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

L2/03-327

Doc Type: **Working Group Document**
Title: **Revised proposal to add the Coptic alphabet to the BMP of the UCS**
Source: **NSAI/ICTSCC/SC4, Ireland**
Status: **Member Body Contribution**
Action: **For consideration by JTC1/SC2/WG2 and UTC**
Date: **2003-10-01**

This document requests additional characters to be added to the UCS and contains the proposal summary form. It replaces N2611, and gives additional information about the KHI RO symbol and about the DOUBLE HYPHEN.

A. Administrative

1. Title
Revised proposal to add the Coptic alphabet to the BMP of the UCS.
2. Requester's name
Ireland
3. Requester type (Member body/Liaison/Individual contribution)
Member body contribution.
4. Submission date
2003-10-01
5. Requester's reference (if applicable)
NN2611 (2003-08024), N2444 (2002-05-08)
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)
No, but it is a proposal for a new block of Coptic characters.
Proposed name of script
Coptic
1b. The proposal is for addition of character(s) to an existing block
Yes, one.
1b. Name of the existing block
General punctuation
2. Number of characters in proposal
60 (59 + 1)
3. Proposed category (see section II, Character Categories)
Category A
4a. Proposed Level of Implementation (1, 2 or 3) (see clause 14, ISO/IEC 10646-1: 2000)
Level 1.
4b. Is a rationale provided for the choice?
Yes.
4c. If YES, reference
Spacing characters are proposed.

5a. Is a repertoire including character names provided?
Yes.
5b. If YES, are the names in accordance with the character naming guidelines in Annex L of ISO/IEC 10646-1: 2000?
Yes.
5c. Are the character shapes attached in a legible form suitable for review?
Yes.
6a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?
Michael Everson. TrueType.
6b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:
Michael Everson, Fontographer.
7a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?
Yes, see bibliography below.
7b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?
Yes.
8. 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 below.
9. 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.
Yes, see Unicode properties below.

C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.
Yes. N1658, N2444. UTC has recently acknowledged the need to disunify Coptic from Greek.
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?
Stephen Emmel representing the International Association for Coptic Studies (IACS)
2c. If YES, available relevant documents
N2444
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?
Scholarly, ecclesiastical, and library communities.
4a. The context of use for the proposed characters (type of use; common or rare)
Characters are used to write the Coptic language.
4b. Reference
See below.
5a. Are the proposed characters in current use by the user community?
Yes.
5b. If YES, where?
By scholars, ecclesiastical researchers, Coptic Christians, and librarians.
6a. After giving due considerations to the principles in Principles and Procedures document (a WG 2 standing document) must the proposed characters be entirely in the BMP?
Yes.
6b. If YES, is a rationale provided?
Yes.
6c. If YES, reference
Accordance with the Roadmap. Other Coptic characters are encoded in the Greek and Coptic block.
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?
Yes, they should be encoded in a single block as presented here.

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?
Yes.
8b. If YES, is a rationale for its inclusion provided?
Yes.
8c. If YES, reference
Coptic characters are similar to, but not identical to, Greek characters, and Copticists need to distinguish the two in plain text.
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?
Yes.
10b. If YES, is a rationale for its inclusion provided?
Yes.
10c. If YES, reference
The more generic U+2627 CHI RHO must be considered to be a logotype derived from two Greek letters; the KHI RO proposed here is derived from two Coptic letters, and is used in Coptic text.
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)?
Yes.
11b. If YES, is a rationale for such use provided?
Yes.
11c. If YES, reference
Combining diacritical marks.
12a. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?
No.
12b. If YES, reference
13a. Does the proposal contain characters with any special properties such as control function or similar semantics?
No.
13b. If YES, describe in detail (include attachment if necessary)
14a. Does the proposal contain any Ideographic compatibility character(s)?
No.
14b. If YES, is the equivalent corresponding unified ideographic character(s) identified?
14c. If YES, reference

D. Proposal

On foot of the arguments given in N2444, the UTC and WG2 have decided to disunify the Coptic script from the Greek script. Currently the UCS encodes 7 Coptic letters (14 characters with the casing pairs); this proposal adds 26 letters (52 characters with the casing pairs), as well as several other characters needed for basic Coptic text processing, including standard logotypes used in Coptic text. It is recognized that there will be further additions required by scholars for special purposes, but the set here will allow basic Coptic text processing of, for instance, the Gospel of Thomas and other important Coptic texts. The set proposed here is the *core character set* for Coptic. (Additional characters include, at least, alphabetical characters representing the sounds in Old Nubian, namely /dʒ/, /ŋ/, /ɲ/, /w/. There are also additional script-specific symbols.)

Combining characters

A number of generic characters are used in Coptic. The diaeresis (U+ 0308 ¨) can be used over ⲓ and ⲩ in syllable-initial position; the apostrophe (U+2019 ’) is used to indicate the end of phonological words and clitics; the circumflex (U+0302 ˆ) is used in post-seventh century texts on vowels which form independent syllables. According to Fossey 1948, the acute accent (U+0301 ´) can be used to indicate stress; likely this is a didactic use in modern editions.

A special combining mark called the *jinkim* is used in Coptic. The *jinkim* indicates the syllabic pronunciation of a character, that is, a consonant pronounced with a reduced vowel: so ⲥ̄ⲛ̄ is pronounced

[sᵉn]. Coptic scribes treated the *jinkim* differently: in Sahidic, it looks like a macron; in Akhmimic (sometimes Fayumic), it looks like a grave; in Bohairic, it looks like a dot above. At this time we accept the proposal to unify these with macron (U+ 0304 ¯), grave (U+ 0300 ̀), and dot above (U+ 0307 ̇). It may be the case that because of monofont issues with Greek varia or Latin macron that this may prove impractical, but at this time we are only proposing to add the core character set. We expect that the UTC and WG2 will look as favourably on an eventual disunification of the *jinkim*s from the other combining accents as they have for the disunification of Coptic letters from Greek letters, if Copticists find they have the same problems.

Punctuation
A number of punctuation characters are used in Coptic. Several of these are generic punctuation characters: FULL STOP, COLON, SEMICOLON (= GREEK QUESTION MARK) and MIDDLE DOT (= GREEK ANO TELEIA) are used, and in edited texts quotation marks are used. A COPTIC FULL STOP ⳹ can be used. In some didactic texts, hyphen is distinguished from a special oblique double hyphen ⸗ as can be seen in the samples below. This character has been observed in use in other scripts. We believe it should be encoded in the General Punctuation block. It forms a part of *this* proposal; we believe the evidence here is strong enough to encode it at U+2055, and we encourage UTC and WG2 not to wait for "another proposal".

Numerals
Numerals are indicated with letters of the alphabet, as in Greek; sometimes COMBINING OVERLINE U+0305 is used with them. The GREEK LOWER NUMERAL SIGN U+0375 or the COMBINING DOUBLE OVERLINE U+033F can be used to indicate multiples of 1000, so ⲁ = 1, ⲁ͵ or ⲁ͠ = 1000; ⲁ͵ⲱ͠ⲡⲏ = 1888. The GREEK NUMERAL SIGN U+0374 is used for fractions, so ⲥ′ = ⅓, though ½ is indicated by the symbol ⲋ. See figure 11.

Abbreviations
The COMBINING OVERLINE U+0305 is also used to indicate abbreviations: ⲡⲛⲁ̄ for ⲡⲛⲉⲩⲙⲁ.

