seems to have appeared in Egypt at the end of the fourth millennium BCE. The writing system is pictographic: the glyphs represent tangible objects, most of which modern scholars have been able to identify; a great many of them are easily recognizable even to non-specialists. Egyptian Hieroglyphs represent people and animals, parts of the bodies of people and animals, clothing, tools, vessels, and so on. Hieroglyphs were used to write Egyptian for more than 3,000 years retaining characteristic features such as use of colour and detail in the more elaborated expositions. Throughout the Old Kingdom, the Middle Kingdom, and the New Kingdom, between 700 and 1,000 hieroglyphs were in regular use. During the Greco-Roman period, the number of variants, as distinguished by some modern scholars, grew to somewhere between 6,000 and 8,000. Hieroglyphs were carved in stone, painted on frescos, and could also be written with a reed stylus, though this cursive writing soon became standardized in what is called *hieratic* writing. Demotic then Coptic replaced the earlier scripts for much practical writing of Egyptian but hieroglyphs and hieratic continued in use until the fourth century CE. On the Gateway of Hadrian in the Temple complex at Philae an inscription dated 0394-08-24 has been found, and this is thought to be among the latest examples of Ancient Egyptian writing in hieroglyphs.

3. Structure. Egyptian Hieroglyphs made use of 24 letters comprising a true alphabet, of which the modern alphabetic order is *z, i, y, c, w, b, p, f, m, n, r, h, h, h, h, s/z, š, k, k, g, t, t, d, d* in Alan Gardiner's transcription. Other transcription systems exist; *i* for instance is sometimes written *j*. In addition to the basic alphabet, the script made use of a fairly large number of "biliterals" and "trilaterals" which represented sequences of two or three consonants, examples of these are biliterals *z̄c, w̄c, b̄c, p̄c, m̄c, h̄c, h̄c, h̄c, s̄c, š̄c, k̄c, t̄c, t̄c, d̄c, m̄i, t̄i, w̄z, h̄z, c̄w, īw, m̄w, n̄w, r̄w, h̄w, h̄w, s̄w, š̄w, d̄w, c̄b, n̄b, w̄p, k̄p, īm, n̄m, h̄m, k̄m, ḡm, t̄m, īn, w̄n, m̄n, n̄n, h̄n, h̄n, s̄n, š̄n* and trilaterals *z̄h̄z, h̄p̄r, s̄d̄m, n̄f̄r, z̄n̄h, h̄t̄p*; there are many more.







In addition to the phonetic characters, Egyptian Hieroglyphs made use of a very large number of logographic characters (called “logograms” or “ideograms” by Egyptologists), some of which could be read as a word, and some of which had only a semantic “determinative” function, to enable the reader to distinguish between words which were otherwise written the same, thus: *hb* ‘enter’, *hb* ‘ibis’, and *hb* ‘plough’. Sometimes a number of characters were used redundantly. For example, *gbꜣ* ‘arm’ was conventionally written , literally *g-b-bꜣ-ꜣ*. Within a word, characters are arranged together to form an aesthetically-pleasing arrangement within a notional square; see “Rendering” below.




4. Directionality. Characters may be written left-to-right or right-to-left, generally in horizontal lines but often (especially in monumental texts) in vertical columns. In general, directionality is easy to determine because one reads a line into the faces of the people and animals, so *ꜣꜣ* ‘people’ becomes when written right-to-left. Like Old Italic, Egyptian Hieroglyphs are given strong left-to-right directionality in this proposed encoding because most Egyptian editions are published in English, French, and German and left-to-right directionality is the standard presentation mode. U+202E RIGHT-TO-LEFT OVERRIDE can be used for the presentation of right-to-left Egyptian text. In this case, as with Old Italic, the glyphs from Egyptian Hieroglyphic fonts should be mirrored from those given in the code charts.




5. Rendering. The proposed encoding of Egyptian hieroglyphs treats them simply as a set of text elements; a higher-level protocol would be required for the necessary clustering, mirroring, and rotation of signs within text. This approach works well in the context of existing encoding conventions which use a simple markup scheme to indicate such formatting. The most prominent example of this which has been developed since computers were introduced into Egyptology in the late 1970s and the early 1980s, called the *Manuel de codage* (*MdC*; Paris: 1988), a later recension of which can be seen in van den Berg 1997. These conventions make use of ASCII characters to separate hieroglyphs and to indicate the organization of the hieroglyphs in space (that is, the position of hieroglyphs in a block). The hyphen “-” is used to separate hieroglyphic blocks; the colon “:” superposes one hieroglyph over another; the asterisk “*” is used to juxtapose two or more hieroglyphs, typically when they are a group which is superposed over or under another hieroglyph or group of hieroglyphs. So “ - : ” will render (one way of writing the name of Osiris), and “ : * ” will render (another way of writing the same name). More complex overlapping combinations can use the ampersand “&”, so “ & ” will render . Other *MdC* notations are used to indicate the reversal or rotation of hieroglyphs within the LTR text stream. The application of *MdC* conventions to text is not, however, a plain-text process. Ordinary word-processors are not expected to be able to use *MdC* conventions to render Egyptian Hieroglyphs correctly. In plain text the examples given will render - : , : * , and & , and without *MdC* markup they will render as , , and . Neither is the illustration of *MdC* given here intended to be prescriptive. Other schemes have been proposed that attempt to provide greater flexibility than *MdC* by use of more elaborate encodings and XML and similar remarks apply. However, none has yet obtained widespread usage comparable with *MdC*. The Macintosh and Windows implementations (*MacScribe*, and *WinGlyph* and *InScribe*) make use of the *Manuel de Codage* conventions, as does the Wikimedia’s WikiHiero PHP script.

6. Character names. Egyptian hieroglyphic characters are traditionally designated in a number of ways:






























- by complex description: GOD WITH HEAD OF IBIS, DESERT HARE, VULTURE-GODDESS NEKHBT AND COBRA-GODDESS EDJO ON BASKETS, OWL, LAPWING WITH WINGS TWISTED ROUND ONE ANOTHER, QUAIL CHICK (these are Gardiner’s own descriptions)
- by standardized sign number: C3, E34, G16, G17, G24, G43
- by conventional sound which works for only a minority of characters: *wn*, *m*, *w*














The most convenient way of naming the characters is to identify them with their standard Egyptological catalogue numbers, since otherwise the character names would be picturesque but rather long. The name EGYPTIAN HIEROGLYPH E034 refers uniquely and unambiguously to the DESERT HARE character used for the sound *wn*. Character names are padded with zeros here for two reasons. First, they will tend to sort correctly even when “smart” sorting algorithms are not available. Second, the use of zeros offers a mechanism for distinguishing UCS character names from the many extant naming schemes for Egyptian, since formally-standardized UCS characters will have a different status than font collections like Hieroglyphica (Grimal *et al.* 1993 and 2000) or other works. Gardiner uses A44 for  KING OF UPPER EGYPT WITH FLAGELLUM; Collier and Manley (whose numbering is completely idiosyncratic) use A44 for  ARM HOLDING THE *nḥbt*-WAND; Möller uses A44 for  SOLDIER WITH BOW AND QUIVER. The UCS names for  A044,  D045, and  A012 uniquely identify the characters and also identifies the designation *as* a UCS name.























According to Gardiner’s identification scheme, Egyptian Hieroglyphs are classified according to letters of the alphabet, so A000 is “Man and his occupations”, B000 is “Woman and her occupations”, C000 is “Anthropomorphic deities”, D000 is “Parts of the human body”, E000 is “Mammals”, F000 is “Parts of mammals”, G000 is “Birds”, H000 is “Parts of birds”, I000 is “Amphibious animals, reptiles, etc.”, K000 is “Fishes and parts of fishes”, L000 is Invertebrata and lesser animals”, M000 is “Trees and plants”, N000 is “Sky, earth, water”, O000 is “Buildings, parts of buildings, etc.”, P000 is “Ships and parts of ships”, Q000 is “Domestic and funerary furniture”, R000 is “Temple furniture and sacred emblems”, S000 is “Crowns, dress, staves, etc.”, T000 is “Warfare, hunting, butchery”, U000 is “Agriculture, crafts, and professions”, V000 is “Rope, fibre, baskets, bags, etc.”, W000 is “Vessels of stone and earthenware”, X000 is “Loaves and cakes”, Y000 is “Writings, games, music”, Z000 is “Strokes, signs derived from Hieratic, geometrical features”, and AA000 is used for “Unclassified” signs. (Note: some individual characters have been may have been identified as belonging to other classes since the category was assigned but we have not re-assigned them.) In Gardiner 1929, 1931, and 1953 a section Ff “Signs for transcription from Hieratic” appears, but as these are identified as variants of other characters, they are named accordingly here (for example, since  G1928:95:Ff2 is a “substitute for λ V7”, it is named V007A). In Gardiner 1953, a section Nn is given to represent the nomes of Egypt, with L prefixed to the number for the nomes of Lower Egypt, and U for the nomes of Upper Egypt. All of those characters are related to  N024, which indicates land marked out with irrigation runnels, which is presumably why Gardiner used the notation “Nn” for the nomes. Gardiner gives NnL1 for ; the naming convention here calls it NL001 rather than>NNL001. An aesthetic complaint might be made about O000, but Gardiner used the letter O in his classification and we maintain that the leading zero is a useful convention for the reasons given above.

Gardiner identified some variants of characters by unique catalogue numbers, and others by extending adding one or two asterisks (and in one instance *a* and *a'*). UCS naming convention does not allow the use of asterisks, but it is traditional to add letters of the alphabet, as has been done here. Thus Gardiner’s  G7,  G7*, and  G7** are G007, G007A, and G007B here respectively. Letters for variants are to be added serially as the Egyptian repertoire in the UCS is expanded.

7. Character set repertoire. The first set of hieroglyphs which should be encoded, and which is proposed here, is “the Gardiner set”, which is something of a moving target. “The Gardiner set” was not exhaustively described and enumerated by Gardiner or indeed by anyone else. The chief source of the repertoire is Gardiner’s Middle Egyptian sign-list as given in his *Egyptian Grammar* (Gardiner 1957). This is supplemented by additional characters found in his font catalogues (Gardiner 1928, Gardiner 1929, Gardiner 1931, and Gardiner 1953), and a collection of signs found in the Griffith Institute’s *Topographical Bibliography*, which also used the Gardiner fonts. In consultation with Egyptologists, a handful of other characters has been added to this set forming the proposal here. The following criteria have been used as guidelines to determine the contents of repertoire.

7.1. Entities to which Gardiner gave specific catalogue numbers. Most of these are taken quite straightforwardly from the sign-lists. A few characters which need additional comment are discussed here. Gardiner gave catalogue numbers to  C002B,  C002C,  C013, and  C015. C002B was used in the royal name      ‘Setnakht beloved of Amun Ra’, attested in the *Topographical Bibliography* (Vol. I, Pt. II, p. 527). It can be argued that reversed characters like these should not be encoded because *Manual de Codage* markup is normally used for reversing and rotating characters. This is not always the case of course.  D054 ‘movement’ contrasts with  D055 ‘backwards’;  P001 ‘boat’ contrasts with  P001A as used in   *pn^c* ‘upset, overturn’. Some other characters are distinguished as “low” glyphs needed in Gardiner’s font: compare  E034 and  E034A,  F013 and  F013A,  G036 and  G036A,  G037 and  G037A,  N025 and  N025A,  V030 and  V030A, and  W003 and  W003A. Egyptologists are not unanimous as to the need to use these variants as characters per se, but a number of them requested the retention in the character set for completeness of representation of Gardiner’s own materials. In a certain sense they may be considered “compatibility” characters.

7.2. Positional variants without Gardiner catalogue numbers. A number of positional variants without catalogue numbers were listed in the Gardiner 1957 and Gardiner 1928. An example is the down-facing fly  L003, which is arguably an error occurring only in the Index to Gardiner’s sign-list;  L003 seems to be the only form found elsewhere. Other examples are the two moons  and  which are said by Gardiner to be used as determinatives; but  N011 and  N012 can represent these well enough. Twenty-six such variants were listed in a code table in N3183 described as “Gardiner Positional Variants”. The Egyptologists we consulted considered it unnecessary that these be encoded, apart from three of them. Vertical  O029A (a variant of  O029) and  Y001A (a variant of  Y001) were requested by more than one specialist because of their very high frequency of occurrence. The vertical F045A  used in hieratic for *m, n* was identified by Gardiner as a vertical form of  *rth* ‘restrain’ but it has been shown to derive from F045  BICORNUATE UTERUS OF HEIFER, and so the two should not be unified.

7.3. Enclosures. The two principal names of the king, the nomen and praenomen, were normally written inside a cartouche: a figure representing a coil of rope, for instance  *ε₃pp* ‘Apophis’. Gardiner 1957:71–76 describes the royal titulary, giving beginning and end shapes  and  signs in the Catalogue. The bracket-like convention of writing  is used in the hieratic (cf. Möller 1936:51) and some modern publications. Plain text and general purpose software should likewise treat these signs as characters and not render the fully enclosed form. Several other characters are also used to represent enclosures. While the cartouche proper normally begins with  V011A and ends with  V011B, it sometimes ends with  V011C, the “knotless” cartouche. The *hwt* enclosure used to describe houses, temples, and tombs is based on  O006, the rectangular enclosure seen in plan. It may have different beginning and final forms. When  O006A begins a *hwt* enclosure,  O006D or  O006E may complete it; when  O006B or  O006C begins a *hwt* enclosure,  O006F may complete it. The *srh* or *serekh* enclosure is based on  O033, a banner. A *serekh* enclosure is begun with  O006A, and completed with  O033A. Champollion 1836:159 describes a “fortified surrounding wall” cartouche based on  O033, the fortified wall, which is used to describe countries and foreign cities; this begins with  O033A and ends with  O033B. A rectilinear form of this is also given in Champollion 1841–43:274; this begins with  O033C and ends with  O033D.

7.4. Numerals. Egyptian numbers are encoded here along the same principles which were used in the encoding of Aegean and Cuneiform numbers. Gardiner does not supply a full set of numerals with catalogue numbers in his *Egyptian Grammar*. He describes numbers in detail in §§259–266. Möller’s three volumes on Hieratic palaeography do give catalogue numbers and those references have been added to the database to instantiate the numerals encoded. Two conventions of representing Egyptian numerals

133AC	EGYPTIAN	HIEROGLYPH	V040;N1;0;L;;;10;N;;;;	133EA	EGYPTIAN	HIEROGLYPH	Z007;Lo;0;L;;;N;;;;
133AD	EGYPTIAN	HIEROGLYPH	V040A;N1;0;L;;;20;N;;;;	133EB	EGYPTIAN	HIEROGLYPH	Z008;Lo;0;L;;;N;;;;
133AE	EGYPTIAN	HIEROGLYPH	W001;Lo;0;L;;;N;;;;	133EC	EGYPTIAN	HIEROGLYPH	Z009;Lo;0;L;;;N;;;;
133AF	EGYPTIAN	HIEROGLYPH	W002;Lo;0;L;;;N;;;;	133ED	EGYPTIAN	HIEROGLYPH	Z010;Lo;0;L;;;N;;;;
133B0	EGYPTIAN	HIEROGLYPH	W003;Lo;0;L;;;N;;;;	133EE	EGYPTIAN	HIEROGLYPH	Z011;Lo;0;L;;;N;;;;
133B1	EGYPTIAN	HIEROGLYPH	W003A;Lo;0;L;;;N;;;;	133EF	EGYPTIAN	HIEROGLYPH	Z012;Lo;0;L;;;N;;;;
133B2	EGYPTIAN	HIEROGLYPH	W004;Lo;0;L;;;N;;;;	133F0	EGYPTIAN	HIEROGLYPH	Z013;Lo;0;L;;;N;;;;
133B3	EGYPTIAN	HIEROGLYPH	W005;Lo;0;L;;;N;;;;	133F1	EGYPTIAN	HIEROGLYPH	Z014;Lo;0;L;;;N;;;;
133B4	EGYPTIAN	HIEROGLYPH	W006;Lo;0;L;;;N;;;;	133F2	EGYPTIAN	HIEROGLYPH	Z015;N1;0;L;;;1;N;;;;
133B5	EGYPTIAN	HIEROGLYPH	W007;Lo;0;L;;;N;;;;	133F3	EGYPTIAN	HIEROGLYPH	Z015A;N1;0;L;;;2;N;;;;
133B6	EGYPTIAN	HIEROGLYPH	W008;Lo;0;L;;;N;;;;	133F4	EGYPTIAN	HIEROGLYPH	Z015B;N1;0;L;;;3;N;;;;
133B7	EGYPTIAN	HIEROGLYPH	W009;Lo;0;L;;;N;;;;	133F5	EGYPTIAN	HIEROGLYPH	Z015C;N1;0;L;;;4;N;;;;
133B8	EGYPTIAN	HIEROGLYPH	W009A;Lo;0;L;;;N;;;;	133F6	EGYPTIAN	HIEROGLYPH	Z015D;N1;0;L;;;5;N;;;;
133B9	EGYPTIAN	HIEROGLYPH	W010;Lo;0;L;;;N;;;;	133F7	EGYPTIAN	HIEROGLYPH	Z015E;N1;0;L;;;6;N;;;;
133BA	EGYPTIAN	HIEROGLYPH	W010A;Lo;0;L;;;N;;;;	133F8	EGYPTIAN	HIEROGLYPH	Z015F;N1;0;L;;;7;N;;;;
133BB	EGYPTIAN	HIEROGLYPH	W011;Lo;0;L;;;N;;;;	133F9	EGYPTIAN	HIEROGLYPH	Z015G;N1;0;L;;;8;N;;;;
133BC	EGYPTIAN	HIEROGLYPH	W012;Lo;0;L;;;N;;;;	133FA	EGYPTIAN	HIEROGLYPH	Z015H;N1;0;L;;;9;N;;;;
133BD	EGYPTIAN	HIEROGLYPH	W013;Lo;0;L;;;N;;;;	133FB	EGYPTIAN	HIEROGLYPH	Z015I;N1;0;L;;;5;N;;;;
133BE	EGYPTIAN	HIEROGLYPH	W014;Lo;0;L;;;N;;;;	133FC	EGYPTIAN	HIEROGLYPH	Z016;N1;0;L;;;1;N;;;;
133BF	EGYPTIAN	HIEROGLYPH	W014A;Lo;0;L;;;N;;;;	133FD	EGYPTIAN	HIEROGLYPH	Z016A;N1;0;L;;;2;N;;;;
133C0	EGYPTIAN	HIEROGLYPH	W015;Lo;0;L;;;N;;;;	133FE	EGYPTIAN	HIEROGLYPH	Z016B;N1;0;L;;;3;N;;;;
133C1	EGYPTIAN	HIEROGLYPH	W016;Lo;0;L;;;N;;;;	133FF	EGYPTIAN	HIEROGLYPH	Z016C;N1;0;L;;;4;N;;;;
133C2	EGYPTIAN	HIEROGLYPH	W017;Lo;0;L;;;N;;;;	13400	EGYPTIAN	HIEROGLYPH	Z016D;N1;0;L;;;5;N;;;;
133C3	EGYPTIAN	HIEROGLYPH	W017A;Lo;0;L;;;N;;;;	13401	EGYPTIAN	HIEROGLYPH	Z016E;N1;0;L;;;6;N;;;;
133C4	EGYPTIAN	HIEROGLYPH	W018;Lo;0;L;;;N;;;;	13402	EGYPTIAN	HIEROGLYPH	Z016F;N1;0;L;;;7;N;;;;
133C5	EGYPTIAN	HIEROGLYPH	W018A;Lo;0;L;;;N;;;;	13403	EGYPTIAN	HIEROGLYPH	Z016G;N1;0;L;;;8;N;;;;
133C6	EGYPTIAN	HIEROGLYPH	W019;Lo;0;L;;;N;;;;	13404	EGYPTIAN	HIEROGLYPH	Z016H;N1;0;L;;;9;N;;;;
133C7	EGYPTIAN	HIEROGLYPH	W020;Lo;0;L;;;N;;;;	13405	EGYPTIAN	HIEROGLYPH	AA001;Lo;0;L;;;N;;;;
133C8	EGYPTIAN	HIEROGLYPH	W021;Lo;0;L;;;N;;;;	13406	EGYPTIAN	HIEROGLYPH	AA002;Lo;0;L;;;N;;;;
133C9	EGYPTIAN	HIEROGLYPH	W022;Lo;0;L;;;N;;;;	13407	EGYPTIAN	HIEROGLYPH	AA003;Lo;0;L;;;N;;;;
133CA	EGYPTIAN	HIEROGLYPH	W023;Lo;0;L;;;N;;;;	13408	EGYPTIAN	HIEROGLYPH	AA004;Lo;0;L;;;N;;;;
133CB	EGYPTIAN	HIEROGLYPH	W024;Lo;0;L;;;N;;;;	13409	EGYPTIAN	HIEROGLYPH	AA005;Lo;0;L;;;N;;;;
133CC	EGYPTIAN	HIEROGLYPH	W024A;Lo;0;L;;;N;;;;	1340A	EGYPTIAN	HIEROGLYPH	AA006;Lo;0;L;;;N;;;;
133CD	EGYPTIAN	HIEROGLYPH	W025;Lo;0;L;;;N;;;;	1340B	EGYPTIAN	HIEROGLYPH	AA007;Lo;0;L;;;N;;;;
133CE	EGYPTIAN	HIEROGLYPH	X001;Lo;0;L;;;N;;;;	1340C	EGYPTIAN	HIEROGLYPH	AA007A;Lo;0;L;;;N;;;;
133CF	EGYPTIAN	HIEROGLYPH	X002;Lo;0;L;;;N;;;;	1340D	EGYPTIAN	HIEROGLYPH	AA007B;Lo;0;L;;;N;;;;
133D0	EGYPTIAN	HIEROGLYPH	X003;Lo;0;L;;;N;;;;	1340E	EGYPTIAN	HIEROGLYPH	AA008;Lo;0;L;;;N;;;;
133D1	EGYPTIAN	HIEROGLYPH	X004;Lo;0;L;;;N;;;;	1340F	EGYPTIAN	HIEROGLYPH	AA009;Lo;0;L;;;N;;;;
133D2	EGYPTIAN	HIEROGLYPH	X004A;Lo;0;L;;;N;;;;	13410	EGYPTIAN	HIEROGLYPH	AA010;Lo;0;L;;;N;;;;
133D3	EGYPTIAN	HIEROGLYPH	X005;Lo;0;L;;;N;;;;	13411	EGYPTIAN	HIEROGLYPH	AA011;Lo;0;L;;;N;;;;
133D4	EGYPTIAN	HIEROGLYPH	X006;Lo;0;L;;;N;;;;	13412	EGYPTIAN	HIEROGLYPH	AA012;Lo;0;L;;;N;;;;
133D5	EGYPTIAN	HIEROGLYPH	X006A;Lo;0;L;;;N;;;;	13413	EGYPTIAN	HIEROGLYPH	AA013;Lo;0;L;;;N;;;;
133D6	EGYPTIAN	HIEROGLYPH	X007;Lo;0;L;;;N;;;;	13414	EGYPTIAN	HIEROGLYPH	AA014;Lo;0;L;;;N;;;;
133D7	EGYPTIAN	HIEROGLYPH	X008;Lo;0;L;;;N;;;;	13415	EGYPTIAN	HIEROGLYPH	AA015;Lo;0;L;;;N;;;;
133D8	EGYPTIAN	HIEROGLYPH	Y001;Lo;0;L;;;N;;;;	13416	EGYPTIAN	HIEROGLYPH	AA016;Lo;0;L;;;N;;;;
133D9	EGYPTIAN	HIEROGLYPH	Y001A;Lo;0;L;;;N;;;;	13417	EGYPTIAN	HIEROGLYPH	AA017;Lo;0;L;;;N;;;;
133DA	EGYPTIAN	HIEROGLYPH	Y002;Lo;0;L;;;N;;;;	13418	EGYPTIAN	HIEROGLYPH	AA018;Lo;0;L;;;N;;;;
133DB	EGYPTIAN	HIEROGLYPH	Y003;Lo;0;L;;;N;;;;	13419	EGYPTIAN	HIEROGLYPH	AA019;Lo;0;L;;;N;;;;
133DC	EGYPTIAN	HIEROGLYPH	Y004;Lo;0;L;;;N;;;;	1341A	EGYPTIAN	HIEROGLYPH	AA020;Lo;0;L;;;N;;;;
133DD	EGYPTIAN	HIEROGLYPH	Y005;Lo;0;L;;;N;;;;	1341B	EGYPTIAN	HIEROGLYPH	AA021;Lo;0;L;;;N;;;;
133DE	EGYPTIAN	HIEROGLYPH	Y006;Lo;0;L;;;N;;;;	1341C	EGYPTIAN	HIEROGLYPH	AA022;Lo;0;L;;;N;;;;
133DF	EGYPTIAN	HIEROGLYPH	Y007;Lo;0;L;;;N;;;;	1341D	EGYPTIAN	HIEROGLYPH	AA023;Lo;0;L;;;N;;;;
133E0	EGYPTIAN	HIEROGLYPH	Y008;Lo;0;L;;;N;;;;	1341E	EGYPTIAN	HIEROGLYPH	AA024;Lo;0;L;;;N;;;;
133E1	EGYPTIAN	HIEROGLYPH	Z001;Lo;0;L;;;N;;;;	1341F	EGYPTIAN	HIEROGLYPH	AA025;Lo;0;L;;;N;;;;
133E2	EGYPTIAN	HIEROGLYPH	Z002;Lo;0;L;;;N;;;;	13420	EGYPTIAN	HIEROGLYPH	AA026;Lo;0;L;;;N;;;;
133E3	EGYPTIAN	HIEROGLYPH	Z003;Lo;0;L;;;N;;;;	13421	EGYPTIAN	HIEROGLYPH	AA027;Lo;0;L;;;N;;;;
133E4	EGYPTIAN	HIEROGLYPH	Z003A;Lo;0;L;;;N;;;;	13422	EGYPTIAN	HIEROGLYPH	AA028;Lo;0;L;;;N;;;;
133E5	EGYPTIAN	HIEROGLYPH	Z004;Lo;0;L;;;N;;;;	13423	EGYPTIAN	HIEROGLYPH	AA029;Lo;0;L;;;N;;;;
133E6	EGYPTIAN	HIEROGLYPH	Z004A;Lo;0;L;;;N;;;;	13424	EGYPTIAN	HIEROGLYPH	AA030;Lo;0;L;;;N;;;;
133E7	EGYPTIAN	HIEROGLYPH	Z005;Lo;0;L;;;N;;;;	13425	EGYPTIAN	HIEROGLYPH	AA031;Lo;0;L;;;N;;;;
133E8	EGYPTIAN	HIEROGLYPH	Z005A;Lo;0;L;;;N;;;;	13426	EGYPTIAN	HIEROGLYPH	AA032;Lo;0;L;;;N;;;;
133E9	EGYPTIAN	HIEROGLYPH	Z006;Lo;0;L;;;N;;;;				