Additional symbols
In dates, the Diocletan era is indicated with a ⳺ *mi ro* or ⳻ *khi ro* (either originally derived from the Greek χρόνος μαρτύρων 'time of martyrs'). These are conventional symbols which cannot be algorithmically decomposed. The latter must not be unified with U+2627 CHI RHO because the CHI RHO is a ligature of Greek CHI and Greek RHO, and these have been disunified from Coptic KHI and Coptic RO. Therefore it is only logical (as well as necessary for the stated monofont requirement for Greek and Coptic), for the Coptic KHI RO to be likewise disunified. See figures 15 and 16 below for more information. Note the use of ⲣ RO WITH STROKE as a standard abbreviation: ⲥⲣⲟⲥ = ⲥⲧⲁⲩⲣⲟⲥ 'cross'; it is not a ligature of *ⲧⲁⲩⲣ., though it is probably an original ligature of the two letters *tau ro*.

Character names.
Transliterated character names taken from Coptic dialects as given in Crum are used for the Coptic letters. A chart showing these and other variants is given below. Note that we have specified five columns for Coptic. It is known that there will be more than five *non-core* additions to this script which await further study.

Unicode Character Properties

```
2055;DOUBLE HYPHEN;Pd;0;ON;;;;;N;;;;;
2C80;COPTIC CAPITAL LETTER ALFA;Lu;0;L;;;;;N;;;2CA0;
2C81;COPTIC CAPITAL LETTER VIDA;Lu;0;L;;;;;N;;;2CA1;
2C82;COPTIC CAPITAL LETTER GAMMA;Lu;0;L;;;;;N;;;2CA2;
2C83;COPTIC CAPITAL LETTER DALDA;Lu;0;L;;;;;N;;;2CA3;
2C84;COPTIC CAPITAL LETTER EIE;Lu;0;L;;;;;N;;;2CA4;
2C85;COPTIC CAPITAL LETTER SOU;Lu;0;L;;;;;N;;;2CA5;
2C86;COPTIC CAPITAL LETTER ZATA;Lu;0;L;;;;;N;;;2CA6;
2C87;COPTIC CAPITAL LETTER HATE;Lu;0;L;;;;;N;;;2CA7;
2C88;COPTIC CAPITAL LETTER THETHE;Lu;0;L;;;;;N;;;2CA8;
2C89;COPTIC CAPITAL LETTER IAUDA;Lu;0;L;;;;;N;;;2CA9;
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2C8A;COPTIC CAPITAL LETTER KAPA;Lu;0;L;;;;;N;;;2CAA;
2C8B;COPTIC CAPITAL LETTER LAULA;Lu;0;L;;;;;N;;;2CAB;
2C8C;COPTIC CAPITAL LETTER MI;Lu;0;L;;;;;N;;;2CAC;
2C8D;COPTIC CAPITAL LETTER NI;Lu;0;L;;;;;N;;;2CAD;
2C8E;COPTIC CAPITAL LETTER KSI;Lu;0;L;;;;;N;;;2CAE;
2C8F;COPTIC CAPITAL LETTER O;Lu;0;L;;;;;N;;;2CAF;
2C90;COPTIC CAPITAL LETTER PI;Lu;0;L;;;;;N;;;2CB0;
2C91;COPTIC CAPITAL LETTER RO;Lu;0;L;;;;;N;;;2CB1;
2C92;COPTIC CAPITAL LETTER SIMA;Lu;0;L;;;;;N;;;2CB2;
2C93;COPTIC CAPITAL LETTER TAU;Lu;0;L;;;;;N;;;2CB3;
2C94;COPTIC CAPITAL LETTER UA;Lu;0;L;;;;;N;;;2CB4;
2C95;COPTIC CAPITAL LETTER FI;Lu;0;L;;;;;N;;;2CB5;
2C96;COPTIC CAPITAL LETTER KHI;Lu;0;L;;;;;N;;;2CB6;
2C97;COPTIC CAPITAL LETTER PSI;Lu;0;L;;;;;N;;;2CB7;
2C98;COPTIC CAPITAL LETTER OOU;Lu;0;L;;;;;N;;;2CB8;
2C99;COPTIC CAPITAL LETTER AKHMIMIC KHEI;Lu;0;L;;;;;N;;;2CB9;
2C9A;COPTIC CAPITAL LETTER RO WITH STROKE;Lu;0;L;;;;;N;;;2CBA;
2CA0;COPTIC SMALL LETTER ALFA;Ll;0;L;;;;;N;;;2C80;;2C80
2CA1;COPTIC SMALL LETTER VIDA;Ll;0;L;;;;;N;;;2C81;;2C81
2CA2;COPTIC SMALL LETTER GAMMA;Ll;0;L;;;;;N;;;2C82;;2C82
2CA3;COPTIC SMALL LETTER DALDA;Ll;0;L;;;;;N;;;2C83;;2C83
2CA4;COPTIC SMALL LETTER EIE;Ll;0;L;;;;;N;;;2C84;;2C84
2CA5;COPTIC SMALL LETTER SOU;Ll;0;L;;;;;N;;;2C85;;2C85
2CA6;COPTIC SMALL LETTER ZATA;Ll;0;L;;;;;N;;;2C86;;2C86
2CA7;COPTIC SMALL LETTER HATE;Ll;0;L;;;;;N;;;2C87;;2C87
2CA8;COPTIC SMALL LETTER THETHE;Ll;0;L;;;;;N;;;2C88;;2C88
2CA9;COPTIC SMALL LETTER IAUDA;Ll;0;L;;;;;N;;;2C89;;2C89
2CAA;COPTIC SMALL LETTER KAPA;Ll;0;L;;;;;N;;;2C8A;;2C8A
2CAB;COPTIC SMALL LETTER LAULA;Ll;0;L;;;;;N;;;2C8B;;2C8B
2CAC;COPTIC SMALL LETTER MI;Ll;0;L;;;;;N;;;2C8C;;2C8C
2CAD;COPTIC SMALL LETTER NI;Ll;0;L;;;;;N;;;2C8D;;2C8D
2CAE;COPTIC SMALL LETTER KSI;Ll;0;L;;;;;N;;;2C8E;;2C8E
2CAF;COPTIC SMALL LETTER O;Ll;0;L;;;;;N;;;2C8F;;2C8F
2CB0;COPTIC SMALL LETTER PI;Ll;0;L;;;;;N;;;2C90;;2C90
2CB1;COPTIC SMALL LETTER RO;Ll;0;L;;;;;N;;;2C91;;2C91
2CB2;COPTIC SMALL LETTER SIMA;Ll;0;L;;;;;N;;;2C92;;2C92
2CB3;COPTIC SMALL LETTER TAU;Ll;0;L;;;;;N;;;2C93;;2C93
2CB4;COPTIC SMALL LETTER UA;Ll;0;L;;;;;N;;;2C94;;2C94
2CB5;COPTIC SMALL LETTER FI;Ll;0;L;;;;;N;;;2C95;;2C95
2CB6;COPTIC SMALL LETTER KHI;Ll;0;L;;;;;N;;;2C96;;2C96
2CB7;COPTIC SMALL LETTER PSI;Ll;0;L;;;;;N;;;2C97;;2C97
2CB8;COPTIC SMALL LETTER OOU;Ll;0;L;;;;;N;;;2C98;;2C98
2CB9;COPTIC SMALL LETTER AKHMIMIC KHEI;Ll;0;L;;;;;N;;;2C99;;2C99
2CBA;COPTIC SMALL LETTER RO WITH STROKE;Ll;0;L;;;;;N;;;2C9A;;2C9A
2CBB;COPTIC SYMBOL MI RO;So;0;N;;;;;N;;;;;
2CBC;COPTIC SYMBOL KHI RO;So;0;N;;;;;N;;;;;
2CBD;COPTIC SYMBOL KHRISTOS;So;0;N;;;;;N;;;;;
2CCE;COPTIC FULL STOP;Po;0;CS;;;;;N;;;;;
2CCF;COPTIC FRACTION ONE HALF;No;0;ON;;;;1/2;N;;;;;
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Figures

THE COPTIC ALPHABET.

	Names.	Values.	Coptic.	Greek Uncials.		Names.	Values.	Coptic.
1	Alpha	*a*	ⲁ Ⲁ	Α	17	Pi	*p, b*	ⲡ Ⲡ
2	Vida	*b, v*	ⲃ Ⲃ	Β	18	Ro	*r*	ⲣ Ⲣ
3	Gamma	*g*	ⲅ Ⲅ	Γ	19	Sima	*s*	ⲥ Ⲥ
4	Dalda	*d*	ⲇ Ⲇ	Δ	20	Tau	*t, d*	ⲧ Ⲧ
5	Ei	*e*	ⲉ Ⲉ	Ε	21	He	*ü*	ⲩ Ⲩ
6	So	*6*	ⲋ Ⲋ	Ϛ	22	Phi	*ph*	ⲫ Ⲫ
7	Zita	*dz*	ⲍ Ⲍ	Ζ	23	Khi	*kh*	ⲭ Ⲭ
8	Ita	*e, ī*	Ⲏ ⲏ	Η	24	Psi	*ps*	ⲯ Ⲯ
9	Thita	*th*	ⲑ Ⲑ	Θ	25	Au	*ū, ō*	ⲱ Ⲱ
10	Jauta	*i*	Ⲓ ⲓ	Ι	26	Shei	*sh*	ⲱ Ⲱ
11	Kapa	*k*	Ⲕ ⲕ	Κ	27	Fei	*f*	ⲫ ⲫ
12	Laula	*l*	ⲗ Ⲗ	Λ	28	Chei	*ch*	ϧ Ϧ
13	Mi	*m*	Ⲙ ⲙ	Μ	29	Hori	*h*	ϩ Ϩ
14	Ni	*n*	Ⲛ ⲛ	Ν	30	Janjia	*j.g,dzh*	ϫ Ϫ
15	Ksi	*ks*	ⲝ Ⲝ	Ξ	31	Tshima	*tsh*	ϭ Ϭ
16	O	*o*	Ⲟ ⲟ	Ο	32	Ti	*ti*	ϯ Ϯ

Figure 1. The Coptic alphabet, from Taylor 1883.

Die koptischen Buchstaben und ihre Umschreibung:

ⲁ	a	ⲓ	i, j	ⲣ	r	ⲱ	š, sch
ⲃ	b	ⲕ	k	ⲥ	s	ⲫ	f
ⲅ	g	ⲗ	l	ⲧ	t	ϧ, ϭ	ḫ, ch
ⲇ	d	ⲙ	m	ⲩ	u, w, y	ϩ	ḫ, ch
ⲉ	ĕ	ⲛ	n	ⲫ	ph	ϩ	h
ⲍ	z	ⲝ	ks, x	ⲭ	kh, ch	ϫ	č, tsch
ⲏ	ē, ê	ⲟ	ŏ	ⲯ	ps	ϭ	c, kj
ⲑ	th	ⲡ	p	ⲱ	ō, ô	ϯ	ti

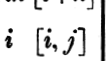