9. Ordering. Deterministic ordering of actual hieroglyphs is something that is probably unknown to the Egyptological tradition, since Egyptologists have tended to sort the transliterations. However, an alphabetic order does exist (ⲗ, *i*, *y*, *c*, *w*, *b*, *p*, *f*, *m*, *n*, *r*, *h*, *ḥ*, *ḥ*, *ḥ*, *s/z*, *š*, *k*, *k*, *g*, *t*, *t*, *d*, *d* as given above), and this should be the basis for ordering those characters with a phonetic reading. Determinatives without phonetic readings should probably be left in code-point order. Some experimentation and investigation of current practice will have to be undertaken before precise recommendations can be made, and this will be the subject of a further proposal as input to ISO/IEC 14651 and the Unicode Collation Algorithm. As an example, however, we have taken a set of words beginning in *g*- from Gardiner's grammar and ordered the list of words there as it might be ordered according to the principles outlined above.

Some of the characters in the sample have a single phonetic value, some have more than one value, and some have no value but are just determinatives. Assigning a numeric value to each of the 24 letters of the alphabet (so ⲗ *g* = 20), and expanding biliteral and triliteral to the same values (so ⲗⲗ *gb* = 20-06 and ⲗⲗⲗ *grg* = 20-11-20), and leaving determinatives values 25 to 52 (for this data set) so that they sort in coding order (so ⲗⲗⲗⲗ E029 = 35 and ⲗⲗⲗⲗ N002 = 39), the following results were obtained:

	<i>iwgrt</i>		<i>gmgm</i>		<i>ghs</i>
	<i>igrt</i>		<i>gmt</i>		<i>ghs</i>
	<i>g3wt</i>		<i>gnf</i>		<i>gs</i>
	<i>g3w</i>		<i>gnf</i>		<i>gsw</i>
	<i>g3w</i>		<i>gnwt</i>		<i>gs3</i>
	<i>g3w</i>		<i>gnwt</i>		<i>gs</i>
	<i>Gbb</i>		<i>gnn</i>		<i>gs</i>
	<i>gb3</i>		<i>gnwt</i>		<i>gs</i>
	<i>gbb</i>		<i>gnwty</i>		<i>gsw</i>
	<i>Gb</i>		<i>gr</i>		<i>gs-pr</i>
	<i>gbgb</i>		<i>grh</i>		<i>gsti</i>
	<i>Gbtiw</i>		<i>grh</i>		<i>ggwy</i>
	<i>gb3</i>		<i>grg</i>		<i>ggwt</i>
	<i>gfn</i>		<i>grg</i>		<i>Gsy</i>
	<i>gf</i>		<i>grg</i>		<i>gsti</i>
	<i>gmi</i>		<i>grg</i>		<i>ggt</i>
	<i>gmw</i>		<i>grg</i>		<i>di hr gs</i>
	<i>gmht</i>		<i>grt</i>		<i>ghs</i>
	<i>gmh</i>		<i>gr</i>		<i>grh</i>

Figure 1. The words in Gardiner’s grammar beginning with \overline{g} -, expanded to plain-text strings of characters and run through a very basic sorting algorithm as proof-of-concept regarding the ordering of hieroglyphs as opposed to transliteration-based ordering.

Compare this with the same list of words in Gardiner’s dictionary:

<p>\overline{g} (W 11)</p> <p> <i>gwt</i> (V 32) bundles.</p> <p> varr. det. \overline{g}, <i>grw</i> (V 32; Aa 2) lack, <i>r</i> (something), be narrow, short of breath; deprive, <i>m</i> of (breath); <i>gst</i>, <i>grw</i> lack, <i>n</i> of; <i>n-grw</i> through lack of, § 178; <i>grwrs</i> det. \overline{g} (D 1) throttle, choke.</p> <p> (G 38, O.K.) white-fronted goose.</p> <p> <i>Gb</i>, older var. <i>Gbb</i>, the earth-god Geb, Gk. K$\eta$$\beta$.</p> <p> (V 33) Kift, Coptus, a town in Upper Egypt.</p> <p> <i>gb3</i> (D 41) arm; det. \overline{g} side (of room).</p> <p> <i>gbgb</i> fall prostrate; <i>gbgbyt</i> headlong fall.</p> <p> <i>gf</i>, varr. <i>gff</i>, <i>gfw</i> (E 33), monkey.</p> <p> <i>gfn</i> (D 19), var. <i>gnf</i>, rebuff (vb.); <i>gfnw</i> rebuff (n.).</p> <p> (G 28, O.K.) black ibis.</p> <p> <i>gmi</i> (G 28) find; foll. by <i>sdm-f</i> (perf., § 452, 1), § 184, 1, 2; by <i>sdm-n-f</i>, § 185; by obj. + <i>sdm-f</i> or <i>sdm-n-f</i>, § 213; by obj. + <i>hr</i> + infn., § 304, 1; by obj. + old perf., § 315.</p> <p> <i>gmw</i> mourning.</p> <p> <i>gmh</i> espy, look at; <i>sgmh</i>, same sense.</p> <p> <i>gmht</i> wick.</p> <p> <i>gmgm</i> (Z 9) break up, break.</p> <p> var. <i>gnwt</i> (N 33; T 19) annals; var. <i>gnwt</i> (?) sculptor.</p> <p> <i>gnf</i>, see <i>gfn</i> above.</p> <p> <i>gnn</i> (A 7) be soft, weak; <i>sgnn</i> soften, weaken.</p>	<p> (A 2) be silent; silence; <i>grw</i> silent, calm one; <i>igrt</i>, var. <i>iwgrt</i> (p. 209, n. 7), the necropolis, lit. the silent one; <i>sgr</i> silence (someone); silence, quiet (n.).</p> <p> <i>grt</i>, older <i>gr</i>, early varr. <i>igrt</i>, <i>igr</i>, encl. part., moreover, now, §§ 66, 255; as adv., further, either, §§ 205, 1; 255.</p> <p> (D 41) cease, <i>m</i> from; finish, <i>m</i> (something); <i>sgrh</i> make to cease, quell.</p> <p> abbrev. (N 2) night.</p> <p> varr. <i>grg</i>, (U 17) 1. snare (vb.); 2. found, establish.</p> <p> var. <i>grg</i> falsehood, lie.</p> <p> varr. <i>ghs</i>, (E 29; D 56) gazelle, f. <i>ghst</i>.</p> <p> (Aa 13-16) side; half, § 265; <i>r-gs</i>, rarely <i>hr-gs</i>, beside, in the presence of, § 178; <i>gs(uy)/fy</i> its two sides, § 75, 2; <i>di hr gs</i> 1. dispose of, kill; 2. show partiality; <i>gsw</i> neighbours; <i>gs-pr</i> (X 7, O.K.) half-loaves; administration (?), in title <i>tmy-r gs-pr</i>.</p> <p> var. <i>gs</i> (Aa 13) anoint, <i>m</i> with.</p> <p> <i>gs</i> run (vb.).</p> <p> <i>Gsy</i> K\acute{u}s, Apollonos polis, a town in Upper Egypt.</p> <p> (O 37) tilt, slant (intrans.).</p> <p> var. <i>gsti</i> (Aa 13) palette.</p> <p> (V 33) kidney (?).</p> <p> <i>ggwy</i>, var. <i>ggwt</i> (V 33), dazzled amazement, <i>hr</i> at.</p>
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Figure 2. The words in Gardiner’s grammar beginning with \overline{g} -.

It can be seen that there are some differences between the order in Figure 1 and Gardiner’s order in Figure 2, but note that Gardiner’s is not algorithmically derived. For instance, Gardiner orders *gbb* < *Gb* < *Gbtīw* < *gb₃* < *gbgb*; according to Gardiner’s own alphabetical order one might expect *Gb* < *gb₃* < *gbb* < *gbgb* < *Gbtīw* (though perhaps Gardiner is using a root-based ordering). Our results gave *gb₃* < *gbb* < *Gb* < *gbgb* < *Gbtīw*, because the underlying spelling is *g-b-(b-₃)-₃-⤵* < *g-b-b-(g-b)* < *(g-b)-b-⤵* < *g-b-g-b-⤵* < *g-b-(t-ī-w)-⊗*.

Something else that will need to be dealt with is the question of characters with multiple readings. T019, the harpoon head of bone \ddagger , has two readings, *gn* and *ks*, and it is uncertain how a decision about “primary” values will be made. Second- and third-level ordering for homophones like \boxminus *g* and \textcircled{g} *g* is also something we have not attempted in this exercise. Nevertheless, it seems clear that a phonetic-based ordering for Egyptian hieroglyphs yields results which are more useful than binary ordering would yield.


Another way of illustrating this is to choose a set of words each beginning with a different letter of the Egyptian alphabet and order that according to phonetic value and according to binary order. The use of binary order apparently transforms Egyptian alphabetical order into *r, c, d, b, h, ₃, m, w, f, d, i, k, n, š, s/z, h, p, t, h, k, g, t, y, h*. Figure 3 shows the same set of words sorted in binary order. When we consulted with Egyptologists, they agreed that this order would not be useful to them.











	<i>dī hr gs</i>		<i>gr</i>		<i>gfn</i>
	<i>ghs</i>		<i>gr</i>		<i>gnf</i>
	<i>gmi</i>		<i>grg</i>		<i>gnf</i>
	<i>gmgm</i>		<i>grg</i>		<i>gnn</i>
	<i>gmh</i>		<i>grh</i>		<i>gnwt</i>
	<i>gmht</i>		<i>grh</i>		<i>gs</i>
	<i>gmw</i>		<i>grg</i>		<i>gs₃</i>
	<i>Gb</i>		<i>grg</i>		<i>gsw</i>
	<i>iwgrt</i>		<i>grt</i>		<i>ghs</i>
	<i>igrt</i>		<i>gb₃</i>		<i>ghs</i>
	<i>grh</i>		<i>gbb</i>		<i>ggwy</i>
	<i>gnwt</i>		<i>gb₃</i>		<i>ggt</i>
	<i>gnwt</i>		<i>gbgb</i>		<i>gsti</i>
	<i>gnwty</i>		<i>g₃w</i>		<i>gs</i>
	<i>grg</i>		<i>g₃wt</i>		<i>gs</i>
	<i>Gbb</i>		<i>g₃w</i>		<i>gsw</i>
	<i>Gbtīw</i>		<i>g₃w</i>		<i>gs-pr</i>
	<i>ggwt</i>		<i>gmt</i>		<i>gsti</i>
	<i>Gsy</i>		<i>gfl</i>		<i>gs</i>

Figure 3. The words in Gardiner’s grammar beginning with \boxminus *g*-, expanded to plain-text strings of characters and sorting in binary order.

10. The UniKemet database and future expansion of the repertoire. The database containing source references for the characters encoded has been named the *UniKemet* database after \textcircled{Kmt} “Egypt” since we considered a name like *UniHieroglyph* to be too general (given Anatolian Hieroglyphs, Maya Hieroglyphs, and Míkmaq Hieroglyphs). This database provides the means for Egyptologists to work with ISO/IEC JTC1/SC2/WG2 and with the Unicode Consortium to add Egyptian Hieroglyphs to the standard in future. Its structure is relatively straightforward; it contains the following fields:

Hex	The proposed U+1xxxx character code.
Name	The catalogue name of the character, such as A001, M013.
G1957	Citation from Gardiner 1957, giving page number and designation.
G1928	Citation from Gardiner 1928, giving page number and designation.
G1929	Citation from Gardiner 1929, giving page number and designation.
G1931	Citation from Gardiner 1931, giving page number and designation.
G1953	Citation from Gardiner 1953, giving page number and designation.
GITB	Citation from the Griffith Insititute <i>Topographical Bibliography</i> , giving volume, page number, and designation.
M1909	Citation from Möller 1909, giving page number and designation (only for number characters so far, here and for M1927 and M1936).
M1927	Citation from Möller 1927, giving page number and designation.
M1936	Citation from Möller 1936, giving page number and designation.
A1999	Citation from Allen 1999, giving page number and designation.
F1962	A field for citations from Faulkner 1962.
Uname	Calculation field that adds EGYPTIAN HIEROGLYPH to the Name field to produce the UCS names list.
Note	Notes which assist in the creation of the UCS names list.
Amd	A field which indicates the block or amendment into which a character is (to be) encoded, to assist in sorting the characters in order to produce the names list.
C2005	A temporary field containing the assignments in Richard Cook's L2/05-311, to assist members of the UTC who have reviewed that document in comparing it with the present document.

The intent of this database is that it will be a standard repository of those Egyptian characters which specialists deem suitable for formal encoding. Its citations are specific to a printed source, giving page number and an identifying designation given on that page. For example, the character  Z020 '9' is attested in Gardiner and in Möller. **G1957:197:9** means that it is attested in Gardiner 1957 on page 197 as "9" (since he did not assign a catalogue number to it). It is also attested in Möller as **M1909:59:AAa622** which means it is in Möller 1909 on page 59 in section "AA" subsection "a" with catalogue number 622. The full source citation format is "**G1957:197:9**" though at present the content of the G1957 field in the database is simply "**197:9**" because each source has its own field.

In future, when work for additions to the repertoire begins on materials from other sources, a unification process will be used where existing coded characters are first mapped to the content of those sources. Then we will be able to look at what is left over as sources for further standardization. Möller has many characters not found in other sources. For instance, standard Middle Egyptian writes  *pnw* 'mouse', but Möller cites  'mice' and so in due course the new character  **M1909:12:E131** could be standardized and added to the database. Other candidates for future addition to the database and to the UCS could be found in Faulkner 1986 (e.g.,  in  *py*, 'flea' ref. **F1962:88:py**) or in Hannig 2003 (e.g.,  in  *wbs*, 'to pile up' ref. **H2003:331:wbs**). If these three characters were being standardized as the next addition to the repertoire here, they would be assigned the names  EGYPTIAN HIEROGLYPH E039,  EGYPTIAN HIEROGLYPH L009, and  EGYPTIAN HIEROGLYPH M045 respectively.

A printout of the UniKemet database is attached at the end of this document; an electronic version of this draft can be found at in a tab-delimited text file at <http://www.evertype.com/standards/iso10646/pdf/unikemet-mappings-20070402.tab>. This file should be used for review only, and not for development as its contents will certainly change.

11. Bibliography

Allen, James P. 1999. *Middle Egyptian: an introduction to the language and culture of Hieroglyphs*. Cambridge: Cambridge University Press. ISBN 0-521-77483-7

- Champollion, Jean-François. 1997 (1836). *Grammaire égyptienne*. Préface de Christian Jacq. Arles: Solin, Actes Sud. ISBN 2-7427-1558-4.
- Champollion, Jean-François. 2000 (1841–43). *Dictionnaire égyptien*. Arles: Solin, Actes Sud. ISBN 2-7427-1558-4.
- Collier, Mark, and Bill Manley. 1998. *How to read Egyptian hieroglyphs: a step-by-step guide to teach yourself*. [London]: British Museum Press. ISBN 0-7141-1910-5
- Cook, Richard, Michael Everson, Rick McGowan, & Robert Richmond. 2005-10-24. L2/05-311 *Revised proposal to encode Egyptian hieroglyphs in Plane 1*.
- Everson, Michael. 1997-08-25. N1636 *Encoding Egyptian Hieroglyphs in ISO/IEC 10646-2*. <http://www.dkuug.dk/JTC1/SC2/WG2/docs/n1636/n1636.htm>
- Everson, Michael. 1999-01-09. N1944 *Encoding Egyptian Hieroglyphs in Plane 1 of the UCS*. <http://www.dkuug.dk/JTC1/SC2/WG2/docs/n1944.pdf>
- Everson, Michael, & Bob Richmond. 2006-07-19. *Towards a proposal to encode Egyptian Hieroglyphs in Unicode*. <http://www.evertype.com/standards/iso10646/pdf/towards-egyptian.pdf>
- Faulkner, Raymond O. 1986 (1962). *A concise dictionary of Middle Egyptian*. Oxford: Griffith Institute. ISBN 0-900416-32-7
- Gardiner, Alan H. 1928. *Catalogue of the Egyptian hieroglyphic printing type, from matrices owned and controlled by Dr. Alan H. Gardiner, in two sizes, 18 point, 12 point with intermediate forms*. Oxford: Oxford University Press.
- Gardiner, Alan H. 1929. “Additions to the new hieroglyphic fount (1928)”, in *The Journal of Egyptian Archaeology* 15, p. 95. London: Egypt Exploration Society
- Gardiner, Alan H. 1931. “Additions to the new hieroglyphic fount (1931)”, in *The Journal of Egyptian Archaeology* 17, pp. 245-247. London: Egypt Exploration Society
- Gardiner, Alan H. 1953. *Supplement to the catalogue of the Egyptian hieroglyphic printing type, showing acquisitions to December 1953*. Oxford: Oxford University Press.
- Gardiner, Alan H. 1957. *Egyptian grammar: being an introduction to the study of hieroglyphs*. 3rd edition. London: Oxford University Press.
- Grimal, Nicolas, Jochen Hallof, & Dirk van der Plas. 1993. *Hieroglyphica. Volume 1: Sign list – Liste des signes – Zeichenliste*. (Publications interuniversitaires de recherches égyptologiques informatisées). Utrecht & Paris: Centre for Computer-aided Egyptological Research. ISBN 90-393-0207-3.
- Grimal, Nicolas, Jochen Hallof, & Dirk van der Plas. 2000. *Hieroglyphica. Volume 1²: Sign list – Liste des signes – Zeichenliste*. Second edition, revised and enlarged by Jochen Hallof, Hans van den Berg, Gabriele Hallof. (Publications interuniversitaires de recherches égyptologiques informatisées). Utrecht & Paris: Centre for Computer-aided Egyptological Research. ISBN 90-393-2349-6.
- Hannig, Rainer. 2003. *Ägyptisches Wörterbuch I: Altes Reich und Erste Zwischenzeit*. (Hannig-Lexica; 4) (Kulturgeschichte der antiken Welt; 98) Mainz am Rhein: Philipp von Zabern. ISBN 3-8053-3088-X.
- Möller, Georg. 1909. *Hieratische Paläographie: die aegyptische Buchschrift in ihrer Entwicklung von der Fünften Dynastie bis zur römischen Kaiserzeit*. Erster Band: Bis zum Beginn der achtzehnten Dynastie, mit neun Tafeln Schriftproben. Leipzig: J. C. Hinrichs'sche Buchhandlung.
- Möller, Georg. 1927 (1965). *Hieratische Paläographie: die aegyptische Buchschrift in ihrer Entwicklung von der Fünften Dynastie bis zur römischen Kaiserzeit*. Zweiter Band: Von der Zeit Thutmosis' III bis zum Ende der einundzwanzigsten Dynastie, mit acht Tafeln Schriftproben. Neudruck der zweiten verbesserten Auflage. Osnabrück: Otto Zeller.
- Möller, Georg. 1936 (1965). *Hieratische Paläographie: die aegyptische Buchschrift in ihrer Entwicklung von der Fünften Dynastie bis zur römischen Kaiserzeit*. Dritter Band: Von der zweiundzwanzigsten Dynastie bis zum dritten Jahrhundert nach Chr., mit elf Tafeln Schriftproben. Neudruck der zweiten verbesserten Auflage. Osnabrück: Otto Zeller.
- Rosmorduc, Serge. 2002. *Codage informatique des langues anciennes : le cas des hiéroglyphes égyptiens*. <http://www.irisa.fr/DocNum/Unic/codageHiero.pdf>

van den Berg, Hans. 1997. *“Manuel de Codage”*: A standard system for the computer-encoding of Egyptian transliteration and hieroglyphic texts. [Leiden]: Centre for Computer-Aided Egyptological Research. <http://www.catchpenny.org/codage/>
Wikimedia’s WikiHiero PHP script <http://meta.wikimedia.org/wiki/WikiHiero>

A. Administrative

1. Title

Proposal to encode Egyptian Hieroglyphs in the SMP of the UCS

2. Requester’s name

UC Berkeley Script Encoding Initiative (Universal Scripts Project); authors: Michael Everson and Bob Richmond

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

Liaison contribution.