Die Namen der Buchstaben sind nur bohairisch in moderner Form erhalten und lauten nach Worrell (UM 314ff.) folgendermaßen[2]: ⲁ *alfa*, ⲃ *bēda* oder *vēda*, ⲅ *gamma*, ⲇ *dalda*, ⲉ *ēje*, ⲍ *zāda*, ⲏ *hāda*, ⲑ *túte*, ⲓ *jōda*, ⲕ *kabba*, ⲗ *lōla*, ⲙ *mēj*, ⲛ *ni'*, ⲝ *eksi*, ⲟ *ōw*, ⲡ *bej*, ⲣ *rōw*, ⲥ *sámma*, ⲧ *daū*, ⲩ *he*, ⲫ *fīj*, ⲭ *kij*, ⲯ *ébsi*, ⲱ *ō'*, ϣ *schaj*, ϥ *fāj*, ϧ *chāj*, ϩ *hōri*, ϫ *dschandscha*, ϭ *schīma*, ϯ *dīj*, *dī*.

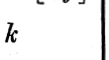
Figure 2. The Coptic alphabet, from Till 1966.

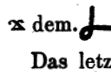
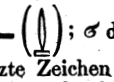
Name	Zeichen	Umschrift und Lautwert
Alfa	Ⲁ ⲁ	*a*
Vida	Ⲃ ⲃ	*b* [*b*, *v*]
Gamma	Ⲅ ⲅ	*g*
Dalda	Ⲇ ⲇ	*d*
Ei	Ⲉ ⲉ	*e* [*ĕ*]
Sīta	Ⲍ ⲍ	*z*
Hîda	Ⲏ ⲏ	*ē*
Tīda	Ⲑ ⲑ	*th* [*t*+*h*]
Jōda	Ⲓ ⲓ	*i* [*i*, *j*]
Kappa	Ⲕ ⲕ	*k*
Lōla	Ⲗ ⲗ	*l*
Mi	Ⲙ ⲙ	*m*
Ni	Ⲛ ⲛ	*n*
Exi	Ⲝ ⲝ	*x* [*ks*]
O	Ⲟ ⲟ	*o* [*ŏ*]
Bi	Ⲡ ⲡ	*p*
Ro	Ⲣ ⲣ	*r*
Sīma	Ⲥ ⲥ	*s*
Dau	Ⲧ ⲧ	*t*
He	Ⲩ ⲩ	*y* [*i*, *y*]
Phi	Ⲫ ⲫ	*ph*[*p*+*h*]
Chi	Ⲭ ⲭ	*kh*[*k*+*h*]
Epsi	Ⲯ ⲯ	*ps*
O	Ⲱ ⲱ	*ō*
Schāi	Ⲫ ⲫ	*š* [*sch*]
Fāi	Ⲫ ⲫ	*f*
Chāi	Ⲯ ⲯ	*h* [*ch*]
Hori	Ⲩ ⲩ	*h*
Dschandscha	Ⲭ ⲭ	*dž*[*dsch*]
Schima	Ⲯ ⲯ	*č* [*g*,*tsch*]
Di	Ⲧ ⲧ	*ti*

Allgemeines. Das Koptische ist die in christlicher Zeit (seit dem 3. Jahrhundert) gesprochene und mit griechischen Buchstaben geschriebene Sprache der Ägypter. Seit dem 16. Jahrhundert ist es vom Vulgärarabischen verdrängt und lebt heute nur noch im bohairischen Dialekt als Kirchensprache fort (ähnlich dem Latein der katholischen Kirche). Der Name dieses letzten Ausläufers der vorher mit Hieroglyphen (siehe Taf. 6) geschriebenen altägyptischen Sprache geht auf arabisch Qobṭ, korrekter Qibṭ = ϩγπτιος (*Αἰγύπτιος*) zurück. Die koptische Sprache, deren Literatur überwiegend biblisch und kirchlich ist, liegt uns in mehreren Dialekten vor, den oberägyptischen des Sahidischen, Achmimischen, Fayumischen, Memphitischen und dem unterägyptischen des Bohairischen (vgl. die unten mitgeteilte Textprobe).

Das Alphabet besteht aus 31 Buchstaben, die von links nach rechts geschrieben werden wie die griechischen, die den Grundbestand des Alphabets bilden. Die letzten 7 Buchstaben sind der demotischen Schrift entnommen, und zwar liegt zugrunde dem

ϣ demot.  ; ϥ demot. ;

ϭ demot.  ; ϩ demot. ;

ϫ dem. ; ϭ dem.  ; ϯ dem.  .

Das letzte Zeichen ϯ ist also keine Ligatur aus ⲧ mit aufgesetztem ⲓ; es drückt den Doppellaut *ti* aus. Der Buchstabe ϭ kommt nur im Bohairischen vor; ihm entspricht im Achmimischen ϩ (aus ϩ mit diakritischem Strich).

Außer den vollen Vokalen und Diphthongen (die im Gegensatz zu den Hieroglyphen mit Hilfe der griechischen Buchstaben geschrieben werden) kennt das Koptische noch einen unbestimmten »Murmelvokal« *ĕ*, den man im Sahidischen mit einem über den Konsonanten gesetzten ¯ bezeichnet (im Bohairischen mit ˙, im Fayumischen mit ` [vgl. Textproben]): ⲣ̄ *er*; ⲥ̄ⲛ̄ *sen*.

Die Zahlen, die im Sahidischen meist ausgeschrieben werden, bezeichnet das Bohairische mit den griechischen Buchstabenziffern (darunter ϛ̄ = 6; = 900).

Abkürzungen. Für eine Anzahl häufiger griechischer Wörter (an denen die koptischen Texte reich sind) treten Abkürzungen ein: ⲓ̄ⲥ̄ für ⲓⲏⲥⲟⲩⲥ; ⲭ̄ⲥ̄ für ⲭⲣⲓⲥⲧⲟⲥ; ⲡⲛ̄ⲁ̄ für ⲡⲛⲉⲩⲙⲁ u. a. m.

Worttrennung und Interpunktion. Die einzelnen Wörter werden in den koptischen Handschriften nicht voneinander getrennt. In unseren Drucken trennen wir der Übersichtlichkeit wegen so, daß wir auch in der Schrift zusammenziehen, was sprachlich als ein Ganzes aufzufassen ist, dessen einzelne Bestandteile dann noch durch Bindestriche getrennt werden können.

Als Interpunktionszeichen kommen in koptischen Handschriften Punkt ., Doppelpunkt :, satztrennendes ⁘ u. ä. vor. Die neueren Drucke gebrauchen die griechischen Interpunktionen.

Sprachprobe: Jesaja 5, 18 (in drei Dialekten mit allen Lesezeichen).

Sahidisch: ⲟⲩⲟⲓ ⲛ̄ⲛⲉⲧⲥⲱⲧⲙ ⲛ̄ⲛⲉⲩⲛⲟⲩϩⲉ ⲛ̄ⲟⲉ ⲛ̄ⲟⲩⲛⲟⲩⲩ ⲉϥϣⲟⲓ ⲁⲩⲱ ⲛ̄ⲩⲉⲧⲁⲛⲟⲙⲓⲁ ⲛ̄ⲟⲉ ⲛ̄ⲟⲩⲙⲟⲩⲥ ⲛ̄ⲛⲁϩⲏⲉϥ ⲛ̄ϩⲁϩⲥⲉ.

Fayumisch: ⲟⲩⲉⲓ ⲓⲛⲉⲧⲥⲱⲙ ⲓⲛⲉⲩⲛⲁϩⲓ ⲓⲧϩⲙ ⲛ̄ⲛⲟⲩⲛⲟⲩϩ ⲉϥϣⲟⲩ ⲁⲩⲱ ⲛⲉⲩⲁⲛⲟⲙⲓⲁ ⲓⲧϩⲙ ⲙ̀ⲙⲟⲩⲥ ⲛ̀ⲧⲉ ⲟⲩⲛⲉϩⲏⲉϥ ⲛ̀ϩⲏⲉⲥⲉ.

Bohairisch: ⲟⲩⲟⲓ ⲛⲛⲉ ⲉⲧⲥⲱⲕⲓ ⲛⲛⲓⲛⲟϩⲓ ⲛⲱⲟⲩ ⲙ̀ⲫⲣⲏϯ ⲛⲟⲩⲛⲟϩ ⲉϥϣⲛⲟⲩ ⲛⲉⲙ ⲛⲓⲁⲛⲟⲙⲓⲁ ⲙ̀ⲫⲣⲏϯ ⲙ̀ⲡⲥⲱⲕ ⲙ̀ⲫⲛⲁϩⲏⲉϥ ⲛ̀ⲟⲩϩⲁϩⲥⲉ.

Literatur.

Steindorff, Abriß der koptischen Grammatik (Berlin 1921).
Spiegelberg, Koptisches Handwörterbuch (Heidelberg 1921).

Figure 3. The Coptic alphabet, from the Reichsdruckerei 1924. The three forms of the *jinkim* are shown, as is the sentence divider.

TABLE 22.10: *The Sahidic Coptic Alphabet*

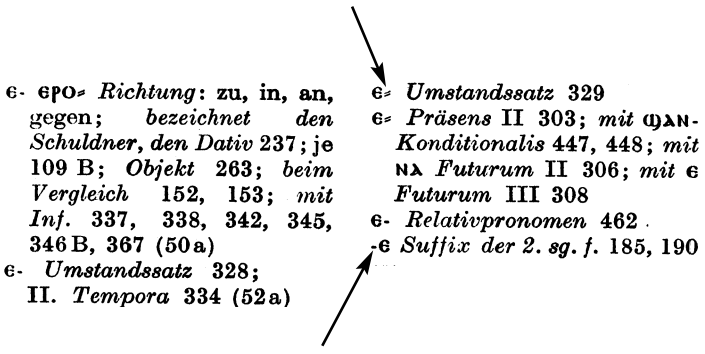
Letter	*Transcription*	*Phonetic Value*	*Name*[a]	*Greek/Demotic Source*
ⲁ	a	[a]	alpha	A
ⲃ	v	[v]	vēta	B
ⲅ	k	[k]	kamma	Γ
ⲇ	t	[t]	talta	Δ
ⲉ	e	[e]	ei	E
ⲍ	s	[s]	sata	Z
ⲏ	ē	[e:]	hata	H
ⲑ	th	[th]	thita	Θ
ⲓ	i	[i]	iōta	I
ⲕ	k	[k]	kappa	K
ⲗ	l	[l]	lauta/lole	Λ
ⲙ	m	[m]	mē/me/mi	M
ⲛ	n	[n]	ne	N
ⲝ	ks	[ks]	ksi	Ξ
ⲟ	o	[o]	ou	O
ⲡ	p	[p]	pi	Π
ⲣ	r	[r]	rō	P
ⲥ	s	[s]	sēmma	Σ
ⲧ	t	[t]	tau	T
ⲩ	u	[u]	he/ue	Y
ⲫ	ph	[ph]	phi	Φ
ⲭ	kh	[kh]	khi	X
ⲯ	ps	[ps]	psi	Ψ
ⲱ	ō	[o:]	ō	ω
ϣ	š	[ʃ]	šai	ϣ
ϥ	f	[f]	fai	ϥ
ϩ	h	[h]	hori	ϩ
ϫ	ḏ	[ʤ]	ḏanḏia	ϫ
ϭ	q	[q]	qima	ϭ
ϯ	ti	[ti]	ti	ϯ

a. Examples collected in Crum 1939, and cf. Vergote 1973, vol. 1a: 7, citing Worrell 1942; and Kasser 1991.

Figure 4. The Coptic alphabet and names from Ritner 1996.

Let.	Num.		Names	
1	1	Ⲁⲁ	ⲁⲗⲫⲁ	alpha
2	2	Ⲃⲃ	ⲃⲏⲧⲁ, ⲃⲓⲇⲁ	bêta, vida
3	3	Ⲅⲅ	ⲅⲁⲙⲙⲁ	gamma
4	4	Ⲇⲇ	ⲇⲗⲇⲁ, ⲇⲁⲗⲇⲁ	dlda, dalda
5	5	Ⲉⲉ	ⲉⲓ, ⲉⲓⲉ	ei, eie
	6	Ⲋⲋ	ⲥⲟⲟⲩ	soou
6	7	Ⲍⲍ	ⲍⲏⲧⲁ, ⲍⲓⲧⲁ, ⲍⲁⲧⲁ	zêta, zita, zata
7	8	Ⲏⲏ	�overⲏⲧⲁ, ⲏⲧⲁ, overⲧⲁ, overⲁⲧⲉ	hêta, êta, hita, hate
8	9	Ⲑⲑ	ⲑⲏⲧⲁ, ⲑⲓⲧⲁ, ⲑⲉⲑⲉ	thêta, thita, thethe
9	10	Ⲓⲓ	ⲓⲱⲧⲁ, ⲓⲟⲧⲁ, ⲓⲁⲩⲇⲁ	iôta, iota, iauda
10	20	Ⲕⲕ	ⲕⲁⲡⲡⲁ, ⲕⲁⲡⲁ	kappa, kapa
11	30	Ⲗⲗ	ⲗⲁⲩⲇⲁ, ⲗⲁⲩⲗⲁ, ⲗⲟⲗⲉ	lauda, laula, lole
12	40	Ⲙⲙ	ⲙⲏ, ⲙⲉ, ⲙⲓ	mê, me, mi
13	50	Ⲛⲛ	ⲛⲉ, ⲛⲛⲏ, ⲛ	ne, nnê, n
14	60	Ⲝⲝ	ⲝⲓ	ksi
15	70	Ⲟⲟ	ⲟⲩ, ⲟ	ou, o
16	80	Ⲡⲡ	ⲡⲓ	pi