4. Submission date

2007-04-02

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

Egyptian Hieroglyphs.

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

1063.

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 F.

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?

Bob Richmond and Michael Everson. TrueType.

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.

Yes. See N1636, N1944, L2/05-311, N3181, N3183.

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?

John Baines, Jaromír Málek, Wolfgang Schenkel, Nigel Strudwick, Jochen Hallof, Marc-Jan Nederhof, Serge Rosmarduc, Hans van den Berg, Lee Collins, Richard Cook.

2c. If YES, available relevant documents

<http://titus.fkidg1.uni-frankfurt.de/unicode/iranian/3tagung.htm>

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

Egyptologists and many enthusiasts worldwide.

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

To write Egyptian.

4b. Reference

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

Yes.

5b. If YES, where?

By scholars and enthusiasts 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. There is no question of unifying Egyptian Hieroglyphs with other scripts or symbols. U+2625 ANKH is not the same character as EGYPTIAN HIEROGLYPH S034, despite the origin of the former in the latter.

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?

	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	130A	130B	130C	130D
0	13000	13010	13020	13030	13040	13050	13060	13070	13080	13090	130A0	130B0	130C0	130D0
1	13001	13011	13021	13031	13041	13051	13061	13071	13081	13091	130A1	130B1	130C1	130D1
2	13002	13012	13022	13032	13042	13052	13062	13072	13082	13092	130A2	130B2	130C2	130D2
3	13003	13013	13023	13033	13043	13053	13063	13073	13083	13093	130A3	130B3	130C3	130D3
4	13004	13014	13024	13034	13044	13054	13064	13074	13084	13094	130A4	130B4	130C4	130D4
5	13005	13015	13025	13035	13045	13055	13065	13075	13085	13095	130A5	130B5	130C5	130D5
6	13006	13016	13026	13036	13046	13056	13066	13076	13086	13096	130A6	130B6	130C6	130D6
7	13007	13017	13027	13037	13047	13057	13067	13077	13087	13097	130A7	130B7	130C7	130D7
8	13008	13018	13028	13038	13048	13058	13068	13078	13088	13098	130A8	130B8	130C8	130D8
9	13009	13019	13029	13039	13049	13059	13069	13079	13089	13099	130A9	130B9	130C9	130D9
A	1300A	1301A	1302A	1303A	1304A	1305A	1306A	1307A	1308A	1309A	130AA	130BA	130CA	130DA
B	1300B	1301B	1302B	1303B	1304B	1305B	1306B	1307B	1308B	1309B	130AB	130BB	130CB	130DB
C	1300C	1301C	1302C	1303C	1304C	1305C	1306C	1307C	1308C	1309C	130AC	130BC	130CC	130DC
D	1300D	1301D	1302D	1303D	1304D	1305D	1306D	1307D	1308D	1309D	130AD	130BD	130CD	130DD
E	1300E	1301E	1302E	1303E	1304E	1305E	1306E	1307E	1308E	1309E	130AE	130BE	130CE	130DE
F	1300F	1301F	1302F	1303F	1304F	1305F	1306F	1307F	1308F	1309F	130AF	130BF	130CF	130DF

	130E	130F	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	131A	131B
0														
1														
2														
3														
4														
5														
6														
7														
8														
9														
A														
B														
C														
D														
E														
F														

	131C	131D	131E	131F	1320	1321	1322	1323	1324	1325	1326	1327	1328
0	131C0	131D0	131E0	131F0	13200	13210	13220	13230	13240	13250	13260	13270	13280
1	131C1	131D1	131E1	131F1	13201	13211	13221	13231	13241	13251	13261	13271	13281
2	131C2	131D2	131E2	131F2	13202	13212	13222	13232	13242	13252	13262	13272	13282
3	131C3	131D3	131E3	131F3	13203	13213	13223	13233	13243	13253	13263	13273	13283
4	131C4	131D4	131E4	131F4	13204	13214	13224	13234	13244	13254	13264	13274	13284
5	131C5	131D5	131E5	131F5	13205	13215	13225	13235	13245	13255	13265	13275	13285
6	131C6	131D6	131E6	131F6	13206	13216	13226	13236	13246	13256	13266	13276	13286
7	131C7	131D7	131E7	131F7	13207	13217	13227	13237	13247	13257	13267	13277	13287
8	131C8	131D8	131E8	131F8	13208	13218	13228	13238	13248	13258	13268	13278	13288
9	131C9	131D9	131E9	131F9	13209	13219	13229	13239	13249	13259	13269	13279	13289
A	131CA	131DA	131EA	131FA	1320A	1321A	1322A	1323A	1324A	1325A	1326A	1327A	1328A
B	131CB	131DB	131EB	131FB	1320B	1321B	1322B	1323B	1324B	1325B	1326B	1327B	1328B
C	131CC	131DC	131EC	131FC	1320C	1321C	1322C	1323C	1324C	1325C	1326C	1327C	1328C
D	131CD	131DD	131ED	131FD	1320D	1321D	1322D	1323D	1324D	1325D	1326D	1327D	1328D
E	131CE	131DE	131EE	131FE	1320E	1321E	1322E	1323E	1324E	1325E	1326E	1327E	1328E
F	131CF	131DF	131EF	131FF	1320F	1321F	1322F	1323F	1324F	1325F	1326F	1327F	1328F

	1329	132A	132B	132C	132D	132E	132F	1330	1331	1332	1333	1334	1335
0	13290	132A0	132B0	132C0	132D0	132E0	132F0	13300	13310	13320	13330	13340	13350
1	13291	132A1	132B1	132C1	132D1	132E1	132F1	13301	13311	13321	13331	13341	13351
2	13292	132A2	132B2	132C2	132D2	132E2	132F2	13302	13312	13322	13332	13342	13352
3	13293	132A3	132B3	132C3	132D3	132E3	132F3	13303	13313	13323	13333	13343	13353
4	13294	132A4	132B4	132C4	132D4	132E4	132F4	13304	13314	13324	13334	13344	13354
5	13295	132A5	132B5	132C5	132D5	132E5	132F5	13305	13315	13325	13335	13345	13355
6	13296	132A6	132B6	132C6	132D6	132E6	132F6	13306	13316	13326	13336	13346	13356
7	13297	132A7	132B7	132C7	132D7	132E7	132F7	13307	13317	13327	13337	13347	13357
8	13298	132A8	132B8	132C8	132D8	132E8	132F8	13308	13318	13328	13338	13348	13358
9	13299	132A9	132B9	132C9	132D9	132E9	132F9	13309	13319	13329	13339	13349	13359
A	1329A	132AA	132BA	132CA	132DA	132EA	132FA	1330A	1331A	1332A	1333A	1334A	1335A
B	1329B	132AB	132BB	132CB	132DB	132EB	132FB	1330B	1331B	1332B	1333B	1334B	1335B
C	1329C	132AC	132BC	132CC	132DC	132EC	132FC	1330C	1331C	1332C	1333C	1334C	1335C
D	1329D	132AD	132BD	132CD	132DD	132ED	132FD	1330D	1331D	1332D	1333D	1334D	1335D
E	1329E	132AE	132BE	132CE	132DE	132EE	132FE	1330E	1331E	1332E	1333E	1334E	1335E
F	1329F	132AF	132BF	132CF	132DF	132EF	132FF	1330F	1331F	1332F	1333F	1334F	1335F

	1336	1337	1338	1339	133A	133B	133C	133D	133E	133F	1340	1341	1342
0	13360	13370	13380	13390	133A0	133B0	133C0	133D0	133E0	133F0	13400	13410	13420
1	13361	13371	13381	13391	133A1	133B1	133C1	133D1	133E1	133F1	13401	13411	13421
2	13362	13372	13382	13392	133A2	133B2	133C2	133D2	133E2	133F2	13402	13412	13422
3	13363	13373	13383	13393	133A3	133B3	133C3	133D3	133E3	133F3	13403	13413	13423
4	13364	13374	13384	13394	133A4	133B4	133C4	133D4	133E4	133F4	13404	13414	13424
5	13365	13375	13385	13395	133A5	133B5	133C5	133D5	133E5	133F5	13405	13415	13425
6	13366	13376	13386	13396	133A6	133B6	133C6	133D6	133E6	133F6	13406	13416	13426
7	13367	13377	13387	13397	133A7	133B7	133C7	133D7	133E7	133F7	13407	13417	
8	13368	13378	13388	13398	133A8	133B8	133C8	133D8	133E8	133F8	13408	13418	
9	13369	13379	13389	13399	133A9	133B9	133C9	133D9	133E9	133F9	13409	13419	
A	1336A	1337A	1338A	1339A	133AA	133BA	133CA	133DA	133EA	133FA	1340A	1341A	
B	1336B	1337B	1338B	1339B	133AB	133BB	133CB	133DB	133EB	133FB	1340B	1341B	
C	1336C	1337C	1338C	1339C	133AC	133BC	133CC	133DC	133EC	133FC	1340C	1341C	
D	1336D	1337D	1338D	1339D	133AD	133BD	133CD	133DD	133ED	133FD	1340D	1341D	
E	1336E	1337E	1338E	1339E	133AE	133BE	133CE	133DE	133EE	133FE	1340E	1341E	
F	1336F	1337F	1338F	1339F	133AF	133BF	133CF	133DF	133EF	133FF	1340F	1341F	

Note to reviewers: This is a preliminary proposal. The code points shown are merely suggestions for a possible placement.

A. Man and his occupations

13000		EGYPTIAN HIEROGLYPH A001
13001		EGYPTIAN HIEROGLYPH A002
13002		EGYPTIAN HIEROGLYPH A003
13003		EGYPTIAN HIEROGLYPH A004
13004		EGYPTIAN HIEROGLYPH A005
13005		EGYPTIAN HIEROGLYPH A005A
13006		EGYPTIAN HIEROGLYPH A006
13007		EGYPTIAN HIEROGLYPH A006A
13008		EGYPTIAN HIEROGLYPH A006B
13009		EGYPTIAN HIEROGLYPH A007
1300A		EGYPTIAN HIEROGLYPH A008
1300B		EGYPTIAN HIEROGLYPH A009
1300C		EGYPTIAN HIEROGLYPH A010
1300D		EGYPTIAN HIEROGLYPH A011
1300E		EGYPTIAN HIEROGLYPH A012
1300F		EGYPTIAN HIEROGLYPH A013
13010		EGYPTIAN HIEROGLYPH A014
13011		EGYPTIAN HIEROGLYPH A014A
13012		EGYPTIAN HIEROGLYPH A015
13013		EGYPTIAN HIEROGLYPH A016
13014		EGYPTIAN HIEROGLYPH A017
13015		EGYPTIAN HIEROGLYPH A017A
13016		EGYPTIAN HIEROGLYPH A018
13017		EGYPTIAN HIEROGLYPH A019
13018		EGYPTIAN HIEROGLYPH A020
13019		EGYPTIAN HIEROGLYPH A021
1301A		EGYPTIAN HIEROGLYPH A022
1301B		EGYPTIAN HIEROGLYPH A023
1301C		EGYPTIAN HIEROGLYPH A024
1301D		EGYPTIAN HIEROGLYPH A025
1301E		EGYPTIAN HIEROGLYPH A026
1301F		EGYPTIAN HIEROGLYPH A027
13020		EGYPTIAN HIEROGLYPH A028
13021		EGYPTIAN HIEROGLYPH A029
13022		EGYPTIAN HIEROGLYPH A030
13023		EGYPTIAN HIEROGLYPH A031
13024		EGYPTIAN HIEROGLYPH A032
13025		EGYPTIAN HIEROGLYPH A032A
13026		EGYPTIAN HIEROGLYPH A033
13027		EGYPTIAN HIEROGLYPH A034
13028		EGYPTIAN HIEROGLYPH A035
13029		EGYPTIAN HIEROGLYPH A036
1302A		EGYPTIAN HIEROGLYPH A037
1302B		EGYPTIAN HIEROGLYPH A038
1302C		EGYPTIAN HIEROGLYPH A039
1302D		EGYPTIAN HIEROGLYPH A040
1302E		EGYPTIAN HIEROGLYPH A040A
1302F		EGYPTIAN HIEROGLYPH A041
13030		EGYPTIAN HIEROGLYPH A042
13031		EGYPTIAN HIEROGLYPH A042A
13032		EGYPTIAN HIEROGLYPH A043
13033		EGYPTIAN HIEROGLYPH A043A
13034		EGYPTIAN HIEROGLYPH A044
13035		EGYPTIAN HIEROGLYPH A045
13036		EGYPTIAN HIEROGLYPH A045A
13037		EGYPTIAN HIEROGLYPH A046
13038		EGYPTIAN HIEROGLYPH A047





13039		EGYPTIAN HIEROGLYPH A048
1303A		EGYPTIAN HIEROGLYPH A049
1303B		EGYPTIAN HIEROGLYPH A050
1303C		EGYPTIAN HIEROGLYPH A051
1303D		EGYPTIAN HIEROGLYPH A052
1303E		EGYPTIAN HIEROGLYPH A053
1303F		EGYPTIAN HIEROGLYPH A054
13040		EGYPTIAN HIEROGLYPH A055
13041		EGYPTIAN HIEROGLYPH A056
13042		EGYPTIAN HIEROGLYPH A057
13043		EGYPTIAN HIEROGLYPH A058
13044		EGYPTIAN HIEROGLYPH A059
13045		EGYPTIAN HIEROGLYPH A060
13046		EGYPTIAN HIEROGLYPH A061
13047		EGYPTIAN HIEROGLYPH A062
13048		EGYPTIAN HIEROGLYPH A063
13049		EGYPTIAN HIEROGLYPH A064
1304A		EGYPTIAN HIEROGLYPH A065
1304B		EGYPTIAN HIEROGLYPH A066
1304C		EGYPTIAN HIEROGLYPH A067
1304D		EGYPTIAN HIEROGLYPH A068
1304E		EGYPTIAN HIEROGLYPH A069
1304F		EGYPTIAN HIEROGLYPH A070

B. Woman and her occupations














































13050		EGYPTIAN HIEROGLYPH B001
13051		EGYPTIAN HIEROGLYPH B002
13052		EGYPTIAN HIEROGLYPH B003
13053		EGYPTIAN HIEROGLYPH B004
13054		EGYPTIAN HIEROGLYPH B005
13055		EGYPTIAN HIEROGLYPH B005A
13056		EGYPTIAN HIEROGLYPH B006
13057		EGYPTIAN HIEROGLYPH B007
13058		EGYPTIAN HIEROGLYPH B008
13059		EGYPTIAN HIEROGLYPH B009













































C. Anthropomorphic deities

1305A		EGYPTIAN HIEROGLYPH C001
1305B		EGYPTIAN HIEROGLYPH C002
1305C		EGYPTIAN HIEROGLYPH C002A
1305D		EGYPTIAN HIEROGLYPH C002B
1305E		EGYPTIAN HIEROGLYPH C002C
1305F		EGYPTIAN HIEROGLYPH C003
13060		EGYPTIAN HIEROGLYPH C004
13061		EGYPTIAN HIEROGLYPH C005
13062		EGYPTIAN HIEROGLYPH C006
13063		EGYPTIAN HIEROGLYPH C007
13064		EGYPTIAN HIEROGLYPH C008
13065		EGYPTIAN HIEROGLYPH C009
13066		EGYPTIAN HIEROGLYPH C010
13067		EGYPTIAN HIEROGLYPH C010A
13068		EGYPTIAN HIEROGLYPH C011 = 1,000,000
13069		EGYPTIAN HIEROGLYPH C012
1306A		EGYPTIAN HIEROGLYPH C013
1306B		EGYPTIAN HIEROGLYPH C014
1306C		EGYPTIAN HIEROGLYPH C015
1306D		EGYPTIAN HIEROGLYPH C016
1306E		EGYPTIAN HIEROGLYPH C017
1306F		EGYPTIAN HIEROGLYPH C018
13070		EGYPTIAN HIEROGLYPH C019
13071		EGYPTIAN HIEROGLYPH C020

13072  EGYPTIAN HIEROGLYPH C021
 13073  EGYPTIAN HIEROGLYPH C022
 13074  EGYPTIAN HIEROGLYPH C023
 13075  EGYPTIAN HIEROGLYPH C024

D. Parts of the human body

13076  EGYPTIAN HIEROGLYPH D001
 13077  EGYPTIAN HIEROGLYPH D002
 13078  EGYPTIAN HIEROGLYPH D003
 13079  EGYPTIAN HIEROGLYPH D004
 1307A  EGYPTIAN HIEROGLYPH D005
 1307B  EGYPTIAN HIEROGLYPH D006
 1307C  EGYPTIAN HIEROGLYPH D007
 1307D  EGYPTIAN HIEROGLYPH D008
 1307E  EGYPTIAN HIEROGLYPH D008A
 1307F  EGYPTIAN HIEROGLYPH D009
 13080  EGYPTIAN HIEROGLYPH D010
 13081  EGYPTIAN HIEROGLYPH D011
 = 1/2
 13082  EGYPTIAN HIEROGLYPH D012
 = 1/4
 13083  EGYPTIAN HIEROGLYPH D013
 = 1/8
 13084  EGYPTIAN HIEROGLYPH D014
 = 1/16
 13085  EGYPTIAN HIEROGLYPH D015
 = 1/32
 13086  EGYPTIAN HIEROGLYPH D016
 = 1/64
 13087  EGYPTIAN HIEROGLYPH D017
 13088  EGYPTIAN HIEROGLYPH D018
 13089  EGYPTIAN HIEROGLYPH D019
 1308A  EGYPTIAN HIEROGLYPH D020
 1308B  EGYPTIAN HIEROGLYPH D021
 = r
 1308C  EGYPTIAN HIEROGLYPH D022
 1308D  EGYPTIAN HIEROGLYPH D023
 1308E  EGYPTIAN HIEROGLYPH D024
 1308F  EGYPTIAN HIEROGLYPH D025
 13090  EGYPTIAN HIEROGLYPH D026
 13091  EGYPTIAN HIEROGLYPH D027
 13092  EGYPTIAN HIEROGLYPH D027A
 13093  EGYPTIAN HIEROGLYPH D028
 13094  EGYPTIAN HIEROGLYPH D029
 13095  EGYPTIAN HIEROGLYPH D030
 13096  EGYPTIAN HIEROGLYPH D031
 13097  EGYPTIAN HIEROGLYPH D031A
 13098  EGYPTIAN HIEROGLYPH D032
 13099  EGYPTIAN HIEROGLYPH D033
 1309A  EGYPTIAN HIEROGLYPH D034
 1309B  EGYPTIAN HIEROGLYPH D034A
 1309C  EGYPTIAN HIEROGLYPH D035
 1309D  EGYPTIAN HIEROGLYPH D036
 = ayin
 → 05E2 ׁ hebrew letter ayin
 → 0639 ع arabic letter ain
 → A725 ç latin small letter egyptological ain
 1309E  EGYPTIAN HIEROGLYPH D037
 1309F  EGYPTIAN HIEROGLYPH D038
 130A0  EGYPTIAN HIEROGLYPH D039
 130A1  EGYPTIAN HIEROGLYPH D040
 130A2  EGYPTIAN HIEROGLYPH D041

130A3  EGYPTIAN HIEROGLYPH D042
 130A4  EGYPTIAN HIEROGLYPH D043
 130A5  EGYPTIAN HIEROGLYPH D044
 130A6  EGYPTIAN HIEROGLYPH D045
 130A7  EGYPTIAN HIEROGLYPH D046
 = d
 130A8  EGYPTIAN HIEROGLYPH D046A
 130A9  EGYPTIAN HIEROGLYPH D047
 130AA  EGYPTIAN HIEROGLYPH D048
 130AB  EGYPTIAN HIEROGLYPH D048A
 130AC  EGYPTIAN HIEROGLYPH D049
 130AD  EGYPTIAN HIEROGLYPH D050
 = 10,000
 130AE  EGYPTIAN HIEROGLYPH D050A
 = 20,000
 130AF  EGYPTIAN HIEROGLYPH D050B
 = 30,000
 130B0  EGYPTIAN HIEROGLYPH D050C
 = 40,000
 130B1  EGYPTIAN HIEROGLYPH D050D
 = 50,000
 130B2  EGYPTIAN HIEROGLYPH D050E
 = 60,000
 130B3  EGYPTIAN HIEROGLYPH D050F
 = 70,000
 130B4  EGYPTIAN HIEROGLYPH D050G
 = 80,000
 130B5  EGYPTIAN HIEROGLYPH D050H
 = 90,000
 130B6  EGYPTIAN HIEROGLYPH D050I
 = 50,000
 130B7  EGYPTIAN HIEROGLYPH D051
 130B8  EGYPTIAN HIEROGLYPH D052
 130B9  EGYPTIAN HIEROGLYPH D052A
 130BA  EGYPTIAN HIEROGLYPH D053
 130BB  EGYPTIAN HIEROGLYPH D054
 130BC  EGYPTIAN HIEROGLYPH D054A
 130BD  EGYPTIAN HIEROGLYPH D055
 130BE  EGYPTIAN HIEROGLYPH D056
 130BF  EGYPTIAN HIEROGLYPH D057
 130C0  EGYPTIAN HIEROGLYPH D058
 = b
 130C1  EGYPTIAN HIEROGLYPH D059
 130C2  EGYPTIAN HIEROGLYPH D060
 130C3  EGYPTIAN HIEROGLYPH D061
 130C4  EGYPTIAN HIEROGLYPH D062
 130C5  EGYPTIAN HIEROGLYPH D063
 130C6  EGYPTIAN HIEROGLYPH D064
 130C7  EGYPTIAN HIEROGLYPH D065
 130C8  EGYPTIAN HIEROGLYPH D066
 130C9  EGYPTIAN HIEROGLYPH D067
 = 1 heqat measure
 130CA  EGYPTIAN HIEROGLYPH D067A
 = 2 heqat measures
 130CB  EGYPTIAN HIEROGLYPH D067B
 = 3 heqat measures
 130CC  EGYPTIAN HIEROGLYPH D067C
 = 4 heqat measures
 130CD  EGYPTIAN HIEROGLYPH D067D
 = 5 heqat measures
 130CE  EGYPTIAN HIEROGLYPH D067E
 = 6 heqat measures