17	100	Ⲣⲣ	ⲣⲱ, overⲣⲟ, ⲣⲟ	rô, hro, ro
18	200	Ⲥⲥ	ⲥⲙⲙⲁ, ⲥⲩⲙⲁ, ⲥⲓⲙⲁ, ⲥⲙⲙⲁ	sêmma, summa, sima, smma
19	300	Ⲧⲧ	ⲧⲁⲩ	tau
20	400	Ⲩⲩ	overⲉ, ⲩⲉ, ⲩⲁ	he, ue, ua
21	500	Ⲫⲫ	ⲫⲓ	phi
22	600	Ⲭⲭ	ⲭⲓ	khi
23	700	Ⲯⲯ	ⲯⲓ	psi
24	800	Ⲱⲱ	ⲱ, ⲁⲩ, ⲱⲟⲩ	ô, au, ôou
25		Ϣϣ	ϣⲁⲓ, ϣⲉⲓ	šai, šei
26	90	Ϥϥ	ϥⲁⲓ, ϥⲉⲓ	fai, fei
27		Ϧϧ	—	[unattested]
28		Ϩϩ	ϩⲉⲓ, ϩⲁⲓ	ẖei, ẖai
29		Ϫϫ	ϫⲟⲣⲓ	hori
30		Ϭϭ	ϭⲁⲛϭⲓⲁ, ϭⲉⲛϭⲉ	janjia, jenje
31		Ϯϯ	ϯⲓⲙⲁ	čima
		Ⲧⲧ	ⲧⲓ, ⲧⲓ, ⲧⲉⲓ, ⲧⲉⲓ, ⲧⲏ, ⲧⲉ	ti, *ti*i, *ti*ei, tei, tê, te
	900	Ⲣⲣ		

Figure 5. The Coptic alphabet. The first column indicates the letter order (for example, PHI is the twenty-first letter of the alphabet) as stated in Crum. The second column gives the numeric value of the letters. Transliterated character names taken from Coptic dialects as given in Crum 2000 are used for the Coptic letters. Note especially that Crum distinguishes AKHMIMIC KHEI, KHEI, and HORI in different entries in his dictionary.



ϵ- ϵρο= *Richtung*: **zu, in, an,** gegen; *bezeichnet den Schuldner, den Dativ* **237**; je **109 B**; *Objekt* **263**; *beim Vergleich* **152, 153**; *mit Inf.* **337, 338, 342, 345, 346 B, 367 (50a)**
ϵ- *Umstandssatz* **328**; **II.** *Tempora* **334 (52a)**

ϵ= *Umstandssatz* **329**
ϵ= *Präsens* **II 303**; *mit* ϣⲁⲛ- *Konditionalis* **447, 448**; *mit* ⲛⲁ *Futurum* **II 306**; *mit* ϵ *Futurum* **III 308**
ϵ- *Relativpronomen* **462**
-ϵ *Suffix der 2. sg. f.* **185, 190**

Figure 6. Sample text from Till's grammar showing the use of the DOUBLE HYPHEN, distinguished from the ordinary single hyphen.

(300) Das koptische Alphabet im Vergleich zur griechischen Unzialschrift

Zahlen-wert	Laut-wert	Name	Koptisch	Griech. Unziale
1	*a*	*alfa*	ⲁ	ⲁ
2	*b, v*	*vēda*	ⲃ	ⲃ
3	*g*	*gamma*	ⲅ	ⲅ
4	*d*	*dalda*	ⲇ	ⲇ
5	*ē*	*ēje*	ⲉ	ⲉ
6	–	*sou*	ⲋ	ⲋ
7	*z*	*zāda*	ⲍ	ⲍ
8	*ē*	*hāda*	ⲏ	ⲏ
9	*t-h*	*tutte*	ⲑ	ⲑ
10	*j, i*	*jōda*	ⲓ	ⲓ
20	*k*	*kabba*	ⲕ	ⲕ
30	*l*	*lōla*	ⲗ	ⲗ
40	*m*	*mēj*	ⲙ	ⲙ
50	*n*	*ni*	ⲛ	ⲛ
60	*ks*	*eksi*	ⲝ	ⲝ
70	*ŏ*	*ou*	ⲟ	ⲟ
80	*p*	*bej*	ⲡ	ⲡ
100	*r*	*rou*	ⲣ	ⲣ
200	*s*	*samma*	ⲥ	ⲥ
300	*t*	*daū*	ⲧ	ⲧ
400	*i*	*he*	ⲩ	ⲩ
500	*p-h*	*fīj*	ⲫ	ⲫ
600	*k-h*	*kij*	ⲭ	ⲭ
700	*ps*	*ebsi*	ⲯ	ⲯ
800	*ō*	*ō*	ⲱ	ⲱ
900	–	–	ⲣ̀ⲣ	

Figure 7. Chart showing Coptic with the Greek uncial forms from which they were derived, from Haarmann 1990.

80 10 ⲛⲁⲉⲓ ⲛⲉ ⲛ̄ϣⲁϫⲉ ⲉⲑⲏⲡ̀ ⲉⲛⲧⲁⲓⲥ̄ ⲉⲧⲟⲛϩ·
ϫⲟⲟⲩ ⲁⲩⲱ ⲁϥⲥϩⲁⲓ̈ⲥⲟⲩ ⲛ̄ϭⲓ ⲇⲓⲇⲩⲙⲟⲥ
12 ⲓ̈ⲟⲩⲇⲁⲥ ⲑⲱⲙⲁⲥ (1) ⲁⲩⲱ ⲡⲉϫⲁϥ ϫⲉ ⲡⲉ
ⲧⲁϩⲉ ⲉⲑⲉⲣⲙⲏⲛⲉⲓⲁ ⲛ̄ⲛⲉⲉⲓϣⲁϫⲉ ϥⲛⲁ
14 ϫⲓ ϯⲡⲉ ⲁⲛ ⲙ̄ⲡⲙⲟⲩ· (2) ⲡⲉϫⲉ ⲓⲥ̄ ⲙⲛ̄ⲧⲣⲉϥ̀
ⲗⲟ ⲛ̄ϭⲓ ⲡⲉⲧ̀ϣⲓⲛⲉ ⲉϥ̀ϣⲓⲛⲉ ϣⲁⲛⲧⲉϥ̀
16 ϭⲓⲛⲉ ⲁⲩⲱ ϩⲟⲧⲁⲛ̀ ⲉϥϣⲁⲛϭⲓⲛⲉ ϥⲛⲁ
ϣⲧⲣ̄ⲧⲣ̄ ⲁⲩⲱ ⲉϥϣⲁⲛϣⲧⲟⲣⲧⲣ̄ ϥⲛⲁⲣ̄
18 (blank) ϣⲡⲏⲣⲉ ⲁⲩⲱ ϥⲛⲁⲣ̄
ⲣ̄ⲣⲟ ⲉϫⲙ̄ ⲡⲧⲏⲣϥ (3) ⲡⲉϫⲉ ⲓⲥ̄ ϫⲉ ⲉⲩϣⲁ
20 ϫⲟⲟⲥ ⲛⲏⲧⲛ̄ ⲛ̄ϭⲓ ⲛⲉⲧ̀ⲥⲱⲕ ϩⲏⲧ̀ ⲧⲏⲩⲧⲛ̄
ϫⲉ ⲉⲓⲥ ϩⲏⲏⲧⲉ ⲉⲧ̀ⲙⲛ̄ⲧⲉⲣⲟ ϩⲛ̄ ⲧⲡⲉ ⲉ
22 ⲉⲓⲉ ⲛ̄ϩⲁⲗⲏⲧ̀ ⲛⲁⲣ̄ ϣⲟⲣⲡ̀ ⲉⲣⲱⲧⲛ̄ ⲛ̄ⲧⲉ

Figure 8. Sample text from an edition of the Gospel of Thomas showing use of *jinkim*, diaeresis, apostrophe (drawn as a grave-like stroke), and middle dot.

5. *Accentuation.* L'écriture copte emploie surtout l'accent grave (ou un point) et des traits horizontaux suscrits au-dessus de certaines lettres; c'est pour indiquer qu'une voyelle brève ou auxiliaire ϵ, correspondant à notre *e* accentué ou atone, est sous-entendue par l'écriture.

Dans ce cas, le bohaïrique emploie un accent grave ` (ou un point), au-dessus de la première consonne des mots : ⲙ̀ⲕⲁϩ (ou ⲙ̇ⲕⲁϩ) pour ⲉⲙⲕⲁϩ *ᵉmkah.*

Toutefois, dans le corps du mot, le bohaïrique écrit la voyelle brève ϵ.

Tous les autres dialectes remplacent l'accent ` ou ˙ par un trait horizontal ¯ tracé au-dessus de la première consonne : ⲣ̄ⲛⲟⲃⲉ pour ⲉⲣⲛⲟⲃⲉ *ᵉrnobe.*

Dans le corps du mot, le sa'idique indique aussi l'*e* accentué ou atone par le même trait entre les deux consonnes et au-dessus d'elles : ϩⲙ̄ⲙⲉ pour *hᵉmme;* ⲥⲱⲧⲙ̄ pour *sōtᵉm;* ⲱⲛⲛ̄ϩ pour *ōnᵉh;* ⲉⲡⲉⲕⲣⲙ̄ⲣⲙ̄ pour *epekrᵉmrᵉm.*

Les règles d'accentuation sont souvent hors d'usage, bon nombre de manuscrits n'étant pas accentués.

6. Le trait horizontal suscrit est encore employé :

1° Pour indiquer que certains mots très fréquents, coptes ou grecs, sont écrits en abrégé :

ⲫ̄ⲧ, ⲫ̄ⲧ pour ⲫⲛⲟⲩⲧ « Dieu ». ⲡⲥ̄ pour ⲡⲥⲟⲓⲥ « le Seigneur ».
ⲑ̄ⲥ̄ pour ⲑⲉⲟⲥ « Dieu ». ⲕ̄ⲉ̄ pour ⲕⲩⲣⲓⲉ « Seigneur ».
ⲓ̄ⲥ̄, ⲓ̄ⲏ̄ⲥ̄ pour ⲓⲏⲥⲟⲩⲥ « Jésus ». ⲡⲛ̄ⲁ̄ pour ⲡⲛⲉⲩⲙⲁ « esprit ».
ⲭ̄ⲥ̄ pour ⲭⲣⲓⲥⲧⲟⲥ « Christ ». ⲉ̄ⲑ̄ pour ⲉⲑⲟⲩⲁⲃ « saint ».

Figure 9. Text from Fossey 1948 describing the use of the *jinkim* and the mark of abbreviation.

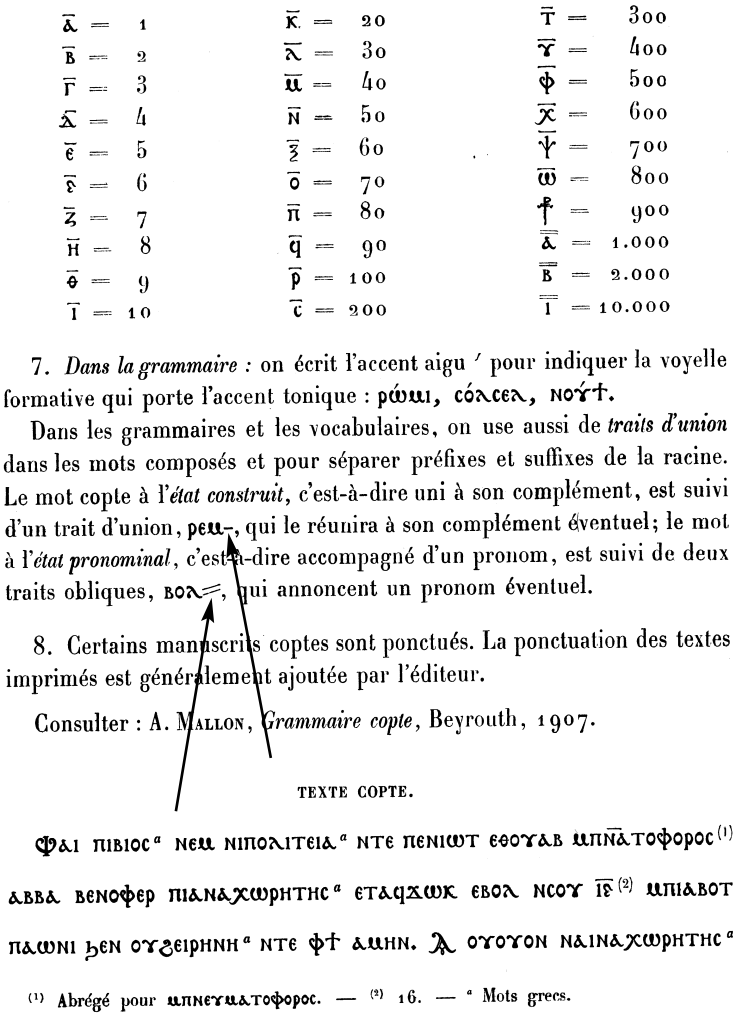
Für häufige nomina sacra werden Kurzschreibungen (Zusammenziehungen) verwendet, die durch einen waagrechten Strich darüber als solche gekennzeichnet sind. Die gebräuchlichsten sind: ΑΛᾹ = ΑΛΥΘΙΑ, ΙC̄ = ΙΗCΟΥC, ΙΗ̄Λ̄ = ΙCΡΑΗΛ, ΘῙΛ̄Η̄Μ̄ = ΘΙΘΡΟΥCΑΛΗΜ, ΠΝ̄Ᾱ = ΠΝΘΥΜΑ, CP̄OC̄ = CΤΑΥΡΟC, C̄Ω̄Ρ̄ = CΩΤΗΡ. X̄C̄ = ΧΡΙCΤΟC, X̄C̄ = ΧΟΘΙC.

Figure 10. Text from Till 1966 showing abbreviations, including the use of COPTIC SMALL LETTER RO WITH STROKE

wöhnlich sind sie durch einen waagrechten Strich darüber als Zahlen gekennzeichnet. Die Zahlwerte sind: Α = 1, Β = 2, Γ = 3, Δ = 4, Ε = 5, Ϛ = 6, Ζ = 7, Η = 8, Θ = 9, Ι = 10, Κ = 20, Λ = 30, Μ = 40, Ν = 50, Ξ = 60, Ο = 70, Π = 80, Ϙ = 90, Ρ = 100, Σ = 200, Τ = 300, Υ = 400, Φ = 500, Χ = 600, Ψ = 700, Ω = 800, Ϡ = 900, Α͵ = 1000 usw.; z. B. Α͵ΩΠ̄Η̄ = 1888.

Die Brüche, deren Zähler mit ganz wenigen Ausnahmen stets 1 ist, werden dadurch bezeichnet, daß der Zahl für den Nenner ein schräger Strich rechts oben beigefügt wird: Γ′ = $\frac{1}{3}$. Ausnahmen: ϝ = $\frac{1}{2}$.

Figure 11. Coptic numerals from Till 1966.



ⲁ̅ = 1	ⲕ̅ = 20	ⲧ̅ = 300
ⲃ̅ = 2	ⲗ̅ = 30	ⲩ̅ = 400
ⲅ̅ = 3	ⲙ̅ = 40	ⲫ̅ = 500
ⲇ̅ = 4	ⲛ̅ = 50	ⲭ̅ = 600
ⲉ̅ = 5	ⲝ̅ = 60	ⲯ̅ = 700
ⲋ̅ = 6	ⲟ̅ = 70	ⲱ̅ = 800
ⲍ̅ = 7	ⲡ̅ = 80	ϡ̅ = 900
ⲏ̅ = 8	ⲣ̅ = 90	ⲁ̿ = 1.000