130CF		EGYPTIAN HIEROGLYPH D067F = 7 heqat measures
130D0		EGYPTIAN HIEROGLYPH D067G = 8 heqat measures
130D1		EGYPTIAN HIEROGLYPH D067H = 9 heqat measures

E. Mammals

130D2		EGYPTIAN HIEROGLYPH E001
130D3		EGYPTIAN HIEROGLYPH E002
130D4		EGYPTIAN HIEROGLYPH E003
130D5		EGYPTIAN HIEROGLYPH E004
130D6		EGYPTIAN HIEROGLYPH E005
130D7		EGYPTIAN HIEROGLYPH E006
130D8		EGYPTIAN HIEROGLYPH E007
130D9		EGYPTIAN HIEROGLYPH E008
130DA		EGYPTIAN HIEROGLYPH E008A
130DB		EGYPTIAN HIEROGLYPH E009
130DC		EGYPTIAN HIEROGLYPH E009A
130DD		EGYPTIAN HIEROGLYPH E010
130DE		EGYPTIAN HIEROGLYPH E011
130DF		EGYPTIAN HIEROGLYPH E012
130E0		EGYPTIAN HIEROGLYPH E013
130E1		EGYPTIAN HIEROGLYPH E014
130E2		EGYPTIAN HIEROGLYPH E015
130E3		EGYPTIAN HIEROGLYPH E016
130E4		EGYPTIAN HIEROGLYPH E016A
130E5		EGYPTIAN HIEROGLYPH E017
130E6		EGYPTIAN HIEROGLYPH E017A
130E7		EGYPTIAN HIEROGLYPH E018
130E8		EGYPTIAN HIEROGLYPH E019
130E9		EGYPTIAN HIEROGLYPH E020
130EA		EGYPTIAN HIEROGLYPH E020A
130EB		EGYPTIAN HIEROGLYPH E021
130EC		EGYPTIAN HIEROGLYPH E022
130ED		EGYPTIAN HIEROGLYPH E023
130EE		EGYPTIAN HIEROGLYPH E024
130EF		EGYPTIAN HIEROGLYPH E025
130F0		EGYPTIAN HIEROGLYPH E026
130F1		EGYPTIAN HIEROGLYPH E027
130F2		EGYPTIAN HIEROGLYPH E028
130F3		EGYPTIAN HIEROGLYPH E028A
130F4		EGYPTIAN HIEROGLYPH E029
130F5		EGYPTIAN HIEROGLYPH E030
130F6		EGYPTIAN HIEROGLYPH E031
130F7		EGYPTIAN HIEROGLYPH E032
130F8		EGYPTIAN HIEROGLYPH E033
130F9		EGYPTIAN HIEROGLYPH E034
130FA		EGYPTIAN HIEROGLYPH E034A
130FB		EGYPTIAN HIEROGLYPH E035
130FC		EGYPTIAN HIEROGLYPH E036
130FD		EGYPTIAN HIEROGLYPH E037
130FE		EGYPTIAN HIEROGLYPH E038

F. Parts of mammals

130FF		EGYPTIAN HIEROGLYPH F001
13100		EGYPTIAN HIEROGLYPH F001A
13101		EGYPTIAN HIEROGLYPH F002
13102		EGYPTIAN HIEROGLYPH F003
13103		EGYPTIAN HIEROGLYPH F004
13104		EGYPTIAN HIEROGLYPH F005
13105		EGYPTIAN HIEROGLYPH F006

13106		EGYPTIAN HIEROGLYPH F007
13107		EGYPTIAN HIEROGLYPH F008
13108		EGYPTIAN HIEROGLYPH F009
13109		EGYPTIAN HIEROGLYPH F010
1310A		EGYPTIAN HIEROGLYPH F011
1310B		EGYPTIAN HIEROGLYPH F012
1310C		EGYPTIAN HIEROGLYPH F013
1310D		EGYPTIAN HIEROGLYPH F013A
1310E		EGYPTIAN HIEROGLYPH F014
1310F		EGYPTIAN HIEROGLYPH F015
13110		EGYPTIAN HIEROGLYPH F016
13111		EGYPTIAN HIEROGLYPH F017
13112		EGYPTIAN HIEROGLYPH F018
13113		EGYPTIAN HIEROGLYPH F019
13114		EGYPTIAN HIEROGLYPH F020
13115		EGYPTIAN HIEROGLYPH F021
13116		EGYPTIAN HIEROGLYPH F021A
13117		EGYPTIAN HIEROGLYPH F022
13118		EGYPTIAN HIEROGLYPH F023
13119		EGYPTIAN HIEROGLYPH F024
1311A		EGYPTIAN HIEROGLYPH F025
1311B		EGYPTIAN HIEROGLYPH F026
1311C		EGYPTIAN HIEROGLYPH F027
1311D		EGYPTIAN HIEROGLYPH F028
1311E		EGYPTIAN HIEROGLYPH F029
1311F		EGYPTIAN HIEROGLYPH F030
13120		EGYPTIAN HIEROGLYPH F031
13121		EGYPTIAN HIEROGLYPH F031A
13122		EGYPTIAN HIEROGLYPH F032 = h → 1E96 h latin small letter h with line below
13123		EGYPTIAN HIEROGLYPH F033
13124		EGYPTIAN HIEROGLYPH F034
13125		EGYPTIAN HIEROGLYPH F035
13126		EGYPTIAN HIEROGLYPH F036
13127		EGYPTIAN HIEROGLYPH F037
13128		EGYPTIAN HIEROGLYPH F037A
13129		EGYPTIAN HIEROGLYPH F038
1312A		EGYPTIAN HIEROGLYPH F038A
1312B		EGYPTIAN HIEROGLYPH F039
1312C		EGYPTIAN HIEROGLYPH F040
1312D		EGYPTIAN HIEROGLYPH F041
1312E		EGYPTIAN HIEROGLYPH F042
1312F		EGYPTIAN HIEROGLYPH F043
13130		EGYPTIAN HIEROGLYPH F044
13131		EGYPTIAN HIEROGLYPH F045
13132		EGYPTIAN HIEROGLYPH F045A
13133		EGYPTIAN HIEROGLYPH F046
13134		EGYPTIAN HIEROGLYPH F046A
13135		EGYPTIAN HIEROGLYPH F047
13136		EGYPTIAN HIEROGLYPH F047A
13137		EGYPTIAN HIEROGLYPH F048
13138		EGYPTIAN HIEROGLYPH F049
13139		EGYPTIAN HIEROGLYPH F050
1313A		EGYPTIAN HIEROGLYPH F051
1313B		EGYPTIAN HIEROGLYPH F051A
1313C		EGYPTIAN HIEROGLYPH F051B
1313D		EGYPTIAN HIEROGLYPH F051C
1313E		EGYPTIAN HIEROGLYPH F052
1313F		EGYPTIAN HIEROGLYPH F053

G. Birds

13140		EGYPTIAN HIEROGLYPH G001 = alef → 05D0 א hebrew letter alef → 0623 ا arabic letter alef with hamza above → A723 ۓ latin small letter egyptological alef
13141		EGYPTIAN HIEROGLYPH G002
13142		EGYPTIAN HIEROGLYPH G003
13143		EGYPTIAN HIEROGLYPH G004
13144		EGYPTIAN HIEROGLYPH G005
13145		EGYPTIAN HIEROGLYPH G006
13146		EGYPTIAN HIEROGLYPH G006A
13147		EGYPTIAN HIEROGLYPH G007
13148		EGYPTIAN HIEROGLYPH G007A
13149		EGYPTIAN HIEROGLYPH G007B
1314A		EGYPTIAN HIEROGLYPH G008
1314B		EGYPTIAN HIEROGLYPH G009
1314C		EGYPTIAN HIEROGLYPH G010
1314D		EGYPTIAN HIEROGLYPH G011
1314E		EGYPTIAN HIEROGLYPH G011A
1314F		EGYPTIAN HIEROGLYPH G012
13150		EGYPTIAN HIEROGLYPH G013
13151		EGYPTIAN HIEROGLYPH G014
13152		EGYPTIAN HIEROGLYPH G015
13153		EGYPTIAN HIEROGLYPH G016
13154		EGYPTIAN HIEROGLYPH G017 = m
13155		EGYPTIAN HIEROGLYPH G018
13156		EGYPTIAN HIEROGLYPH G019
13157		EGYPTIAN HIEROGLYPH G020
13158		EGYPTIAN HIEROGLYPH G020A
13159		EGYPTIAN HIEROGLYPH G021
1315A		EGYPTIAN HIEROGLYPH G022
1315B		EGYPTIAN HIEROGLYPH G023
1315C		EGYPTIAN HIEROGLYPH G024
1315D		EGYPTIAN HIEROGLYPH G025
1315E		EGYPTIAN HIEROGLYPH G026
1315F		EGYPTIAN HIEROGLYPH G026A
13160		EGYPTIAN HIEROGLYPH G027
13161		EGYPTIAN HIEROGLYPH G028
13162		EGYPTIAN HIEROGLYPH G029
13163		EGYPTIAN HIEROGLYPH G030
13164		EGYPTIAN HIEROGLYPH G031
13165		EGYPTIAN HIEROGLYPH G032
13166		EGYPTIAN HIEROGLYPH G033
13167		EGYPTIAN HIEROGLYPH G034
13168		EGYPTIAN HIEROGLYPH G035
13169		EGYPTIAN HIEROGLYPH G036
1316A		EGYPTIAN HIEROGLYPH G036A
1316B		EGYPTIAN HIEROGLYPH G037
1316C		EGYPTIAN HIEROGLYPH G037A
1316D		EGYPTIAN HIEROGLYPH G038
1316E		EGYPTIAN HIEROGLYPH G039
1316F		EGYPTIAN HIEROGLYPH G040
13170		EGYPTIAN HIEROGLYPH G041
13171		EGYPTIAN HIEROGLYPH G042
13172		EGYPTIAN HIEROGLYPH G043 = w
13173		EGYPTIAN HIEROGLYPH G043A
13174		EGYPTIAN HIEROGLYPH G044
13175		EGYPTIAN HIEROGLYPH G045

13176		EGYPTIAN HIEROGLYPH G045A
13177		EGYPTIAN HIEROGLYPH G046
13178		EGYPTIAN HIEROGLYPH G047
13179		EGYPTIAN HIEROGLYPH G048
1317A		EGYPTIAN HIEROGLYPH G049
1317B		EGYPTIAN HIEROGLYPH G050
1317C		EGYPTIAN HIEROGLYPH G051
1317D		EGYPTIAN HIEROGLYPH G052
1317E		EGYPTIAN HIEROGLYPH G053
1317F		EGYPTIAN HIEROGLYPH G054

H. Parts of birds

13180		EGYPTIAN HIEROGLYPH H001
13181		EGYPTIAN HIEROGLYPH H002
13182		EGYPTIAN HIEROGLYPH H003
13183		EGYPTIAN HIEROGLYPH H004
13184		EGYPTIAN HIEROGLYPH H005
13185		EGYPTIAN HIEROGLYPH H006
13186		EGYPTIAN HIEROGLYPH H006A
13187		EGYPTIAN HIEROGLYPH H007
13188		EGYPTIAN HIEROGLYPH H008

I. Amphibious animals, reptiles, etc.

13189		EGYPTIAN HIEROGLYPH I001
1318A		EGYPTIAN HIEROGLYPH I002
1318B		EGYPTIAN HIEROGLYPH I003
1318C		EGYPTIAN HIEROGLYPH I004
1318D		EGYPTIAN HIEROGLYPH I005
1318E		EGYPTIAN HIEROGLYPH I005A
1318F		EGYPTIAN HIEROGLYPH I006
13190		EGYPTIAN HIEROGLYPH I007
13191		EGYPTIAN HIEROGLYPH I008 = 100,000
13192		EGYPTIAN HIEROGLYPH I009 = f
13193		EGYPTIAN HIEROGLYPH I009A
13194		EGYPTIAN HIEROGLYPH I010 = dj → 1E0F d latin small letter d with line below
13195		EGYPTIAN HIEROGLYPH I010A
13196		EGYPTIAN HIEROGLYPH I011
13197		EGYPTIAN HIEROGLYPH I011A
13198		EGYPTIAN HIEROGLYPH I012
13199		EGYPTIAN HIEROGLYPH I013
1319A		EGYPTIAN HIEROGLYPH I014
1319B		EGYPTIAN HIEROGLYPH I015

K. Fishes and parts of fishes

1319C		EGYPTIAN HIEROGLYPH K001
1319D		EGYPTIAN HIEROGLYPH K002
1319E		EGYPTIAN HIEROGLYPH K003
1319F		EGYPTIAN HIEROGLYPH K004
131A0		EGYPTIAN HIEROGLYPH K005
131A1		EGYPTIAN HIEROGLYPH K006
131A2		EGYPTIAN HIEROGLYPH K007
131A3		EGYPTIAN HIEROGLYPH K008

L. Invertebrata and lesser animals

131A4		EGYPTIAN HIEROGLYPH L001
131A5		EGYPTIAN HIEROGLYPH L002
131A6		EGYPTIAN HIEROGLYPH L002A
131A7		EGYPTIAN HIEROGLYPH L003

131A8		EGYPTIAN HIEROGLYPH L004
131A9		EGYPTIAN HIEROGLYPH L005
131AA		EGYPTIAN HIEROGLYPH L006
131AB		EGYPTIAN HIEROGLYPH L006A
131AC		EGYPTIAN HIEROGLYPH L007
131AD		EGYPTIAN HIEROGLYPH L008

M. Trees and plants

131AE		EGYPTIAN HIEROGLYPH M001
131AF		EGYPTIAN HIEROGLYPH M001A
131B0		EGYPTIAN HIEROGLYPH M001B
131B1		EGYPTIAN HIEROGLYPH M002
131B2		EGYPTIAN HIEROGLYPH M003
131B3		EGYPTIAN HIEROGLYPH M003A
131B4		EGYPTIAN HIEROGLYPH M004
131B5		EGYPTIAN HIEROGLYPH M005
131B6		EGYPTIAN HIEROGLYPH M006
131B7		EGYPTIAN HIEROGLYPH M007
131B8		EGYPTIAN HIEROGLYPH M008
131B9		EGYPTIAN HIEROGLYPH M009
131BA		EGYPTIAN HIEROGLYPH M010
131BB		EGYPTIAN HIEROGLYPH M010A
131BC		EGYPTIAN HIEROGLYPH M011
131BD		EGYPTIAN HIEROGLYPH M012 = 1,000
131BE		EGYPTIAN HIEROGLYPH M012A = 2,000
131BF		EGYPTIAN HIEROGLYPH M012B = 3,000
131C0		EGYPTIAN HIEROGLYPH M012C = 4,000
131C1		EGYPTIAN HIEROGLYPH M012D = 5,000
131C2		EGYPTIAN HIEROGLYPH M012E = 6,000
131C3		EGYPTIAN HIEROGLYPH M012F = 7,000
131C4		EGYPTIAN HIEROGLYPH M012G = 8,000
131C5		EGYPTIAN HIEROGLYPH M012H = 9,000
131C6		EGYPTIAN HIEROGLYPH M013
131C7		EGYPTIAN HIEROGLYPH M014
131C8		EGYPTIAN HIEROGLYPH M015
131C9		EGYPTIAN HIEROGLYPH M015A
131CA		EGYPTIAN HIEROGLYPH M016
131CB		EGYPTIAN HIEROGLYPH M016A
131CC		EGYPTIAN HIEROGLYPH M017 = yod → 05D9 י hebrew letter yod → 064A ي arabic letter yeh
131CD		EGYPTIAN HIEROGLYPH M017A = y → 133E5 𐀀 egyptian hieroglyph z004
131CE		EGYPTIAN HIEROGLYPH M018
131CF		EGYPTIAN HIEROGLYPH M019
131D0		EGYPTIAN HIEROGLYPH M020
131D1		EGYPTIAN HIEROGLYPH M021
131D2		EGYPTIAN HIEROGLYPH M022
131D3		EGYPTIAN HIEROGLYPH M022A
131D4		EGYPTIAN HIEROGLYPH M023
131D5		EGYPTIAN HIEROGLYPH M024

131D6		EGYPTIAN HIEROGLYPH M024A
131D7		EGYPTIAN HIEROGLYPH M025
131D8		EGYPTIAN HIEROGLYPH M026
131D9		EGYPTIAN HIEROGLYPH M027
131DA		EGYPTIAN HIEROGLYPH M028
131DB		EGYPTIAN HIEROGLYPH M028A
131DC		EGYPTIAN HIEROGLYPH M029
131DD		EGYPTIAN HIEROGLYPH M030
131DE		EGYPTIAN HIEROGLYPH M031
131DF		EGYPTIAN HIEROGLYPH M031A
131E0		EGYPTIAN HIEROGLYPH M032
131E1		EGYPTIAN HIEROGLYPH M033
131E2		EGYPTIAN HIEROGLYPH M033A
131E3		EGYPTIAN HIEROGLYPH M033B
131E4		EGYPTIAN HIEROGLYPH M034
131E5		EGYPTIAN HIEROGLYPH M035
131E6		EGYPTIAN HIEROGLYPH M036
131E7		EGYPTIAN HIEROGLYPH M037
131E8		EGYPTIAN HIEROGLYPH M038
131E9		EGYPTIAN HIEROGLYPH M039
131EA		EGYPTIAN HIEROGLYPH M040
131EB		EGYPTIAN HIEROGLYPH M040A
131EC		EGYPTIAN HIEROGLYPH M041
131ED		EGYPTIAN HIEROGLYPH M042
131EE		EGYPTIAN HIEROGLYPH M043
131EF		EGYPTIAN HIEROGLYPH M044

N. Sky, earth, water

131F0		EGYPTIAN HIEROGLYPH N001
131F1		EGYPTIAN HIEROGLYPH N002
131F2		EGYPTIAN HIEROGLYPH N003
131F3		EGYPTIAN HIEROGLYPH N004
131F4		EGYPTIAN HIEROGLYPH N005
131F5		EGYPTIAN HIEROGLYPH N006
131F6		EGYPTIAN HIEROGLYPH N007
131F7		EGYPTIAN HIEROGLYPH N008
131F8		EGYPTIAN HIEROGLYPH N009
131F9		EGYPTIAN HIEROGLYPH N010
131FA		EGYPTIAN HIEROGLYPH N011
131FB		EGYPTIAN HIEROGLYPH N012
131FC		EGYPTIAN HIEROGLYPH N013
131FD		EGYPTIAN HIEROGLYPH N014
131FE		EGYPTIAN HIEROGLYPH N015
131FF		EGYPTIAN HIEROGLYPH N016
13200		EGYPTIAN HIEROGLYPH N017
13201		EGYPTIAN HIEROGLYPH N018
13202		EGYPTIAN HIEROGLYPH N018A
13203		EGYPTIAN HIEROGLYPH N018B
13204		EGYPTIAN HIEROGLYPH N019
13205		EGYPTIAN HIEROGLYPH N020
13206		EGYPTIAN HIEROGLYPH N021
13207		EGYPTIAN HIEROGLYPH N022
13208		EGYPTIAN HIEROGLYPH N023
13209		EGYPTIAN HIEROGLYPH N024
1320A		EGYPTIAN HIEROGLYPH N025
1320B		EGYPTIAN HIEROGLYPH N025A
1320C		EGYPTIAN HIEROGLYPH N026
1320D		EGYPTIAN HIEROGLYPH N027
1320E		EGYPTIAN HIEROGLYPH N028

1320F		EGYPTIAN HIEROGLYPH N029 = q → 05E7 ק hebrew letter qof → 0642 ق arabic letter qaf → 1E33 ķ latin small letter k with dot below
13210		EGYPTIAN HIEROGLYPH N030
13211		EGYPTIAN HIEROGLYPH N031
13212		EGYPTIAN HIEROGLYPH N032
13213		EGYPTIAN HIEROGLYPH N033
13214		EGYPTIAN HIEROGLYPH N033A
13215		EGYPTIAN HIEROGLYPH N034
13216		EGYPTIAN HIEROGLYPH N034A
13217		EGYPTIAN HIEROGLYPH N035 = n
13218		EGYPTIAN HIEROGLYPH N035A
13219		EGYPTIAN HIEROGLYPH N036
1321A		EGYPTIAN HIEROGLYPH N037 = sh → 0161 š latin small letter s with caron
1321B		EGYPTIAN HIEROGLYPH N037A
1321C		EGYPTIAN HIEROGLYPH N038
1321D		EGYPTIAN HIEROGLYPH N039
1321E		EGYPTIAN HIEROGLYPH N040
1321F		EGYPTIAN HIEROGLYPH N041
13220		EGYPTIAN HIEROGLYPH N042

NL. Nomes of Lower Egypt

13221		EGYPTIAN HIEROGLYPH NL001
13222		EGYPTIAN HIEROGLYPH NL002
13223		EGYPTIAN HIEROGLYPH NL003
13224		EGYPTIAN HIEROGLYPH NL004
13225		EGYPTIAN HIEROGLYPH NL005
13226		EGYPTIAN HIEROGLYPH NL005A
13227		EGYPTIAN HIEROGLYPH NL006
13228		EGYPTIAN HIEROGLYPH NL007
13229		EGYPTIAN HIEROGLYPH NL008
1322A		EGYPTIAN HIEROGLYPH NL009
1322B		EGYPTIAN HIEROGLYPH NL010
1322C		EGYPTIAN HIEROGLYPH NL011
1322D		EGYPTIAN HIEROGLYPH NL012
1322E		EGYPTIAN HIEROGLYPH NL013
1322F		EGYPTIAN HIEROGLYPH NL014
13230		EGYPTIAN HIEROGLYPH NL015
13231		EGYPTIAN HIEROGLYPH NL016
13232		EGYPTIAN HIEROGLYPH NL017
13233		EGYPTIAN HIEROGLYPH NL017A
13234		EGYPTIAN HIEROGLYPH NL018
13235		EGYPTIAN HIEROGLYPH NL019
13236		EGYPTIAN HIEROGLYPH NL020

NU. Nomes of Upper Egypt

13237		EGYPTIAN HIEROGLYPH NU001
13238		EGYPTIAN HIEROGLYPH NU002
13239		EGYPTIAN HIEROGLYPH NU003
1323A		EGYPTIAN HIEROGLYPH NU004
1323B		EGYPTIAN HIEROGLYPH NU005
1323C		EGYPTIAN HIEROGLYPH NU006
1323D		EGYPTIAN HIEROGLYPH NU007
1323E		EGYPTIAN HIEROGLYPH NU008
1323F		EGYPTIAN HIEROGLYPH NU009
13240		EGYPTIAN HIEROGLYPH NU010
13241		EGYPTIAN HIEROGLYPH NU010A

13242		EGYPTIAN HIEROGLYPH NU011
13243		EGYPTIAN HIEROGLYPH NU011A
13244		EGYPTIAN HIEROGLYPH NU012
13245		EGYPTIAN HIEROGLYPH NU013
13246		EGYPTIAN HIEROGLYPH NU014
13247		EGYPTIAN HIEROGLYPH NU015
13248		EGYPTIAN HIEROGLYPH NU016
13249		EGYPTIAN HIEROGLYPH NU017
1324A		EGYPTIAN HIEROGLYPH NU018
1324B		EGYPTIAN HIEROGLYPH NU018A
1324C		EGYPTIAN HIEROGLYPH NU019
1324D		EGYPTIAN HIEROGLYPH NU020
1324E		EGYPTIAN HIEROGLYPH NU021
1324F		EGYPTIAN HIEROGLYPH NU022
13250		EGYPTIAN HIEROGLYPH NU022A

O. Buildings, parts of buildings, etc.

13251		EGYPTIAN HIEROGLYPH O001
13252		EGYPTIAN HIEROGLYPH O001A
13253		EGYPTIAN HIEROGLYPH O002
13254		EGYPTIAN HIEROGLYPH O003
13255		EGYPTIAN HIEROGLYPH O004 = h → 05D4 ה hebrew letter he → 0647 ه arabic letter keh
13256		EGYPTIAN HIEROGLYPH O005
13257		EGYPTIAN HIEROGLYPH O005A
13258		EGYPTIAN HIEROGLYPH O006
13259		EGYPTIAN HIEROGLYPH O006A = beginning of hwt or serekh enclosure → 13283 egyptian hieroglyph o033a
1325A		EGYPTIAN HIEROGLYPH O006B = beginning of low hwt enclosure
1325B		EGYPTIAN HIEROGLYPH O006C = beginning of high hwt enclosure
1325C		EGYPTIAN HIEROGLYPH O006D = end of high hwt enclosure
1325D		EGYPTIAN HIEROGLYPH O006E = end of low hwt enclosure
1325E		EGYPTIAN HIEROGLYPH O006F = end of hwt enclosure
1325F		EGYPTIAN HIEROGLYPH O007
13260		EGYPTIAN HIEROGLYPH O008
13261		EGYPTIAN HIEROGLYPH O009
13262		EGYPTIAN HIEROGLYPH O010
13263		EGYPTIAN HIEROGLYPH O010A
13264		EGYPTIAN HIEROGLYPH O010B
13265		EGYPTIAN HIEROGLYPH O010C
13266		EGYPTIAN HIEROGLYPH O011
13267		EGYPTIAN HIEROGLYPH O012
13268		EGYPTIAN HIEROGLYPH O013
13269		EGYPTIAN HIEROGLYPH O014
1326A		EGYPTIAN HIEROGLYPH O015
1326B		EGYPTIAN HIEROGLYPH O016
1326C		EGYPTIAN HIEROGLYPH O017
1326D		EGYPTIAN HIEROGLYPH O018
1326E		EGYPTIAN HIEROGLYPH O019
1326F		EGYPTIAN HIEROGLYPH O019A
13270		EGYPTIAN HIEROGLYPH O020
13271		EGYPTIAN HIEROGLYPH O020A
13272		EGYPTIAN HIEROGLYPH O021
13273		EGYPTIAN HIEROGLYPH O022

13274		EGYPTIAN HIEROGLYPH O023
13275		EGYPTIAN HIEROGLYPH O024
13276		EGYPTIAN HIEROGLYPH O024A
13277		EGYPTIAN HIEROGLYPH O025
13278		EGYPTIAN HIEROGLYPH O025A
13279		EGYPTIAN HIEROGLYPH O026
1327A		EGYPTIAN HIEROGLYPH O027
1327B		EGYPTIAN HIEROGLYPH O028
1327C		EGYPTIAN HIEROGLYPH O029
1327D		EGYPTIAN HIEROGLYPH O029A
1327E		EGYPTIAN HIEROGLYPH O030
1327F		EGYPTIAN HIEROGLYPH O030A
13280		EGYPTIAN HIEROGLYPH O031
13281		EGYPTIAN HIEROGLYPH O032
13282		EGYPTIAN HIEROGLYPH O033
13283		EGYPTIAN HIEROGLYPH O033A
		= end of serekh enclosure
		→ 13258
13284		EGYPTIAN HIEROGLYPH O034
		= s, z
		→ 132F3
13285		EGYPTIAN HIEROGLYPH O035
13286		EGYPTIAN HIEROGLYPH O036
13287		EGYPTIAN HIEROGLYPH O036A
		= beginning of fortified wall cartouche
13288		EGYPTIAN HIEROGLYPH O036B
		= end of fortified wall cartouche
13289		EGYPTIAN HIEROGLYPH O036C
		= beginning of fortified wall enclosure
1328A		EGYPTIAN HIEROGLYPH O036D
		= end of fortified wall enclosure
1328B		EGYPTIAN HIEROGLYPH O037
1328C		EGYPTIAN HIEROGLYPH O038
1328D		EGYPTIAN HIEROGLYPH O039
1328E		EGYPTIAN HIEROGLYPH O040
1328F		EGYPTIAN HIEROGLYPH O041
13290		EGYPTIAN HIEROGLYPH O042
13291		EGYPTIAN HIEROGLYPH O043
13292		EGYPTIAN HIEROGLYPH O044
13293		EGYPTIAN HIEROGLYPH O045
13294		EGYPTIAN HIEROGLYPH O046
13295		EGYPTIAN HIEROGLYPH O047
13296		EGYPTIAN HIEROGLYPH O048
13297		EGYPTIAN HIEROGLYPH O049
13298		EGYPTIAN HIEROGLYPH O050
13299		EGYPTIAN HIEROGLYPH O050A
1329A		EGYPTIAN HIEROGLYPH O050B
1329B		EGYPTIAN HIEROGLYPH O051

P. Ships and parts of ships

1329C		EGYPTIAN HIEROGLYPH P001
1329D		EGYPTIAN HIEROGLYPH P001A
1329E		EGYPTIAN HIEROGLYPH P002
1329F		EGYPTIAN HIEROGLYPH P003
132A0		EGYPTIAN HIEROGLYPH P003A
132A1		EGYPTIAN HIEROGLYPH P004
132A2		EGYPTIAN HIEROGLYPH P005
132A3		EGYPTIAN HIEROGLYPH P006
132A4		EGYPTIAN HIEROGLYPH P007
132A5		EGYPTIAN HIEROGLYPH P008
132A6		EGYPTIAN HIEROGLYPH P009
132A7		EGYPTIAN HIEROGLYPH P010

132A8

Q. Domestic and funerary furniture

132A9		EGYPTIAN HIEROGLYPH Q001
132AA		EGYPTIAN HIEROGLYPH Q002
132AB		EGYPTIAN HIEROGLYPH Q003
		= p
132AC		EGYPTIAN HIEROGLYPH Q004
132AD		EGYPTIAN HIEROGLYPH Q005
132AE		EGYPTIAN HIEROGLYPH Q006
132AF		EGYPTIAN HIEROGLYPH Q007

R. Temple furniture and sacred emblems

132B0		EGYPTIAN HIEROGLYPH R001
132B1		EGYPTIAN HIEROGLYPH R002
132B2		EGYPTIAN HIEROGLYPH R002A
132B3		EGYPTIAN HIEROGLYPH R003
132B4		EGYPTIAN HIEROGLYPH R003A
132B5		EGYPTIAN HIEROGLYPH R003B
132B6		EGYPTIAN HIEROGLYPH R004
132B7		EGYPTIAN HIEROGLYPH R005
132B8		EGYPTIAN HIEROGLYPH R006
132B9		EGYPTIAN HIEROGLYPH R007
132BA		EGYPTIAN HIEROGLYPH R008
132BB		EGYPTIAN HIEROGLYPH R009
132BC		EGYPTIAN HIEROGLYPH R010
132BD		EGYPTIAN HIEROGLYPH R010A
132BE		EGYPTIAN HIEROGLYPH R011
132BF		EGYPTIAN HIEROGLYPH R012
132C0		EGYPTIAN HIEROGLYPH R013
132C1		EGYPTIAN HIEROGLYPH R014
132C2		EGYPTIAN HIEROGLYPH R015
132C3		EGYPTIAN HIEROGLYPH R016
132C4		EGYPTIAN HIEROGLYPH R016A
132C5		EGYPTIAN HIEROGLYPH R017
132C6		EGYPTIAN HIEROGLYPH R018
132C7		EGYPTIAN HIEROGLYPH R019
132C8		EGYPTIAN HIEROGLYPH R020
132C9		EGYPTIAN HIEROGLYPH R021
132CA		EGYPTIAN HIEROGLYPH R022
132CB		EGYPTIAN HIEROGLYPH R023
132CC		EGYPTIAN HIEROGLYPH R024
132CD		EGYPTIAN HIEROGLYPH R025
132CE		EGYPTIAN HIEROGLYPH R026
132CF		EGYPTIAN HIEROGLYPH R027
132D0		EGYPTIAN HIEROGLYPH R028
132D1		EGYPTIAN HIEROGLYPH R029

S. Crowns, dress, staves, etc.

132D2		EGYPTIAN HIEROGLYPH S001
132D3		EGYPTIAN HIEROGLYPH S002
132D4		EGYPTIAN HIEROGLYPH S002A
132D5		EGYPTIAN HIEROGLYPH S003
132D6		EGYPTIAN HIEROGLYPH S004
132D7		EGYPTIAN HIEROGLYPH S005
132D8		EGYPTIAN HIEROGLYPH S006
132D9		EGYPTIAN HIEROGLYPH S006A
132DA		EGYPTIAN HIEROGLYPH S007
132DB		EGYPTIAN HIEROGLYPH S008
132DC		EGYPTIAN HIEROGLYPH S009
132DD		EGYPTIAN HIEROGLYPH S010
132DE		EGYPTIAN HIEROGLYPH S011

132DF		EGYPTIAN HIEROGLYPH S012
132E0		EGYPTIAN HIEROGLYPH S013
132E1		EGYPTIAN HIEROGLYPH S014
132E2		EGYPTIAN HIEROGLYPH S014A
132E3		EGYPTIAN HIEROGLYPH S014B
132E4		EGYPTIAN HIEROGLYPH S015
132E5		EGYPTIAN HIEROGLYPH S016
132E6		EGYPTIAN HIEROGLYPH S017
132E7		EGYPTIAN HIEROGLYPH S017A
132E8		EGYPTIAN HIEROGLYPH S018
132E9		EGYPTIAN HIEROGLYPH S019
132EA		EGYPTIAN HIEROGLYPH S020
132EB		EGYPTIAN HIEROGLYPH S021
132EC		EGYPTIAN HIEROGLYPH S022
132ED		EGYPTIAN HIEROGLYPH S023
132EE		EGYPTIAN HIEROGLYPH S024
132EF		EGYPTIAN HIEROGLYPH S025
132F0		EGYPTIAN HIEROGLYPH S026
132F1		EGYPTIAN HIEROGLYPH S027
132F2		EGYPTIAN HIEROGLYPH S028
132F3		EGYPTIAN HIEROGLYPH S029
	= s, z	
	→ 13284	egyptian hieroglyph o034
132F4		EGYPTIAN HIEROGLYPH S030
132F5		EGYPTIAN HIEROGLYPH S031
132F6		EGYPTIAN HIEROGLYPH S032
132F7		EGYPTIAN HIEROGLYPH S033
132F8		EGYPTIAN HIEROGLYPH S034
132F9		EGYPTIAN HIEROGLYPH S035
132FA		EGYPTIAN HIEROGLYPH S035A
132FB		EGYPTIAN HIEROGLYPH S036
132FC		EGYPTIAN HIEROGLYPH S037
132FD		EGYPTIAN HIEROGLYPH S038
132FE		EGYPTIAN HIEROGLYPH S039
132FF		EGYPTIAN HIEROGLYPH S040
13300		EGYPTIAN HIEROGLYPH S041
13301		EGYPTIAN HIEROGLYPH S042
13302		EGYPTIAN HIEROGLYPH S043
13303		EGYPTIAN HIEROGLYPH S044
13304		EGYPTIAN HIEROGLYPH S045
13305		EGYPTIAN HIEROGLYPH S046













T. Warfare, hunting, butchery

13306		EGYPTIAN HIEROGLYPH T001
13307		EGYPTIAN HIEROGLYPH T002
13308		EGYPTIAN HIEROGLYPH T003
13309		EGYPTIAN HIEROGLYPH T003A
1330A		EGYPTIAN HIEROGLYPH T004
1330B		EGYPTIAN HIEROGLYPH T005
1330C		EGYPTIAN HIEROGLYPH T006
1330D		EGYPTIAN HIEROGLYPH T007
1330E		EGYPTIAN HIEROGLYPH T007A
1330F		EGYPTIAN HIEROGLYPH T008
13310		EGYPTIAN HIEROGLYPH T008A
13311		EGYPTIAN HIEROGLYPH T009
13312		EGYPTIAN HIEROGLYPH T009A
13313		EGYPTIAN HIEROGLYPH T010
13314		EGYPTIAN HIEROGLYPH T011
13315		EGYPTIAN HIEROGLYPH T011A
13316		EGYPTIAN HIEROGLYPH T012
13317		EGYPTIAN HIEROGLYPH T013
13318		EGYPTIAN HIEROGLYPH T014



































13319		EGYPTIAN HIEROGLYPH T015
1331A		EGYPTIAN HIEROGLYPH T016
1331B		EGYPTIAN HIEROGLYPH T016A
1331C		EGYPTIAN HIEROGLYPH T017
1331D		EGYPTIAN HIEROGLYPH T018
1331E		EGYPTIAN HIEROGLYPH T019
1331F		EGYPTIAN HIEROGLYPH T020
13320		EGYPTIAN HIEROGLYPH T021
13321		EGYPTIAN HIEROGLYPH T022
13322		EGYPTIAN HIEROGLYPH T023
13323		EGYPTIAN HIEROGLYPH T024
13324		EGYPTIAN HIEROGLYPH T025
13325		EGYPTIAN HIEROGLYPH T026
13326		EGYPTIAN HIEROGLYPH T027
13327		EGYPTIAN HIEROGLYPH T028
13328		EGYPTIAN HIEROGLYPH T029
13329		EGYPTIAN HIEROGLYPH T030
1332A		EGYPTIAN HIEROGLYPH T031
1332B		EGYPTIAN HIEROGLYPH T032
1332C		EGYPTIAN HIEROGLYPH T032A
1332D		EGYPTIAN HIEROGLYPH T033
1332E		EGYPTIAN HIEROGLYPH T033A
1332F		EGYPTIAN HIEROGLYPH T034
13330		EGYPTIAN HIEROGLYPH T035
13331		EGYPTIAN HIEROGLYPH T036















































U. Agriculture, crafts, and professions



13332		EGYPTIAN HIEROGLYPH U001
13333		EGYPTIAN HIEROGLYPH U002
13334		EGYPTIAN HIEROGLYPH U003
13335		EGYPTIAN HIEROGLYPH U004
13336		EGYPTIAN HIEROGLYPH U005
13337		EGYPTIAN HIEROGLYPH U006
13338		EGYPTIAN HIEROGLYPH U006A
13339		EGYPTIAN HIEROGLYPH U006B
1333A		EGYPTIAN HIEROGLYPH U007
1333B		EGYPTIAN HIEROGLYPH U008
1333C		EGYPTIAN HIEROGLYPH U009
1333D		EGYPTIAN HIEROGLYPH U010
1333E		EGYPTIAN HIEROGLYPH U011
1333F		EGYPTIAN HIEROGLYPH U012
13340		EGYPTIAN HIEROGLYPH U013
13341		EGYPTIAN HIEROGLYPH U014
13342		EGYPTIAN HIEROGLYPH U015
13343		EGYPTIAN HIEROGLYPH U016
13344		EGYPTIAN HIEROGLYPH U017
13345		EGYPTIAN HIEROGLYPH U018
13346		EGYPTIAN HIEROGLYPH U019
13347		EGYPTIAN HIEROGLYPH U020
13348		EGYPTIAN HIEROGLYPH U021
13349		EGYPTIAN HIEROGLYPH U022
1334A		EGYPTIAN HIEROGLYPH U023
1334B		EGYPTIAN HIEROGLYPH U023A
1334C		EGYPTIAN HIEROGLYPH U024
1334D		EGYPTIAN HIEROGLYPH U025
1334E		EGYPTIAN HIEROGLYPH U026
1334F		EGYPTIAN HIEROGLYPH U027
13350		EGYPTIAN HIEROGLYPH U028
13351		EGYPTIAN HIEROGLYPH U029
13352		EGYPTIAN HIEROGLYPH U029A
13353		EGYPTIAN HIEROGLYPH U030
13354		EGYPTIAN HIEROGLYPH U031

13355  EGYPTIAN HIEROGLYPH U032
 13356  EGYPTIAN HIEROGLYPH U032A
 13357  EGYPTIAN HIEROGLYPH U033
 13358  EGYPTIAN HIEROGLYPH U034
 13359  EGYPTIAN HIEROGLYPH U035
 1335A  EGYPTIAN HIEROGLYPH U036
 1335B  EGYPTIAN HIEROGLYPH U037
 1335C  EGYPTIAN HIEROGLYPH U038
 1335D  EGYPTIAN HIEROGLYPH U039
 1335E  EGYPTIAN HIEROGLYPH U040
 1335F  EGYPTIAN HIEROGLYPH U041
 13360  EGYPTIAN HIEROGLYPH U042

































V. Rope, fibre, baskets, bags, etc.

13361  EGYPTIAN HIEROGLYPH V001
 = 100
 13362  EGYPTIAN HIEROGLYPH V001A
 = 200
 13363  EGYPTIAN HIEROGLYPH V001B
 = 300
 13364  EGYPTIAN HIEROGLYPH V001C
 = 400
 13365  EGYPTIAN HIEROGLYPH V001D
 = 500
 13366  EGYPTIAN HIEROGLYPH V001E
 = 600
 13367  EGYPTIAN HIEROGLYPH V001F
 = 700
 13368  EGYPTIAN HIEROGLYPH V001G
 = 800
 13369  EGYPTIAN HIEROGLYPH V001H
 = 900
 1336A  EGYPTIAN HIEROGLYPH V001I
 = 500
 1336B  EGYPTIAN HIEROGLYPH V002
 1336C  EGYPTIAN HIEROGLYPH V002A
 1336D  EGYPTIAN HIEROGLYPH V003
 1336E  EGYPTIAN HIEROGLYPH V004
 1336F  EGYPTIAN HIEROGLYPH V005
 13370  EGYPTIAN HIEROGLYPH V006
 13371  EGYPTIAN HIEROGLYPH V007
 13372  EGYPTIAN HIEROGLYPH V007A
 13373  EGYPTIAN HIEROGLYPH V007B
 13374  EGYPTIAN HIEROGLYPH V008
 13375  EGYPTIAN HIEROGLYPH V009
 13376  EGYPTIAN HIEROGLYPH V010
 13377  EGYPTIAN HIEROGLYPH V011
 13378  EGYPTIAN HIEROGLYPH V011A
 = beginning of cartouche
 13379  EGYPTIAN HIEROGLYPH V011B
 = end of cartouche
 1337A  EGYPTIAN HIEROGLYPH V011C
 = end of knotless cartouche
 1337B  EGYPTIAN HIEROGLYPH V012
 1337C  EGYPTIAN HIEROGLYPH V012A
 1337D  EGYPTIAN HIEROGLYPH V012B
 1337E  EGYPTIAN HIEROGLYPH V013
 = tj
 → 1E6F 
 1337F  EGYPTIAN HIEROGLYPH V014
 13380  EGYPTIAN HIEROGLYPH V015
 13381  EGYPTIAN HIEROGLYPH V016











13382  EGYPTIAN HIEROGLYPH V017
 13383  EGYPTIAN HIEROGLYPH V018
 13384  EGYPTIAN HIEROGLYPH V019
 13385  EGYPTIAN HIEROGLYPH V020
 = 10
 13386  EGYPTIAN HIEROGLYPH V020A
 = 20
 13387  EGYPTIAN HIEROGLYPH V020B
 = 30
 13388  EGYPTIAN HIEROGLYPH V020C
 = 40
 13389  EGYPTIAN HIEROGLYPH V020D
 = 50
 1338A  EGYPTIAN HIEROGLYPH V020E
 = 60
 1338B  EGYPTIAN HIEROGLYPH V020F
 = 70
 1338C  EGYPTIAN HIEROGLYPH V020G
 = 80
 1338D  EGYPTIAN HIEROGLYPH V020H
 = 90
 1338E  EGYPTIAN HIEROGLYPH V020I
 = 20
 1338F  EGYPTIAN HIEROGLYPH V020J
 = 30
 13390  EGYPTIAN HIEROGLYPH V020K
 = 40
 13391  EGYPTIAN HIEROGLYPH V020L
 = 50
 13392  EGYPTIAN HIEROGLYPH V021
 13393  EGYPTIAN HIEROGLYPH V022
 13394  EGYPTIAN HIEROGLYPH V023
 13395  EGYPTIAN HIEROGLYPH V023A
 13396  EGYPTIAN HIEROGLYPH V024
 13397  EGYPTIAN HIEROGLYPH V025
 13398  EGYPTIAN HIEROGLYPH V026
 13399  EGYPTIAN HIEROGLYPH V027
 1339A  EGYPTIAN HIEROGLYPH V028
 = h
 → 062D  arabic letter hah
 → 1E25  latin small letter h with dot below
 1339B  EGYPTIAN HIEROGLYPH V028A
 1339C  EGYPTIAN HIEROGLYPH V029
 1339D  EGYPTIAN HIEROGLYPH V029A
 1339E  EGYPTIAN HIEROGLYPH V030
 1339F  EGYPTIAN HIEROGLYPH V030A
 133A0  EGYPTIAN HIEROGLYPH V031
 = k
 → 05DB  hebrew letter kaf
 → 0643  arabic letter kaf
 133A1  EGYPTIAN HIEROGLYPH V031A
 133A2  EGYPTIAN HIEROGLYPH V032
 133A3  EGYPTIAN HIEROGLYPH V033
 133A4  EGYPTIAN HIEROGLYPH V033A
 133A5  EGYPTIAN HIEROGLYPH V034
 133A6  EGYPTIAN HIEROGLYPH V035
 133A7  EGYPTIAN HIEROGLYPH V036
 133A8  EGYPTIAN HIEROGLYPH V037
 133A9  EGYPTIAN HIEROGLYPH V037A
 133AA  EGYPTIAN HIEROGLYPH V038
 133AB  EGYPTIAN HIEROGLYPH V039

- 133AC  EGYPTIAN HIEROGLYPH V040
= 10 in dates
- 133AD  EGYPTIAN HIEROGLYPH V040A
= 20 in dates









W. Vessels of stone and earthenware

- 133AE  EGYPTIAN HIEROGLYPH W001
- 133AF  EGYPTIAN HIEROGLYPH W002
- 133B0  EGYPTIAN HIEROGLYPH W003
- 133B1  EGYPTIAN HIEROGLYPH W003A
- 133B2  EGYPTIAN HIEROGLYPH W004
- 133B3  EGYPTIAN HIEROGLYPH W005
- 133B4  EGYPTIAN HIEROGLYPH W006
- 133B5  EGYPTIAN HIEROGLYPH W007
- 133B6  EGYPTIAN HIEROGLYPH W008
- 133B7  EGYPTIAN HIEROGLYPH W009
- 133B8  EGYPTIAN HIEROGLYPH W009A
- 133B9  EGYPTIAN HIEROGLYPH W010
- 133BA  EGYPTIAN HIEROGLYPH W010A
- 133BB  EGYPTIAN HIEROGLYPH W011
= g
- 133BC  EGYPTIAN HIEROGLYPH W012
- 133BD  EGYPTIAN HIEROGLYPH W013
- 133BE  EGYPTIAN HIEROGLYPH W014
- 133BF  EGYPTIAN HIEROGLYPH W014A
- 133C0  EGYPTIAN HIEROGLYPH W015
- 133C1  EGYPTIAN HIEROGLYPH W016
- 133C2  EGYPTIAN HIEROGLYPH W017
- 133C3  EGYPTIAN HIEROGLYPH W017A
- 133C4  EGYPTIAN HIEROGLYPH W018
- 133C5  EGYPTIAN HIEROGLYPH W018A
- 133C6  EGYPTIAN HIEROGLYPH W019
- 133C7  EGYPTIAN HIEROGLYPH W020
- 133C8  EGYPTIAN HIEROGLYPH W021
- 133C9  EGYPTIAN HIEROGLYPH W022
- 133CA  EGYPTIAN HIEROGLYPH W023
- 133CB  EGYPTIAN HIEROGLYPH W024
- 133CC  EGYPTIAN HIEROGLYPH W024A
- 133CD  EGYPTIAN HIEROGLYPH W025

X. Loaves and cakes

- 133CE  EGYPTIAN HIEROGLYPH X001
= t
- 133CF  EGYPTIAN HIEROGLYPH X002
- 133D0  EGYPTIAN HIEROGLYPH X003
- 133D1  EGYPTIAN HIEROGLYPH X004
- 133D2  EGYPTIAN HIEROGLYPH X004A
- 133D3  EGYPTIAN HIEROGLYPH X005
- 133D4  EGYPTIAN HIEROGLYPH X006
- 133D5  EGYPTIAN HIEROGLYPH X006A
- 133D6  EGYPTIAN HIEROGLYPH X007
- 133D7  EGYPTIAN HIEROGLYPH X008

Y. Writings, games, music

- 133D8  EGYPTIAN HIEROGLYPH Y001
- 133D9  EGYPTIAN HIEROGLYPH Y001A
- 133DA  EGYPTIAN HIEROGLYPH Y002
- 133DB  EGYPTIAN HIEROGLYPH Y003
- 133DC  EGYPTIAN HIEROGLYPH Y004
- 133DD  EGYPTIAN HIEROGLYPH Y005
- 133DE  EGYPTIAN HIEROGLYPH Y006
- 133DF  EGYPTIAN HIEROGLYPH Y007

- 133E0  EGYPTIAN HIEROGLYPH Y008

Z. Strokes, signs derived from Hieratic, geometrical figures

- 133E1  EGYPTIAN HIEROGLYPH Z001
= unity
→ 133F2  egyptian hieroglyph z015
- 133E2  EGYPTIAN HIEROGLYPH Z002
= plurality
→ 133F4  egyptian hieroglyph z015b
- 133E3  EGYPTIAN HIEROGLYPH Z003
= plurality
→ 133F4  egyptian hieroglyph z015b
- 133E4  EGYPTIAN HIEROGLYPH Z003A
- 133E5  EGYPTIAN HIEROGLYPH Z004
= duality
= y
→ 131CD  egyptian hieroglyph m017a
- 133E6  EGYPTIAN HIEROGLYPH Z004A
= duality
→ 133F3  egyptian hieroglyph z015a
- 133E7  EGYPTIAN HIEROGLYPH Z005
- 133E8  EGYPTIAN HIEROGLYPH Z005A
- 133E9  EGYPTIAN HIEROGLYPH Z006
- 133EA  EGYPTIAN HIEROGLYPH Z007
- 133EB  EGYPTIAN HIEROGLYPH Z008
- 133EC  EGYPTIAN HIEROGLYPH Z009
- 133ED  EGYPTIAN HIEROGLYPH Z010
- 133EE  EGYPTIAN HIEROGLYPH Z011
- 133EF  EGYPTIAN HIEROGLYPH Z012
- 133F0  EGYPTIAN HIEROGLYPH Z013
- 133F1  EGYPTIAN HIEROGLYPH Z014
- 133F2  EGYPTIAN HIEROGLYPH Z015
= 1
→ 133E1  egyptian hieroglyph z001
- 133F3  EGYPTIAN HIEROGLYPH Z015A
= 2
→ 133E6  egyptian hieroglyph z004a
- 133F4  EGYPTIAN HIEROGLYPH Z015B
= 3
→ 133E2  egyptian hieroglyph z002
→ 133E3  egyptian hieroglyph z003
- 133F5  EGYPTIAN HIEROGLYPH Z015C
= 4
- 133F6  EGYPTIAN HIEROGLYPH Z015D
= 5
- 133F7  EGYPTIAN HIEROGLYPH Z015E
= 6
- 133F8  EGYPTIAN HIEROGLYPH Z015F
= 7
- 133F9  EGYPTIAN HIEROGLYPH Z015G
= 8
- 133FA  EGYPTIAN HIEROGLYPH Z015H
= 9
- 133FB  EGYPTIAN HIEROGLYPH Z015I
= 5
- 133FC  EGYPTIAN HIEROGLYPH Z016
= 1 in dates
- 133FD  EGYPTIAN HIEROGLYPH Z016A
= 2 in dates

- 133FE ≡ EGYPTIAN HIEROGLYPH Z016B
= 3 in dates
- 133FF ≡ EGYPTIAN HIEROGLYPH Z016C
= 4 in dates
- 13400 ≡ EGYPTIAN HIEROGLYPH Z016D
= 5 in dates
- 13401 ≡ EGYPTIAN HIEROGLYPH Z016E
= 6 in dates
- 13402 ≡ EGYPTIAN HIEROGLYPH Z016F
= 7 in dates
- 13403 ≡ EGYPTIAN HIEROGLYPH Z016G
= 8 in dates
- 13404 ≡ EGYPTIAN HIEROGLYPH Z016H
= 9 in dates

Aa. Unclassified

- 13405 ● EGYPTIAN HIEROGLYPH AA001
= kh
→ 0624 ﺙ arabic letter khah
→ 1E2B ħ latin small letter h with breve below
- 13406 ◊ EGYPTIAN HIEROGLYPH AA002
- 13407 ◊ EGYPTIAN HIEROGLYPH AA003
- 13408 ◊ EGYPTIAN HIEROGLYPH AA004
- 13409 ≡ EGYPTIAN HIEROGLYPH AA005
- 1340A ≡ EGYPTIAN HIEROGLYPH AA006
- 1340B ≡ EGYPTIAN HIEROGLYPH AA007
- 1340C ≡ EGYPTIAN HIEROGLYPH AA007A
- 1340D ≡ EGYPTIAN HIEROGLYPH AA007B
- 1340E ≡ EGYPTIAN HIEROGLYPH AA008
- 1340F ≡ EGYPTIAN HIEROGLYPH AA009
- 13410 ≡ EGYPTIAN HIEROGLYPH AA010
- 13411 ≡ EGYPTIAN HIEROGLYPH AA011
- 13412 ≡ EGYPTIAN HIEROGLYPH AA012
- 13413 ≡ EGYPTIAN HIEROGLYPH AA013
- 13414 ≡ EGYPTIAN HIEROGLYPH AA014
- 13415 ≡ EGYPTIAN HIEROGLYPH AA015
- 13416 ≡ EGYPTIAN HIEROGLYPH AA016
- 13417 ≡ EGYPTIAN HIEROGLYPH AA017
- 13418 ≡ EGYPTIAN HIEROGLYPH AA018
- 13419 ≡ EGYPTIAN HIEROGLYPH AA019
- 1341A ≡ EGYPTIAN HIEROGLYPH AA020
- 1341B ≡ EGYPTIAN HIEROGLYPH AA021
- 1341C ≡ EGYPTIAN HIEROGLYPH AA022
- 1341D ≡ EGYPTIAN HIEROGLYPH AA023
- 1341E ≡ EGYPTIAN HIEROGLYPH AA024
- 1341F ≡ EGYPTIAN HIEROGLYPH AA025
- 13420 ≡ EGYPTIAN HIEROGLYPH AA026
- 13421 ≡ EGYPTIAN HIEROGLYPH AA027
- 13422 ≡ EGYPTIAN HIEROGLYPH AA028
- 13423 ≡ EGYPTIAN HIEROGLYPH AA029
- 13424 ≡ EGYPTIAN HIEROGLYPH AA030
- 13425 ≡ EGYPTIAN HIEROGLYPH AA031
- 13426 ≡ EGYPTIAN HIEROGLYPH AA032

UniKemet database of Egyptian Hieroglyphs for UCS encoding													
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20	
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	0	C20
A001	544:A1	17:A1								423:A1		1	A1
A002	544:A2	17:A2								423:A2		1	A2
A003	544:A3	17:A3								423:A3		1	A3
A004	544:A4	17:A4								423:A4		1	A4
A005	544:A5	17:A5								423:A5		1	A5
A005A					2:A5*							1	A5A
A006	544:A6	17:A6								423:A6		1	A6
A006A					2:A6*							1	A6A
A006B						8-4:5:650						1	A6B
A007	544:A7	17:A7								423:A7		1	A7
A008	544:A8	17:A8								423:A8		1	A8
A009	544:A9	17:A9								423:A9		1	A9
A010	544:A10	17:A10								423:A10		1	A10
A011	544:A11	17:A11								423:A11		1	A11
A012	544:A12	17:A12								423:A12		1	A12
A013	544:A13	17:A13								423:A13		1	A13
A014	544:A14	17:A14								424:A14		1	A14
A014A	544:A14*			245:A14*	2:A14*					424:A14a		1	A14A
A015	544:A15	17:A15								424:A15		1	A15
A016	544:A16	17:A16								424:A16		1	A16
A017	544:A17	17:A17								424:A17		1	A17
A017A	544:A17*				2:A17*					424:A17a		1	A17A
A018	544:A18	17:A18								424:A18		1	A18
A019	544:A19	17:A19								424:A19		1	A19
A020	544:A20	17:A20								424:A20		1	A20
A021	544:A21	17:A21								424:A21		1	A21
A022	544:A22	17:A22								424:A22		1	A22
A023	544:A23	17:A23								424:A23		1	A23
A024	544:A24	17:A24								424:A24		1	A24
A025	544:A25	17:A25								424:A25		1	A25
A026	544:A26	17:A26								424:A26		1	A26

Source database for review 2007-04-02 1

UniKemet database of Egyptian Hieroglyphs for UCS encoding													
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20	
A027	544:A27	17:A27								424:A27		1	A27
A028	544:A28	17:A28								424:A28		1	A28
A029	544:A29	17:A29								424:A29		1	A29
A030	544:A30	17:A30								424:A30		1	A30
A031	544:A31	17:A31								424:A31		1	A31
A032	544:A32	17:A32								424:A32		1	A32
A032A		17:A32*										1	A32A
A033	544:A33	17:A33								424:A33		1	A33
A034	544:A34	17:A34								424:A34		1	A34
A035	544:A35	17:A35								424:A35		1	A35
A036	544:A36	17:A36								424:A36		1	A36
A037	544:A37	17:A37								424:A37		1	A37
A038	544:A38	17:A38								424:A38		1	A38
A039	544:A39	17:A39								424:A39		1	A39
A040	544:A40	17:A40								425:A40		1	A40
A040A					2:C22							1	A40A
A041	544:A41	17:A41								425:A41		1	A41
A042	544:A42	18:142								425:A42		1	A42
A042A				245:A42*	2:A42*							1	A42A
A043	544:A43	18:A43								425:A43		1	A43
A043A					2:C21							1	A43A
A044	544:A44	18:A44								425:A44		1	A44
A045	544:A45	18:A45								425:A45		1	A45
A045A						GITB ref						1	A45A
A046	544:A46	18:A46								425:A46		1	A46
A047	544:A47	18:A47								425:A47		1	A47
A048	544:A48	18:A48								425:A48		1	A48
A049	544:A49	18:A49								425:A49		1	A49
A050	544:A50	18:A50								425:A50		1	A50
A051	544:A51	18:A51								425:A51		1	A51
A052	544:A52	18:A52								425:A52		1	A52
A053	544:A53	18:A53								425:A53		1	A53

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
A054	544:A54	18:A54								425:A54		1 A54
A055	544:A55	18:A55								425:A55		1 A55
A056		18:A56										1 A56
A057		18:A57										1 A57
A058		18:A58										1 A58
A059			95:A59		2:A59					424:A59		1 A59
A060			95:A60		2:A60							1 A60
A061				245:A61	2:A61							1 A61
A062				245:A62	2:A62							1 A62
A063				245:A63	2:A63							1 A63
A064					2:A64							1 A64
A065					2:A65							1 A46
A066					2:A66							1 A23
A067					2:A67							1 A28
A068					2:A68							1 A19
A069						GITB ref				423:A68		1 A68
A070						8-1:626:810						1 A73
B001	544:B1	19:B1								425:B1		1 B1
B002	544:B2	19:B2								425:B2		1 B2
B003	544:B3	19:B3								425:B3		1 B3
B004	544:B4	19:B4								425:B4		1 B4
B005	544:B5	19:B5								425:B5		1 B5
B005A							8-4:13:500					1 B10
B006	544:B6	19:B6								425:B6		1 B6
B007	544:B7		95:B7		2:B7					425:B7		1 B7
B008				245:B8	2:B8							1 B8
B009							8-1:690:370					1 B47
C001	544:C1	19:C1								425:C1		1 C1
C002	544:C2	19:C2								425:C2		1 C2
C002A					2:C2*							1 C2A
C002B					2:C2**							1
C002C					2:C2***							1

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
C003	544:C3	19:C3								425:C3		1 C3
C004	544:C4	19:C4								425:C4		1 C4
C005	544:C5	19:C5								425:C5		1 C5
C006	544:C6	19:C6								426:C6		1 C6
C007	544:C7	19:C7								426:C7		1 C7
C008	544:C8	19:C8								426:C8		1 C8
C009	544:C9	19:C9								426:C9		1 C9
C010	544:C10	19:C10								426:C10		1 C10
C010A		19:C10*								426:C10a		1 C10
C011	544:C11	19:C11					63:AAg655			426:C11		1 C11
C012	544:C12			245:C12	2:C12					426:C12		1 C12
C013				245:C13	2:C13							1
C014				245:C14	2:C14							1 C14
C015				245:C15	2:C15							1
C016				245:C16	2:C16							1 C16
C017	544:C17			245:C17	2:C17					426:C17		1 C17
C018	544:C18			246:C18	2:C18					426:C18		1 C18
C019	544:C19			246:C19	2:C19					426:C19		1 C19
C020	544:C20			246:C20	2:C20					426:C20		1 C20
C021						8-1:751:278						1 C33
C022						8-1:727:370						1 C49
C023						GITB ref						1 C16
C024						8-1:753:130						1 C18
D001	544:D1	20:D1								426:D1		1 D1
D002	544:D2	20:D2								426:D2		1 D2
D003	544:D3	20:D3								426:D3		1 D3
D004	544:D4	20:D4								426:D4		1 D4
D005	544:D5	20:D5								426:D5		1 D5
D006	544:D6	20:D6								426:D6		1 D6
D007	544:D7	20:D7								426:D7		1 D7
D008	544:D8	20:D8								426:D8		1 D8
D008A		20:D8*										1 D8A

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
D009	544:D9	20:D9								426:D9		1 D9
D010	544:D10	20:D10								426:D10		1 D10
D011	544:D11	20:D11								426:D11		1 D11
D012	544:D12	20:D12								426:D12		1 D12
D013	544:D13	20:D13								426:D13		1 D13
D014	544:D14	20:D14								426:D14		1 D14
D015	544:D15	20:D15								426:D15		1 D15
D016	544:D16	20:D16								426:D16		1 D16
D017	544:D17	20:D17								426:D17		1 D17
D018	544:D18	20:D18								426:D18		1 D18
D019	544:D19	20:D19								426:D19		1 D19
D020	544:D20	20:D20								426:D20		1 D20
D021	544:D21	20:D21								427:D21		1 D21
D022	544:D22	20:D22								427:D22		1 D22
D023	544:D23	20:D23								427:D23		1 D23
D024	544:D24	20:D24								427:D24		1 D24
D025	544:D25	20:D25								427:D25		1 D25
D026	544:D26	20:D26								427:D26		1 D26
D027	544:D27	20:D27								427:D27		1 D27
D027A	544:D27*	20:D27*								427:D27a		1 D27
D028	544:D28	20:D28								427:D28		1 D28
D029	544:D29	20:D29								427:D29		1 D29
D030	544:D30	20:D30								427:D30		1 D30
D031	544:D31	20:D31								427:D31		1 D31
D031A					3:D31*							1 D31
D032	544:D32	20:D32								427:D32		1 D32
D033	544:D33	20:D33								427:D33		1 D33
D034	544:D34	20:D34								427:D34		1 D34
D034A	544:D34*	20:D34*								427:D34a		1 D34
D035	544:D35	20:D35								427:D35		1 D35
D036	544:D36	20:D36								427:D36		1 D36
D037	544:D37	20:D37								427:D37		1 D37

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
D038	544:D38	20:D38								427:D38		1 D38
D039	544:D39	20:D39								427:D39		1 D39
D040	544:D40	20:D40								427:D40		1 D40
D041	544:D41	20:D41								427:D41		1 D41
D042	544:D42	20:D42								427:D42		1 D42
D043	544:D43	20:D43								427:D43		1 D43
D044	544:D44	20:D44								427:D44		1 D44
D045	544:D45	20:D45								427:D45		1 D45
D046	544:D46	20:D46								427:D46		1 D46
D046A	544:D46*	20:D46*								427:D46a		1 D46
D047		20:D47								427:D47		1 D47
D048	544:D48	21:D48								427:D48		1 D48
D048A					3:D48*							1 D48
D049	544:D49	21:D49								427:D49		1 D49
D050	544:D50	21:D50					63:AAe650	59:AAe650		427:D50		1 D50
D050A	199:20000						63:AAe651	59:AAe651				1
D050B							63:AAe652	59:AAe652				1
D050C							63:AAe653	59:AAe653				1
D050D	191:50000							59:AAe653B		97:50000		1
D050E								59:AAe653C				1
D050F								59:AAe653D				1
D050G								59:AAe653E				1
D050H								59:AAe653F				1
D050I	191:50000							59:AAe653B		97:50000		1
D051	544:D51	21:D51								428:D51		1 D51
D052	544:D52	21:D52								428:D52		1 D52
D052A				246:D52*	3:D52*							1 S12
D053	544:D53	21:D53								428:D53		1 D53
D054	544:D54	21:D54								428:D54		1 D54
D054A			95:Ff3									1
D055	544:D55	21:D55								428:D55		1 D55
D056	544:D56	21:D56								428:D56		1 D56

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
D057	544:D57	21:D57								428:D57		1 D57
D058	544:D58	21:D58								428:D58		1 D58
D059	544:D59	21:D59								428:D59		1 D59
D060	544:D60	21:D60								428:D60		1 D60
D061	544:D61	21:D61								428:D61		1 D61
D062	544:D62	21:D63								428:D62		1 D62
D063	544:D63	21:D63								428:D63		1 D63
D064					3:D64							1 D27
D065					3:D65							1 D13
D066					3:D66							1 D66
D067	199:1						66:DDc695		63:DDc695			1
D067A	199:2							62:DDc696	63:DDc696			1
D067B	199:3						66:DDc697b	62:DDc697	63:DDc697			1
D067C										102:4		1
D067D							66:DDc699			102:5		1
D067E	192:6						66:DDc700			102:6		1
D067F	198:7						66:DDc701					1
D067G	198:8						66:DDc702			102:8		1
D067H										102:9		1
E001	544:E1	22:E1								428:E1		1 E1
E002	544:E2	22:E2								428:E2		1 E2
E003	544:E3	22:E3								428:E3		1 E3
E004	544:E4	22:E4								428:E4		1 E4
E005	544:E5	22:E5								428:E5		1 E5
E006	544:E6	22:E6								428:E6		1 E6
E007	544:E7	22:E7								428:E7		1 E7
E008	544:E8	22:E8								428:E8		1 E8
E008A	544:E8*			246:E8*	3:E8*					428:E8a		1 E8A
E009	544:E9	22:E9								428:E9		1 E9
E009A					3:E9*							1 E10
E010	544:E10	22:E10								428:E10		1 E10
E011	544:E11	22:E11								428:E11		1 E11

UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
E012	544:E12	22:E12								428:E12		1 E12
E013	544:E13	22:E13								428:E13		1 E13
E014	544:E14	22:E14								429:E14		1 E14
E015	544:E15	22:E15								429:E15		1 E15
E016	544:E16	22:E16								429:E16		1 E16
E016A					3:E16*							1 E16
E017	544:E17	22:E17								429:E17		1 E17
E017A						8-2:134:610						1 E14
E018	544:E18	22:E18								429:E18		1 E18
E019	544:E19	22:E19								429:E19		1 E19
E020	544:E20	22:E20								429:E20		1 E20
E020A		22:E20*										1 E20
E021	544:E21	22:E21								429:E21		1 E21
E022	544:E22	22:E22								429:E22		1 E22
E023	544:E23	22:E23								429:E23		1 E23
E024	544:E24	22:E24								429:E24		1 E24
E025	544:E25	22:E25								429:E25		1 E25
E026	544:E26	22:E26								429:E26		1 E26
E027	544:E27	22:E27								429:E27		1 E27
E028	544:E28	22:E28								429:E28		1 E28
E028A		22:E28*										1 E28
E029	544:E29	22:E29								429:E29		1 E29
E030	544:E30	22:E30								429:E30		1 E30
E031	544:E31	22:E31								429:E31		1 E31
E032	544:E32	22:E32								429:E32		1 E32
E033	544:E33	22:E33								429:E33		1 E33
E034	544:E34	22:E34								429:E34		1 E34
E034A		22:E34*										1
E035		22:E35			7:NnU15							1 E34
E036					3:E36							1 E35
E037					3:E37							1 E45
E038					3:E38							1 E92

UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
F001	544:F1	23:F1								429:F1		1 F1
F001A				246:F1*	3:F1*					429:F63		1 F1E
F002	544:F2	23:F2								429:F2		1 F2
F003	544:F3	23:F3								429:F3		1 F3
F004	544:F4	23:F4								429:F4		1 F4
F005	544:F5	23:F5								429:F5		1 F5
F006	544:F6	23:F6								429:F6		1 F6
F007	544:F7	23:F7								429:F7		1 F7
F008	544:F8	23:F8								429:F8		1 F8
F009	544:F9	23:F9								429:F9		1 F9
F010	544:F10	23:F10								429:F10		1 F10
F011	544:F11	23:F11								429:F11		1 F11
F012	544:F12	23:F12								429:F12		1 F12
F013	544:F13	23:F13								429:F13		1 F13
F013A		23:F13*										1 F13
F014	544:F14	23:F14								430:F14		1 F14
F015	544:F15	23:F15								430:F15		1 F15
F016	544:F16	23:F16								430:F16		1 F16
F017	544:F17	23:F17								430:F17		1 F17
F018	544:F18	23:F18								430:F18		1 F18
F019	544:F19	23:F19								430:F19		1 F19
F020	544:F20	23:F20								430:F20		1 F20
F021	544:F21	23:F21								430:F21		1 F21
F021A			95:Ff4									1
F022	544:F22	23:F22								430:F22		1 F22
F023	544:F23	23:F23								430:F23		1 F23
F024	544:F24	23:F24								430:F24		1 F24
F025	544:F25	23:F25								430:F25		1 F25
F026	544:F26	23:F26								430:F26		1 F26
F027	544:F27	23:F27								430:F27		1 F27
F028	544:F28	23:F28								430:F28		1 F28
F029	544:F29	23:F29								430:F29		1 F29

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
F030	544:F30	23:F30								430:F30		1 F30
F031	544:F31	23:F31								430:F31		1 F31
F031A					3:F31							1 F31
F032	544:F32	23:F32								430:F32		1 F32
F033	544:F33	23:F33								430:F33		1 F33
F034	544:F34	23:F34								430:F34		1 F34
F035	544:F35	23:F35								430:F35		1 F35
F036	544:F36	23:F36								430:F36		1 F36
F037	544:F37	23:F37								430:F37		1 F37
F037A					6:Ff9					430:F37b		1 F37
F038	544:F38	23:F38								430:F38		1 F38
F038A		23:F38*										1 F38
F039	544:F39	23:F39								430:F39		1 F39
F040	544:F40	23:F40								430:F40		1 F40
F041	544:F41	23:F41								430:F41		1 F41
F042	544:F42	23:F42								430:F42		1 F42
F043	544:F43	23:F43								430:F43		1 F43
F044	544:F44	23:F44								430:F44		1 F44
F045	544:F45	23:F45								430:F45		1 F45
F045A		38:U31(v)										1 U31
F046	544:F46	23:F46								430:F46		1 F46
F046A	466:(F46)											1 F46
F047	544:F47	24:F47								430:F47		1 F47
F047A	466:(F47)											1 F47
F048	544:F48	24:F48								430:F48		1 F48
F049	544:F49	24:F49								430:F49		1 F49
F050	544:F50	24:F50								430:F50		1 F50
F051	544:F51	24:F51								431:F51		1 F51
F051A		24:F51*										1 F51
F051B		24:F51**										1 F51
F051C	467:F51n4									431:F51(a)		1 F51
F052	544:F52	24:F52								431:F52		1 F52

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
F053							8-1:797:520					1 F59
G001	545:G1	25:G1								431:G1		1 G1
G002	545:G2	25:G2								431:G2		1 G2
G003	545:G3	25:G3								431:G3		1 G3
G004	545:G4	25:G4								431:G4		1 G4
G005	545:G5	25:G5								431:G5		1 G5
G006	545:G6	25:G6								431:G6		1 G6
G006A		25:G6*										1 G6/
G007	545:G7	25:G7								431:G7		1 G7
G007A	545:G7*			246:G7*	3:G7*					431:G7a		1 G7/
G007B	545:G7**			246:G7**	3:G7**					431:G7b		1 G7/
G008	545:G8	25:G8								431:G8		1 G8
G009	545:G9	25:G9								431:G9		1 G9
G010	545:G10	25:G10								431:G10		1 G10
G011	545:G11	25:G11								431:G11		1 G11
G011A				246:G11*	3:G11*							1 G11
G012	545:G12	25:G12								431:G12		1 G12
G013	545:G13	25:G13								431:G13		1 G13
G014	545:G14	25:G14								431:G14		1 G14
G015	545:G15	25:G15								431:G15		1 G15
G016	545:G16	25:G16								431:G16		1 G16
G017	545:G17	25:G17								431:G17		1 G17
G018	545:G18	25:G18								431:G18		1 G18
G019	545:G19	25:G19								431:G19		1 G19
G020	545:G20	25:G20								431:G20		1 G20
G020A					3:G20*							1 G20
G021	545:G21	25:G21								431:G21		1 G21
G022	545:G22	25:G22								431:G22		1 G22
G023	545:G23	25:G23								431:G23		1 G23
G024	545:G24	25:G24								431:G24		1 G24
G025	545:G25	25:G25								431:G25		1 G25
G026	545:G26	25:G26								432:G26		1 G26

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
G026A	545:G26*				3:G26*					432:G26a		1 G26
G027	545:G27	25:G27								432:G27		1 G27
G028	545:G28	25:G28								432:G28		1 G28
G029	545:G29	25:G29								432:G29		1 G29
G030	545:G30	25:G30								432:G30		1 G30
G031	545:G31	25:G31								432:G31		1 G31
G032	545:G32	25:G32								432:G32		1 G32
G033	545:G33	25:G33								432:G33		1 G33
G034	545:G34	25:G34								432:G34		1 G34
G035	545:G35	25:G35								432:G35		1 G35
G036	545:G36	25:G36								432:G36		1 G36
G036A		25:G36*										1 G36
G037	545:G37	25:G37								432:G37		1 G37
G037A		25:G37*										1 G37
G038	545:G38	25:G38								432:G38		1 G38
G039	545:G39	25:G39								432:G39		1 G39
G040	545:G40	25:G40								432:G40		1 G40
G041	545:G41	26:G41								432:G41		1 G41
G042	545:G42	26:G42								432:G42		1 G42
G043	545:G43	26:G43								432:G43		1 G43
G043A		26:G43*										1
G044	545:G44	26:G44								432:G44		1 G44
G045	545:G45	26:G45								432:G45		1 G45
G045A					3:G45*							1 G45
G046	545:G46	26:G46								432:G46		1 G46
G047	545:G47	26:G47								432:G47		1 G47
G048	545:G48	26:G48								432:G48		1 G48
G049	545:G49	26:G49								432:G49		1 G49
G050	545:G50	26:G50								432:G50		1 G50
G051	545:G51	26:G51								432:G51		1 G51
G052	545:G52	26:G52								432:G52		1 G52
G053	545:G53	26:G53								432:G53		1 G53

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
G054	545:G54	26:G54								432:G54		1 G54
H001	545:H1	27:H1								433:H1		1 H1
H002	545:H2	27:H2								433:H2		1 H2
H003	545:H3	27:H3								433:H3		1 H3
H004	545:H4	27:H4								433:H4		1 H4
H005	545:H5	27:H5								433:H5		1 H5
H006	545:H6	27:H6								433:H6		1 H6
H006A	545:H6*		95:Ff5		3:H6*					433:H6a		1 H6A
H007	545:H7	27:H7								433:H7		1 H7
H008	545:H8	27:H8								433:H8		1 H8
I001	545:I1	27:I1								433:I1		1 I1
I002	545:I2	27:I2								433:I2		1 I2
I003	545:I3	27:I3								433:I3		1 I3
I004	545:I4	27:I4								433:I4		1 I4
I005	545:I5	27:I5								433:I5		1 I5
I005A	545:I5A		95:I5*		4:I5*					433:I5a		1 I5A
I006	545:I6	27:I6								433:I6		1 I6
I007	545:I7	27:I7								433:I7		1 I7
I008	545:I8	27:I8					63:AAf654	59:AAf654		433:I8		1 I8
I009	545:I9	27:I9								433:I9		1 I9
I009A					4:I9*							1 I24
I010	545:I10	27:I10								433:I10		1 I10
I010A					4:I10*							1 I31
I011	545:I11	27:I11								433:I11		1 I11
I011A		27:I11*										1 I11
I012	545:I12	27:I12								433:I12		1 I12
I013	545:I13	27:I13								433:I13		1 I13
I014	545:I14	27:I14								433:I14		1 I14
I015	545:I15	27:I15								433:I15		1 I15
K001	545:K1	28:K1								433:K1		1 K1
K002	545:K2	28:K2								433:K2		1 K2
K003	545:K3	28:K3								433:K3		1 K3

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
K004	545:K4	28:K4								434:K4		1 K4
K005	545:K5	28:K5								434:K5		1 K5
K006	545:K6	28:K6								434:K6		1 K6
K007	545:K7	28:K7								434:K7		1 K7
K008					4:K8							1 K13
L001	545:L1	28:L1								434:L1		1 L1
L002	545:L2	28:L2								434:L2		1 L2
L002A		28:L2*										1 L2A
L003	477:L3	28:L3										1 L3L
L004	545:L4	28:L4								434:L4		1 L4
L005	545:L5	28:L5								434:L5		1 L5
L006	545:L6	28:L6								434:L6		1 L6
L006A		28:L6*										1 L6A
L007	545:L7	28:L7								434:L7		1 L7
L008						8-1:221:400						1 L35
M001	545:M1	29:M1								434:M1		1 M1
M001A		29:M1*								434:M1a		1 M1A
M001B					4:M1**							1 M1B
M002	545:M2	29:M2								434:M2		1 M2
M003	545:M3	29:M3								434:M3		1 M3
M003A					4:M3*							1 M3A
M004	545:M4	29:M4								434:M4		1 M4
M005	545:M5	29:M5								434:M5		1 M5
M006	545:M6	29:M6								434:M6		1 M6
M007	545:M7	29:M7								434:M7		1 M7
M008	545:M8	29:M8								434:M8		1 M8
M009	545:M9	29:M9								434:M9		1 M9
M010	545:M10	29:M10								434:M10		1 M10
M010A		29:M10*										1 M10A
M011	545:M11	29:M11								434:M11		1 M11
M012	545:M12	29:M12					62:AAAd641	58:AAAd641		434:M12		1 M12
M012A	191:2000						62:AAAd642	58:AAAd642	61:AAAd641	97:2000		1 M12A

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UniKemet database of Egyptian Hieroglyphs for UCS encoding													
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd	C20
M012B							62:AAd643	58:AAd643	61:AAd642	97:3000		1	
M012C							62:AAd644	58:AAd644				1	
M012D							62:AAd645	58:AAd645				1	
M012E							62:AAd646	58:AAd646				1	
M012F							62:AAd647	58:AAd647				1	
M012G							62:AAd648	58:AAd648				1	
M012H							62:AAd649	58:AAd649				1	
M013	545:M13	29:M13								434:M13		1	M13
M014	545:M14	29:M14								434:M14		1	M14
M015	545:M15	29:M15								435:M15		1	M15
M015A						8-1:750:190						1	M15A
M016	545:M16	29:M16								435:M16		1	M16
M016A				246:M16*	4:M16*							1	M16A
M017	545:M17	29:M17								435:M17		1	M17
M017A	481:y									435:y		1	M17A
M018	545:M18	29:M18								435:M18		1	M18
M019	545:M19	29:M19								435:M19		1	M19
M020	545:M20	29:M20								435:M20		1	M20
M021	545:M21	29:M21								435:M21		1	M21
M022	545:M22	29:M22								435:M22		1	M22
M022A	482:(M22)									435:nn		1	M22A
M023	545:M23	29:M23								435:M23		1	M23
M024	545:M24	29:M24								435:M24		1	M24
M024A				246:M24*	4:M24*							1	M24A
M025	545:M25	29:M25								435:M25		1	M25
M026	545:M26	29:M26								435:M26		1	M26
M027	545:M27	29:M27								435:M27		1	M27
M028	545:M28	29:M28								435:M28		1	M28
M028A				246:M28*	4:M28*							1	M28A
M029	545:M29	29:M29								435:M29		1	M29
M030	545:M30	29:M30								435:M30		1	M30
M031	545:M31	29:M31								435:M31		1	M31

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UniKemet database of Egyptian Hieroglyphs for UCS encoding													
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd	C20
M031A				246:M31*	4:M31*							1	M31A
M032	545:M32	29:M32								435:M32		1	M32
M033	545:M33	29:M33								435:M33		1	M33
M033A		29:M33*								435:M33(a)		1	M33A
M033B	483:M33(b)											1	M33B
M034	545:M34	29:M34								435:M34		1	M34
M035	545:M35	29:M35								435:M35		1	M35
M036	545:M36	29:M36								435:M36		1	M36
M037	545:M37	29:M37								435:M37		1	M37
M038	545:M38	29:M38								435:M38		1	M38
M039	545:M39	29:M39								435:M39		1	M39
M040	545:M40	29:M40								435:M40		1	M40
M040A		30:M40*										1	M40A
M041	545:M41	30:M41								435:M41		1	M41
M042	545:M42	30:M42								435:M42		1	M42
M043	545:M43	30:M43								435:M43		1	M43
M044	545:M44	30:M44								435:M044		1	M44
N001	545:N1	31:N1								436:N1		1	N1
N002	545:N2	31:N2								436:N2		1	N2
N003	545:N3	31:N3								436:N3		1	N3
N004	545:N4	31:N4								436:N4		1	N4
N005	545:N5	31:N5								436:N5		1	N5
N006	545:N6	31:N6								436:N6		1	N6
N007	545:N7	31:N7								436:N7		1	N7
N008	545:N8	31:N8								436:N8		1	N8
N009	545:N9	31:N9								436:N9		1	N9
N010	545:N10	31:N10								436:N10		1	N10
N011	545:N11	31:N11								436:N11		1	N11
N012	545:N12	31:N12								436:N12		1	N12
N013	545:N13	31:N13								436:N13		1	N13
N014	545:N14	31:N14								436:N14		1	N14
N015	545:N15	31:N15								436:N15		1	N15

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
N016	545:N16	31:N16								436:N16		1 N16
N017	545:N17	31:N17								436:N17		1 N17
N018	545:N18	31:N18								436:N18		1 N18
N018A					4:N18*							1 N18
N018B					4:N18**							1 N18
N019	545:N19	31:N19								436:N19		1 N19
N020	545:N20	31:N20								436:N20		1 N20
N021	545:N21	31:N21								436:N21		1 N21
N022	545:N22	31:N22								436:N22		1 N22
N023	545:N23	31:N23								436:N23		1 N23
N024	545:N24	31:N24								436:N24		1 N24
N025	545:N25	31:N25								436:N25		1 N25
N025A		31:N25*										1 N25
N026	545:N26	31:N26								437:N26		1 N26
N027	545:N27	31:N27								437:N27		1 N27
N028	545:N28	31:N28								437:N28		1 N28
N029	545:N29	31:N29								437:N29		1 N29
N030	545:N30	31:N30								437:N30		1 N30
N031	545:N31	31:N31								437:N31		1 N31
N032	554:N32	31:N32								437:N32		1 N32
N033	545:N33	31:N33								437:N33		1 N33
N033A	547:(N33)	31:N33*								437:33a		1 N33
N034	545:N34	31:N34								437:N34		1 N34
N034A				246:N34*	4:N34*							1 N34
N035	545:N35	31:N35								437:N35		1 N35
N035A	545:(N35)									437:N35A		1 N35
N036	545:N36	31:N36								437:N36		1 N36
N037	545:N37	31:N37								437:N37		1 N37
N037A					4:N37*					437:N37a		1 N37
N038	545:N38	31:N38								437:N38		1 N38
N039	545:N39	31:N39								437:N39		1 N39
N040	545:N40	31:N40								437:N40		1 N40

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
N041	545:N41	31:N41								437:N41		1 N41
N042	545:N42	31:N42								437:N42		1 N42
NL001					7:NnL1							1 NL1
NL002					7:NnL2							1 NL2
NL003					7:NnL3							1 NL3
NL004					7:NnL4							1 NL4
NL005					7:NnL5							1 NL5
NL005A					7:NnL5*							1 NL5
NL006					7:NnL6							1 NL6
NL007					7:NnL7							1 NL7
NL008					7:NnL8							1 NL8
NL009					7:NnL9							1 NL9
NL010					7:NnL10							1 NL10
NL011					7:NnL11							1 NL11
NL012					7:NnL12							1 NL12
NL013					7:NnL13							1 NL13
NL014					7:NnL14							1 NL14
NL015					7:NnL15							1 NL15
NL016					7:NnL16							1 NL16
NL017					7:NnL17							1 NL17
NL017A					7:NnL17*							1 NL17
NL018					7:NnL18							1 NL18
NL019					7:NnL19							1 NL19
NL020					7:NnL20							1 NL20
NU001					7:NnU1							1 NU001
NU002					7:NnU2							1 NU002
NU003					7:NnU3							1 NU003
NU004					7:NnU4							1 NU004
NU005					7:NnU5							1 NU005
NU006					7:NnU6							1 NU006
NU007					7:NnU7							1 NU007
NU008					7:NnU8							1 NU008

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
NU009					7:NnU9							1 NU9
NU010					7:NnU10							1 NU0
NU010A					7:NnU10*							1 NU0
NU011					7:NnU11							1 NU0
NU011A					7:NnU11*							1 NU0
NU012					7:NnU12							1 NU0
NU013					7:NnU13							1 NU0
NU014					7:NnU14							1 NU0
NU015					7:NnU15							1 NU0
NU016					7:NnU16							1 NU0
NU017					8:NnU17							1 NU0
NU018					8:NnU18							1 NU0
NU018A					8:NnU18*							1 NU0
NU019					8:NnU19							1 NU0
NU020					8:NnU20							1 NU0
NU021					8:NnU21							1 NU0
NU022					8:NnU22							1 NU0
NU022A					8:NnU22*							1 NU0
O001	545:O1	32:O1								437:O1		1 O1
O001A					4:O1*							1 O54
O002	545:O2	32:O2								437:O2		1 O2
O003	545:O3	32:O3								437:O3		1 O3
O004	545:O4	32:O4								437:O4		1 O4
O005	545:O5	32:O5								437:O5		1 O5
O005A		32:O5*										1 O50
O006	545:O6	32:O6								437:O6		1 O6
O006A	72:serekh									64:serekh		1
O006B												1
O006C												1
O006D												1
O006E												1
O006F												1

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
O007	545:O7	32:O7								437:O7		1 O7
O008	545:O8	32:O8								437:O8		1 O8
O009	545:O9	32:O9								437:O9		1 O9
O010	545:O10	32:O10								437:O10		1 O10
O010A					4:O10*							1 O10
O010B						8-1:755:460						1 O10
O010C						GITB ref						1 O18
O011	545:O11	32:O11								437:O11		1 O10
O012	545:O12	32:O12								437:O12		1 O10
O013	545:O13	32:O13								438:O13		1 O10
O014	545:O14	32:O14								438:O14		1 O14
O015	545:O15	32:O15								438:O15		1 O15
O016	545:O16	32:O16								438:O16		1 O16
O017	545:O17	32:O17								438:O17		1 O17
O018	545:O18	32:O18								438:O18		1 O18
O019	545:O19	32:O19								438:O19		1 O19
O019A					4:O19*							1 O19
O020	545:O20	32:O20								438:O20		1 O20
O020A		32:O20*										1 O20
O021	545:O21	32:O21								438:O21		1 O20
O022	545:O22	32:O22								438:O22		1 O20
O023	545:O23	32:O23								438:O23		1 O20
O024	545:O24	32:O24								438:O24		1 O24
O024A				246:O24*	4:O24*							1 O24
O025	545:O25	32:O25								438:O25		1 O25
O025A				246:O25*	4:O25*							1 O19
O026	545:O26	32:O26								438:O26		1 O26
O027	545:O27	32:O27								438:O27		1 O27
O028	545:O28	32:O28								438:O28		1 O28
O029	545:O29	32:O29								438:O29		1 O29
O029A	496:O29(a)	32:O29(a)								438:O29(v)		1 O29
O030	545:O30	32:O30								438:O30		1 O30

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
O030A		32:O30*										1 O30
O031	545:O31	32:O31								438:O31		1 O31
O032	545:O32	32:O32								438:O32		1 O32
O033	545:O33	32:O33								438:O33		1 O33
O033A	72:serekh									64:serekh		1
O034	545:O34	32:O34								438:O34		1 O34
O035	545:O35	32:O35								438:O35		1 O35
O036	545:O36	32:O36								438:O36		1 O36
O036A												1
O036B												1
O036C												1
O036D												1
O037	545:O37	32:O37								438:O37		1 O37
O038	545:O38	32:O38								438:O38		1 O38
O039	545:O39	32:O39								438:O39		1 O39
O040	545:O40	32:O40								438:O40		1 O40
O041	545:O41	32:O41								438:O41		1 O41
O042	545:O42	32:O42								438:O42		1 O42
O043	545:O43	33:O43								438:O43		1 O43
O044	545:O44	33:O44								438:O44		1 O44
O045	545:O45	33:O45								439:O45		1 O45
O046	545:O46	33:O46								439:O46		1 O46
O047	545:O47	33:O47								439:O47		1 O47
O048	545:O48	33:O48								439:O48		1 O48
O049	545:O49	33:O49								439:O49		1 O49
O050	545:O50	33:O50								439:O50		1 O50
O050A					6:Ff8							1
O050B					6:Ff8*							1
O051	545:O51	33:O51								439:O51		1 O51
P001	546:P1	34:P1								439:P1		1 P1
P001A	546:(P1)									439:P1a		1 P1A
P002	546:P2	34:P2								439:P2		1 P2

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
P003	546:P3	34:P3								439:P3		1 P3
P003A		34:P3*								439:P3a		1 P3E
P004	546:P4	34:P4								439:P4		1 P4
P005	546:P5	34:P5								439:P5		1 P5
P006	546:P6	34:P6								439:P6		1 P6
P007	546:P7	34:P7								439:P7		1 P7
P008	546:P8	34:P8								439:P8		1 P8
P009	546:P9	34:P9								439:P9		1 P9
P010	546:P10	34:P10								439:P10		1 P10
P011	546:P11	34:P11								439:P11		1 P11
Q001	546:Q1	34:Q1								439:Q1		1 Q1
Q002	546:Q2	34:Q2								439:Q2		1 Q2
Q003	546:Q3	34:Q3								439:Q3		1 Q3
Q004	546:Q4	34:Q4								439:Q4		1 Q4
Q005	546:Q5	34:Q5								439:Q5		1 Q5
Q006	546:Q6	34:Q6								439:Q6		1 Q6
Q007	546:Q7	34:Q7								439:Q7		1 Q7
R001	546:R1	35:R1								440:R1		1 R1
R002	546:R2	35:R2								440:R2		1 R2
R002A					5:R2*					440:R36a		1 R2C
R003	546:R3	35:R3								440:R3		1 R3
R003A					5:R3*							1 R3F
R003B					5:R3**							1 R3F
R004	546:R4	35:R4								440:R4		1 R4
R005	546:R5	35:R5								440:R5		1 R5
R006	546:R6	35:R6								440:R6		1 R6
R007	546:R7	35:R7								440:R7		1 R7
R008	546:R8	35:R8								440:R8		1 R8
R009	546:R9	35:R9								440:R9		1 R9
R010	546:R10	35:R10								440:R10		1 R10
R010A		35:R10*								440:R50		1 R10
R011	546:R11	35:R11								440:R11		1 R11

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
R012	546:R12	35:R12								440:R12		1 R12
R013	546:R13	35:R13								440:R13		1 R13
R014	546:R14	35:R14								440:R14		1 R14
R015	546:R15	35:R15								440:R15		1 R15
R016	546:R16	35:R16								440:R16		1 R16
R016A				246:R16*	5:R16*							1 R16
R017	546:R17	35:R17								440:R17		1 R17
R018	546:R18	35:R18								440:R18		1 R18
R019	546:R19	35:R19								440:R19		1 R19
R020	546:R20	35:R20								440:R20		1 R20
R021	546:R21	35:R21								440:R21		1 R21
R022	546:R22	35:R22								440:R22		1 R22
R023	546:R23	35:R23								440:R23		1 R23
R024	546:R24	35:R24								440:R24		1 R24
R025	546:R25	35:R25								440:R25		1 R25
R026				246:R26	5:R26							1 R26
R027					5:R27							1 R13
R028					5:R28							1 R12
R029					5:R29							1 O19
S001	546:S1	36:S1								440:S1		1 S1
S002	546:S2	36:S2								440:S2		1 S2
S002A					5:S2*							1 S56
S003	546:S3	36:S3								440:S3		1 S3
S004	546:S4	36:S4								440:S4		1 S4
S005	546:S5	36:S5								440:S5		1 S5
S006	546:S6	36:S6								440:S6		1 S6
S006A					5:S6*							1 S48
S007	546:S7	36:S7								441:S7		1 S7
S008	546:S8	36:S8								441:S8		1 S8
S009	546:S9	36:S9								441:S9		1 S9
S010	546:S10	36:S10								441:S10		1 S10
S011	546:S11	36:S11								441:S11		1 S11

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
S012	546:S12	36:S12								441:S12		1 S12
S013	546:S13	36:S13								441:S13		1 S13
S014	546:S14	36:S14								441:S14		1 S14
S014A	546:S14*				5:S14*					441:S14A		1 S14
S014B					5:S14**							1 S14
S015	546:S15	36:S15								441:S15		1 S15
S016	546:S16	36:S16								441:S16		1 S16
S017	546:S17	36:S17								441:S17		1 S17
S017A	546:S17*				5:S17*					441:S17A		1 S17
S018	546:S18	36:S18								441:S18		1 S18
S019	546:S19	36:S19								441:S19		1 S19
S020	546:S20	36:S20								441:S20		1 S20
S021	546:S21	36:S21								441:S21		1 S21
S022	546:S22	36:S22								441:S22		1 S22
S023	546:S23	36:S23								441:S23		1 S23
S024	546:S24	36:S24								441:S24		1 S24
S025	546:S25	36:S25								441:S25		1 S25
S026	546:S26	36:S26								441:S26		1 S26
S027	546:S27	36:S27								441:S27		1 S27
S028	546:S28	36:S28								441:S28		1 S28
S029	546:S29	36:S29								441:S29		1 S29
S030	546:S30	36:S30								441:S30		1 S30
S031	546:S31	36:S31								441:S31		1 S31
S032	546:S32	36:S32								441:S32		1 S32
S033	546:S33	36:S33								441:S33		1 S33
S034	546:S34	36:S34								441:S34		1 S34
S035	546:S35	36:S35								442:S35		1 S35
S035A		36:S35*										1 S35
S036	546:S36	36:S36								442:S36		1 S36
S037	546:S37	36:S37								442:S37		1 S37
S038	546:S38	36:S38								442:S38		1 S38
S039	546:S39	36:S39								442:S39		1 S39

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
S040	546:S40	36:S40								442:S40		1 S40
S041	546:S41	36:S41								442:S41		1 S41
S042	546:S42	36:S42								442:S42		1 S42
S043	546:S43	36:S43								442:S43		1 S43
S044	546:S44	35:S44								442:S44		1 S44
S045	546:S45	36:S45								442:S45		1 S45
S046					5:S46							1 S50
T001	546:T1									442:T1		1 T1
T002	546:T2									442:T2		1 T2
T003	546:T3									442:T3		1 T3
T003A					5:T3*							1 T43
T004	546:T4									442:T4		1 T4
T005	546:T5									442:T5		1 T5
T006	546:T6									442:T6		1 T6
T007	546:T7									442:T7		1 T7
T007A	546:T7*				5:T7*					442:T7A		1 T7A
T008	546:T8									442:T8		1 T8
T008A	546:T8*				5:T8*					442:T8A		1 T8A
T009	546:T9									442:T9		1 T9
T009A	546:T9*				5:T9*					442:T9A		1 T9A
T010	546:T10									442:T10		1 T10
T011	546:T11									442:T11		1 T11
T011A						8-2:065:700						1 T60
T012	546:T12									442:T12		1 T12
T013	546:T13									442:T13		1 T13
T014	546:T14									443:T14		1 T14
T015	546:T15									443:T15		1 T15
T016	546:T16									443:T16		1 T16
T016A				246:T16*	5:T36							1 T16
T017	546:T17									443:T17		1 T17
T018	546:T18									443:T18		1 T18
T019	546:T19									443:T19		1 T19

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	AmdC20
T020	546:T20									443:T20		1 T20
T021	546:T21									443:T21		1 T21
T022	546:T22									443:T22		1 T22
T023	546:T23									443:T23		1 T23
T024	546:T24									443:T24		1 T24
T025	546:T25									443:T25		1 T25
T026	546:T26									443:T26		1 T26
T027	546:T27									443:T27		1 T27
T028	546:T28									443:T28		1 T28
T029	546:T29									443:T29		1 T29
T030	546:T30									443:T30		1 T30
T031	546:T31									443:T31		1 T31
T032	546:T32									443:T32		1 T32
T032A					5:T32*							1 T32
T033	546:T33									443:T33		1 T33
T033A					5:T33*							1 T33
T034	546:T34									443:T34		1 T34
T035	546:T35									443:T35		1 T35
T036				247:T36	5:T37							1 T14
U001	546:U1	38:U1								443:U1		1 U1
U002	546:U2	38:U2								443:U2		1 U2
U003	546:U3	38:U3								443:U3		1 U3
U004	546:U4	38:U4								443:U4		1 U4
U005	546:U5	38:U5								443:U5		1 U5
U006	546:U6	38:U6								443:U6		1 U6
U006A					5:U6*							1 U6A
U006B					5:U6**							1 U6B
U007	546:U7	38:U7								443:U7		1 U7
U008	546:U8	38:U8								443:U8		1 U8
U009	546:U9	38:U9								443:U9		1 U9
U010	546:U10	38:U10								443:U10		1 U10
U011	546:U11	38:U11								443:U11		1 U11

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
U012	546:U12	38:U12								443:U12		1 U12
U013	546:U13	38:U13								443:U13		1 U13
U014	546:U14	38:U14								443:U14		1 U14
U015	546:U15	38:U15								443:U15		1 U15
U016	546:U16	38:U16								444:U16		1 U16
U017	546:U17	38:U17								444:U17		1 U17
U018	546:U18	38:U18								444:U18		1 U18
U019	546:U19	38:U19								444:U19		1 U19
U020	546:U20	38:U20								444:U20		1 U20
U021	546:U21	38:U21								444:U21		1 U21
U022	546:U22	38:U22								444:U22		1 U22
U023	546:U23	38:U23								444:U23		1 U23
U023A				247:U23*	5:U23*							1 U23
U024	546:U24	38:U24								444:U24		1 U24
U025	546:U25	38:U25								444:U25		1 U25
U026	546:U26	38:U26								444:U26		1 U26
U027	546:U27	38:U27								444:U27		1 U27
U028	546:U28	38:U28								444:U28		1 U28
U029	546:U29	38:U29								444:U29		1 U29
U029A					5:U29*							1 U29
U030	546:U30	38:U30								444:U30		1 U30
U031	546:U31	38:U31								444:U31		1 U31
U032	546:U32	38:U32								444:U32		1 U32
U032A				247:Ff7								1
U033	546:U33	38:U33								444:U33		1 U33
U034	546:U34	38:U34								444:U34		1 U34
U035	546:U35	38:U35								444:U35		1 U35
U036	546:U36	38:U36								444:U36		1 U36
U037	546:U37	38:U37								444:U37		1 U37
U038	546:U38	38:U38								444:U38		1 U38
U039	546:U39	38:U39								444:U39		1 U39
U040	546:U40	38:U40								444:U40		1 U40

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
U041	546:U41	38:U41								444:U41		1 U41
U042	546:(O30)									443:U109		1 O30
V001	546:V1	39:V1					61:AAc632	57:AAc632	61:AAc632	444:V1		1 V1
V001A	199:200						61:AAc633	57:AAc633	61:AAc633	99:200		1
V001B	194:300						61:AAc634	57:AAc634	61:AAc634	101:300		1
V001C							61:AAc635	57:AAc635	61:AAc635	106:400		1
V001D	201:500						61:AAc636s	57:AAc636	61:AAc636			1
V001E	192:600						61:AAc637s	57:AAc637	61:AAc637	97:600		1
V001F	200:700						61:AAc638s	57:AAc638	61:AAc638	107:700		1
V001G							61:AAc639	57:AAc639	61:AAc639			1
V001H	191:900											1
V001I							61:AAc636					1
V002	546:V2	39:V2								444:V2		1 V2
V002A				247:Ff6								1
V003	546:V3	39:V3								444:V3		1 V3
V004	546:V4	39:V4								444:V4		1 V4
V005	546:V5	39:V5								444:V5		1 V5
V006	546:V6	39:V6								444:V6		1 V6
V007	546:V7	39:V7								444:V7		1 V7
V007A							6:V7*					1 V7A
V007B			95:Ff2									1
V008	546:V8	39:V8								444:V8		1 V8
V009	546:V9	39:V9								444:V9		1 V9
V010	546:V10	39:V10								445:V10		1 V10
V011	546:V11	39:V11								445:V11		1 V11
V011A		39:V11*a										1 V11
V011B		39:V11*a'										1 V11
V011C												1
V012	546:V12	39:V12								445:V12		1 V12
V012A							6:V12*					1 V12
V012B							6:V12**					1 V12
V013	546:V13	39:V13								445:V13		1 V13

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
V014	546:V14	39:V14								445:V14		1 V14
V015	546:V15	39:V15								445:V15		1 V15
V016	546:V16	39:V16								445:V16		1 V16
V017	546:V17	39:V17								445:V17		1 V17
V018	546:V18	39:V18								445:V18		1 V18
V019	546:V19	39:V19								445:V19		1 V19
V020	546:V20	39:V20					60:AAb623	56:AAb623		445:V20		1 V20
V020A	192:20							56:AAb624	60:AAb624	100:20		1
V020B	201:30						60:AAb625	56:AAb625	60:AAb625	99:30		1
V020C	198:40							56:AAb626		107:40		1
V020D	197:50						60:AAb627	56:AAb627	60:AAb627	107:50		1
V020E	194:60						60:AAb628	56:AAb628	60:AAb628	101:60		1
V020F	192:70						60:AAb629	56:AAb629	60:AAb629			1
V020G	196:80						60:AAb630	56:AAb630	60:AAb630	102:80		1
V020H							60:AAb631	56:AAb631	60:AAb631			1
V020I	191:20						60:AAb624			97:20		1
V020J	194:30									106:30		1
V020K							60:AAb626		60:AAb626			1
V020L	191:50											1
V021	546:V21	39:V21								445:V21		1 V21
V022	546:V22	39:V22								445:V22		1 V22
V023	546:V23	39:V23								445:V23		1 V23
V023A				247:V23*	6:V23*							1
V024	546:V24	39:V24								445:V24		1 V24
V025	546:V25	39:V25								445:V25		1 V25
V026	546:V26	39:V26								445:V26		1 V26
V027	546:V27	39:V27								445:V2[7]		1 V27
V028	546:V28	39:V28								445:V28		1 V28
V028A					6:V28*							1 V71
V029	546:V29	39:V29								445:V29		1 V29
V029A				247:V29*	6:V29*							1 V81
V030	546:V30	39:V30								445:V30		1 V30

UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
V030A		39:V30*										1
V031	546:V31	39:V31								445:V31		1 V31
V031A	546:V31*	39:V31*								445:V31a		1 V31
V032	546:V32	39:V32								445:V32		1 V32
V033	546:V33	39:V33								445:V33		1 V33
V033A							8-4:10:299					1 V33
V034	546:V34	39:V34								445:V34		1 V34
V035	546:V35	39:V35								445:V35		1 V35
V036	546:V36	39:V36								445:V36		1 V36
V037	546:V37	39:V37								445:V37		1 V37
V037A					6:V37*							1 V37
V038	546:V38	39:V38								445:V38		1 V38
V039	546:V39			247:V39	6:V39*					445:V39		1 V39
V040	191:10						63:BB665	60:BB665	62:BB665			1 V20
V040A	201:20						64:BB666	60:BB666	62:BB666			1
W001	547:W1	40:W1								445:W1		1 W1
W002	547:W2	40:W2								446:W2		1 W2
W003	547:W3	40:W3								446:W3		1 W3
W003A		40:W3*										1 W3
W004	547:W4	40:W4								446:W4		1 W4
W005	547:W5	40:W5								446:W5		1 W5
W006	547:W6	40:W6								446:W6		1 W6
W007	547:W7	40:W7								446:W7		1 W7
W008	547:W8	40:W8								446:W8		1 W8
W009	547:W9	40:W9								446:W9		1 W9
W009A					6:W9*							1 W9
W010	547:W10	40:W10								446:W10		1 W1
W010A	547:W10*				6:W10*					446:W10A		1 W1
W011	547:W11	40:W11								446:W11		1 W1
W012	547:W12	40:W12								446:W12		1 W1
W013	547:W13	40:W13								446:W13		1 W1
W014	547:W14	40:W14								446:W14		1 W1

UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
W014A		40:W14*										1
W015	547:W15	40:W15								446:W15		1 W1
W016	547:W16	40:W16								446:W16		1 W1
W017	547:W17	40:W17								446:W17		1 W1
W017A					6:W18*					446:W17a		1
W018	547:W18	40:W18								446:W18		1 W1
W018A										446:W18a		1 W1
W019	547:W19	40:W19								446:W19		1 W1
W020	547:W20	40:W20								446:W20		1 W2
W021	547:W21	40:W21								446:W21		1 W2
W022	547:W22	40:W22								446:W22		1 W2
W023	547:W23	40:W23								446:W23		1 W2
W024	547:W24	40:W24								446:W24		1 W2
W024A		40:W24*										1 W2
W025	547:W25	40:W25								446:W25		1 W2
X001	547:X1	41:X1								446:X1		1 X1
X002	547:X2	41:X2								446:X2		1 X2
X003	547:X3	41:X3								446:X3		1 X3
X004	547:X4	41:X4								447:X4		1 X4
X004A		41:X4*								447:X4a		1 X4
X005	547:X5	41:X5								447:X5		1 X5
X006	547:X6	41:X6								447:X6		1 X6
X006A		41:X6*										1
X007	547:X7	41:X7								447:X7		1 X7
X008	547:X8	41:X8								447:X8		1 X8
Y001	547:Y1	41:Y1								447:Y1		1 Y1
Y001A	533:Y1(v)	41:Y1(v)								447:Y1(v)		1 Y1V
Y002	547:Y2	41:Y2								447:Y2		1 Y2
Y003	547:Y3	41:Y3								447:Y3		1 Y3
Y004	547:Y4	41:Y4								447:Y4		1 Y4
Y005	547:Y5	41:Y5								447:Y5		1 Y5
Y006	547:Y6	41:Y6								447:Y6		1 Y6

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
Y007	547:Y7	41:Y7								447:Y7		1 Y7
Y008	547:Y8	41:Y8								447:Y8		1 Y8
Z001	547:Z1	42:Z1					59:AAa614	55:AAa614	59:AAa614	447:Z1		1 Z1
Z002	547:Z2	42:Z2								447:Z2		1 Z2
Z003	547:Z3	42:Z3								447:Z3		1 Z3
Z003A		42:Z2 also								447:Z3a		1 Z3A
Z004	547:Z4	42:Z4								447:Z4		1 Z4
Z004A	536:Z4v											1
Z005	547:Z5	42:Z5								447:Z5		1 Z5
Z005A		42:Z5*										1 Z5A
Z006	547:Z6	42:Z6								447:Z6		1 Z6
Z007	547:Z7	42:Z7								447:Z7		1 Z7
Z008	547:Z8	42:Z8								447:Z8		1 Z8
Z009	547:Z9	42:Z9								447:Z9		1 Z9
Z010	547:Z10	42:Z10								447:Z10		1 Z10
Z011	547:Z11	42:Z11								447:Z11		1 Z11
Z012			95:Z12									1 Z12
Z013					6:Z13							1
Z014			95:Ff1		6:Ff1							1
Z015										447:Z1		1 Z1
Z015A	192:2						59:AAa615	55:AAa615	59:AAa615	447:Z49		1
Z015B		42:Z2*					59:AAa616	55:AAa616	59:AAa616	447:Z2(a)		1 Z2
Z015C	191:4						59:AAa617	55:AAa617	59:AAa617	97:4		1
Z015D	192:5									97:5		1
Z015E	192:6									102:6		1
Z015F	191:7									97:7		1
Z015G	191:8									102:8		1
Z015H	197:9						59:AAa622	55:AAa622				1
Z015I	191:5						59:AAa618	55:AAa618	59:AAa618	447:Z(2d)		1
Z016							63:BB656					1 Z16
Z016A	191:2						63:BB657	59:BB65[7]	61:BB657	103:2		1
Z016B							8-4:5:654	64:BB658	60:BB658	62:BB658		1 Z3E

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
Z016C	191:4						64:BB659	60:BB659	62:BB659			1
Z016D	191:5						64:BB660	60:BB660	62:BB660			1
Z016E							64:BB661	60:BB661	62:BB661			1
Z016F							64:BB662	60:BB662	62:BB662	103:7		1
Z016G	191:8						64:BB663	60:BB663	62:BB663			1
Z016H								60:BB664				1
ZA001	547:Aa1	43:Aa1								448:Aa1		1 AA1
ZA002	547:Aa2	43:Aa2								448:Aa2		1 AA2
ZA003	547:Aa3	43:Aa3								448:Aa3		1 AA3
ZA004	547:Aa4	43:Aa4								448:Aa4		1 AA4
ZA005	547:Aa5	43:Aa5								448:Aa5		1 AA5
ZA006	547:Aa6	43:Aa6								448:Aa6		1 AA6
ZA007	547:Aa7	43:Aa7								448:Aa7		1 AA7
ZA007A		43:Aa7*										1 AA7
ZA007B				247:Aa7**	6:Aa7**							1 AA7
ZA008	547:Aa8	43:Aa8								448:Aa8		1 AA8
ZA009	547:Aa9	43:Aa9								448:Aa9		1 AA9
ZA010	547:Aa10	43:Aa10								448:Aa10		1 AA10
ZA011	547:Aa11	43:Aa11								448:Aa11		1 AA11
ZA012	547:Aa12	43:Aa12								448:Aa12		1 AA12
ZA013	547:Aa13	43:Aa13								448:Aa13		1 AA13
ZA014	547:Aa14	43:Aa14								448:Aa14		1 AA14
ZA015	547:Aa15	43:Aa15								448:Aa15		1 AA15
ZA016	547:Aa16	43:Aa16								448:Aa16		1 AA16
ZA017	547:Aa17	43:Aa17								448:Aa17		1 AA17
ZA018	547:Aa18	43:Aa18								448:Aa18		1 AA18
ZA019	547:Aa19	43:Aa19								448:Aa19		1 AA19
ZA020	547:Aa20	43:Aa20								448:Aa20		1 AA20
ZA021	547:Aa21	43:Aa21								448:Aa21		1 AA21
ZA022	547:Aa22	43:Aa22								448:Aa22		1 AA22
ZA023	546:Aa23	43:Aa23								448:Aa23		1 AA23
ZA024	546:Aa24	43:Aa24								448:Aa24		1 AA24

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UniKemet database of Egyptian Hieroglyphs for UCS encoding												
Name	G1957	G1928	G1929	G1931	G1953	GITB	M1909	M1927	M1936	A1999	F1962	Amd C20
ZA025	547:Aa25	43:Aa25								448:Aa25		1 AA25
ZA026	547:Aa26	43:Aa26								448:Aa26		1 AA26
ZA027	547:Aa27	43:Aa27								448:Aa27		1 AA27
ZA028	547:Aa28	43:Aa28								448:Aa28		1 AA28
ZA029	547:Aa29	43:Aa29								448:Aa29		1 AA29
ZA030	547:Aa30	43:Aa30								448:Aa30		1 AA30
ZA031	547:Aa31	43:Aa31								448:Aa31		1 AA31
ZA032	546:Aa32	43:Aa32								448:Aa32		1 AA32

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