ⲑ̅ = 9	ⲥ̅ = 100	ⲃ̿ = 2.000
ⲓ̅ = 10	ⲧ̅ = 200	ⲓ̿ = 10.000

7. *Dans la grammaire :* on écrit l'accent aigu ´ pour indiquer la voyelle formative qui porte l'accent tonique : ⲣⲱⲙⲓ, ⲥⲟ̀ⲗⲥⲉⲗ, ⲛⲟⲩ́ⲧ.

Dans les grammaires et les vocabulaires, on use aussi de *traits d'union* dans les mots composés et pour séparer préfixes et suffixes de la racine. Le mot copte à l'*état construit*, c'est-à-dire uni à son complément, est suivi d'un trait d'union, ⲣⲉⲙ-, qui le réunira à son complément éventuel; le mot à l'*état pronominal*, c'est-à-dire accompagné d'un pronom, est suivi de deux traits obliques, ⲃⲟⲗ=, qui annoncent un pronom éventuel.

8. Certains manuscrits coptes sont ponctués. La ponctuation des textes imprimés est généralement ajoutée par l'éditeur.

Consulter : A. Mallon, *Grammaire copte*, Beyrouth, 1907.

TEXTE COPTE.

ⲫⲁⲓ ⲡⲓⲃⲓⲟⲥ[a] ⲛⲉⲙ ⲛⲓⲡⲟⲗⲓⲧⲉⲓⲁ[a] ⲛⲧⲉ ⲡⲉⲛⲓⲱⲧ ⲉⲑⲟⲩⲁⲃ ⲙⲡⲛ̅ⲁⲧⲟⲫⲟⲣⲟⲥ[1]
ⲁⲃⲃⲁ ⲃⲉⲛⲟⲫⲉⲣ ⲡⲓⲁⲛⲁⲭⲱⲣⲏⲧⲏⲥ[a] ⲉⲧⲁϥϫⲱⲕ ⲉⲃⲟⲗ ⲛⲥⲟⲩ ⲓ̅ⲉ̅[2] ⲙⲡⲓⲁⲃⲟⲧ
ⲡⲁⲱⲛⲓ ϧⲉⲛ ⲟⲩϩⲉⲓⲣⲏⲛⲏ[a] ⲛⲧⲉ ϕ† ⲁⲙⲏⲛ. ϯ ⲟⲩⲟⲩⲟⲛ ⲛⲁⲓⲛⲁⲭⲱⲣⲏⲧⲏⲥ[a]

[1] Abrégé pour ⲙⲡⲛⲉⲩⲙⲁⲧⲟⲫⲟⲣⲟⲥ. — [2] 16. — [a] Mots grecs.

Figure 12. Text from Fossey 1948 describing the use of the horizontal stroke over numerals and the double horizontal stroke over thousands. The text also describes the use of the acute accent to indicate tonic accent, and the distinction between hyphen and DOUBLE HYPHEN.

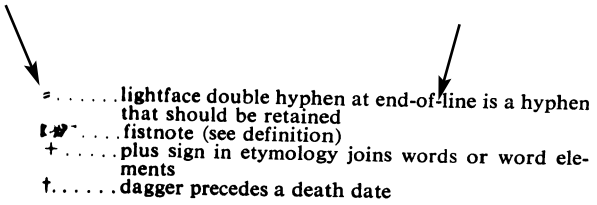


Figure 13. The DOUBLE HYPHEN with its use described in the Webster's Third New International Dictionary.

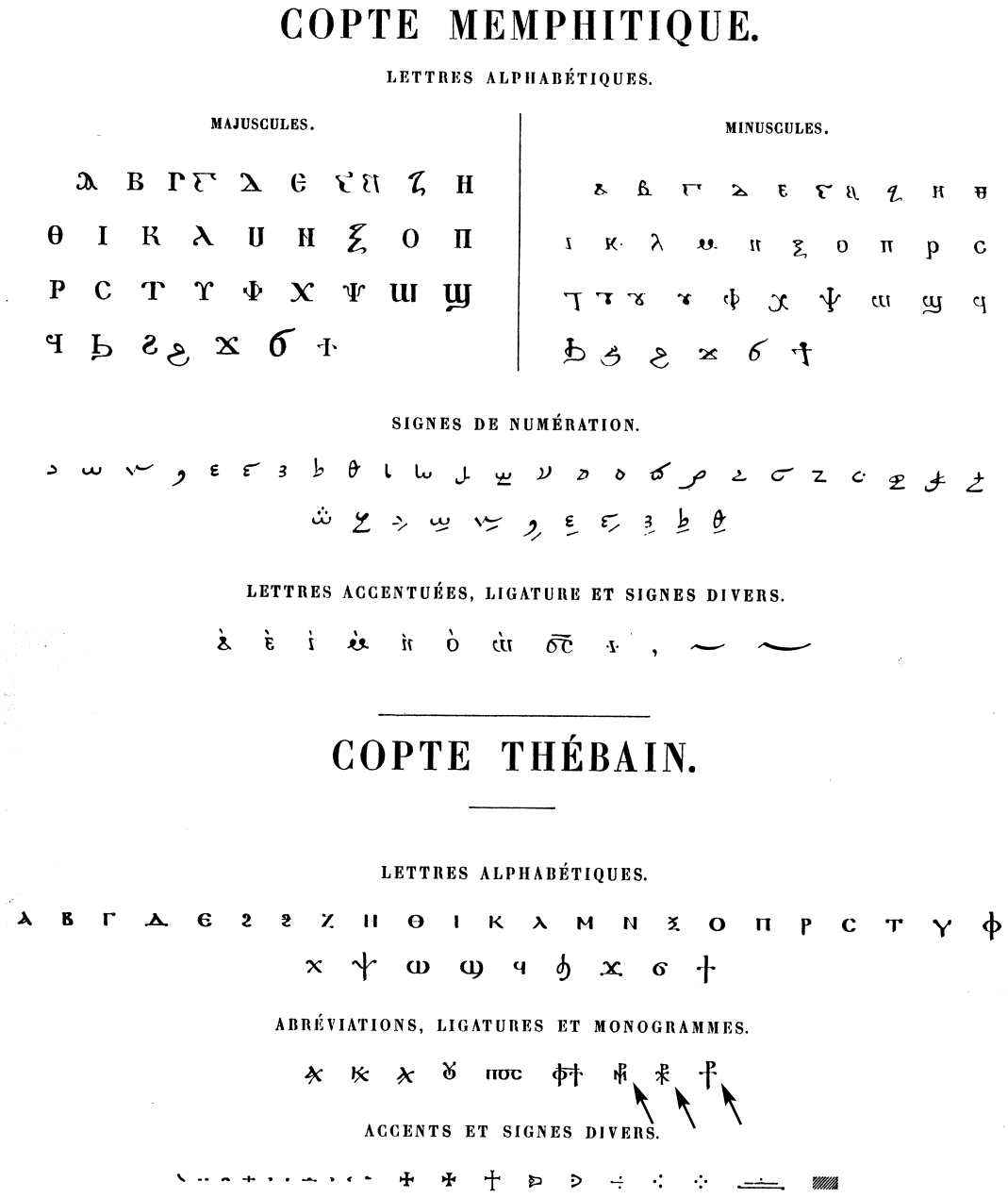
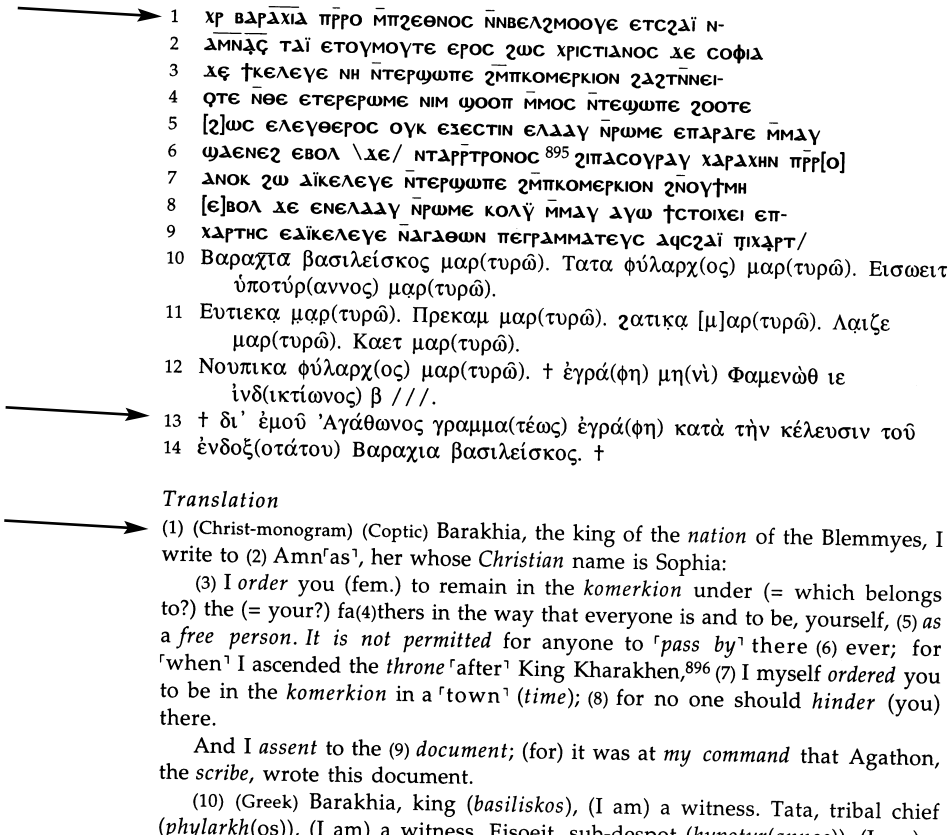


Figure 14. The Coptic alphabet, from the Imprimerie de l'Institut Français d'Archéologie Orientale. Showing the three monograms with RO: MI RO, KHI RO, and TAU RO (called RO WITH STROKE). Further study may indicate that some of the additional characters and symbols shown here should also be added to the Standard.



1 ⳭⲢ ⲃⲁⲣⲁⲭⲓⲁ ⲡⲣⲣⲟ ⲙ̄ⲡϩⲉⲑⲛⲟⲥ ⲛ̄ⲛⲃⲉⲗϩⲙⲟⲟⲩⲉ ⲉⲧⲥϩⲁⲓ ⲛ-
2 ⲁⲙⲛ̄ⲁϩ ⲧⲁⲓ ⲉⲧⲟⲩⲙⲟⲩⲧⲉ ⲉⲣⲟⲥ ϩⲱⲥ ⲭⲣⲓⲥⲧⲓⲁⲛⲟⲥ ⲇⲉ ⲥⲟⲫⲓⲁ
3 ⲇⲉ ϯⲕⲉⲗⲉⲩⲉ ⲛⲏ ⲛ̄ⲧⲉⲣⲱⲡⲉ ϩⲙ̄ⲡⲕⲟⲙⲉⲣⲕⲓⲟⲛ ϩⲁϩⲧⲛ̄ⲛⲉⲓ-
4 ⲣⲧⲉ ⲛ̄ⲑⲉ ⲉⲧⲉⲣⲉⲣⲱⲙⲉ ⲛⲓⲙ ⲱⲟⲟⲡ ⲙ̄ⲙⲟⲥ ⲛ̄ⲧⲉⲱⲡⲉ ϩⲟⲟⲧⲉ
5 [ϩ]ⲱⲥ ⲉⲗⲉⲩⲑⲉⲣⲟⲥ ⲟⲩⲕ ⲉⲓⲉⲥⲧⲓⲛ ⲉⲗⲗⲁⲩ ⲛ̄ⲣⲱⲙⲉ ⲉⲡⲁⲣⲁⲅⲉ ⲙ̄ⲙⲁⲩ
6 ⲱⲁⲉⲛⲉϩ ⲉⲃⲟⲗ \ⲗⲉ/ ⲛⲧⲁⲣⲣ̄ⲧⲣⲟⲛⲟⲥ [895] ϩⲓⲡⲁⲥⲟⲩⲣⲁⲩ ⲭⲁⲣⲁⲭⲏⲛ ⲡⲣⲣ[ⲟ]
7 ⲁⲛⲟⲕ ϩⲱ ⲁⲓⲕⲉⲗⲉⲩⲉ ⲛ̄ⲧⲉⲣⲱⲡⲉ ϩⲙ̄ⲡⲕⲟⲙⲉⲣⲕⲓⲟⲛ ϩⲛ̄ⲟⲩϯⲙⲏ
8 [ⲉ]ⲃⲟⲗ ⲇⲉ ⲉⲛⲉⲗⲁⲩ ⲛ̄ⲣⲱⲙⲉ ⲕⲟⲗⲩ̈ ⲙ̄ⲙⲁⲩ ⲁⲩⲱ ϯⲥⲧⲟⲓⲭⲉⲓ ⲉⲡ-
9 ⲭⲁⲣⲧⲏⲥ ⲉⲁⲓ̈ⲕⲉⲗⲉⲩⲉ ⲛ̄ⲁⲅⲁⲑⲱⲛ ⲡⲉⲅⲣⲁⲙⲙⲁⲧⲉⲩⲥ ⲁⲫⲥϩⲁⲓ̈ ⲏⲓⲭⲁⲣⲧ/
10 Βαραχτα βασιλείσκος μαρ(τυρῶ). Τατα φύλαρχ(ος) μαρ(τυρῶ). Εισωειτ
ὑποτύρ(αννος) μαρ(τυρῶ).
11 Ευτιεκα μαρ(τυρῶ). Πρεκαμ μαρ(τυρῶ). ϩατικα [μ]αρ(τυρῶ). Λαιζε
μαρ(τυρῶ). Καετ μαρ(τυρῶ).
12 Νουπικα φύλαρχ(ος) μαρ(τυρῶ). † ἐγρά(φη) μη(νὶ) Φαμενὼθ ιε
ἰνδ(ικτίωνος) β ///.
13 † δι' ἐμοῦ 'Αγάθωνος γραμμα(τέως) ἐγρά(φη) κατὰ τὴν κέλευσιν τοῦ
14 ἐνδοξ(οτάτου) Βαραχια βασιλείσκος. †

Translation

(1) (Christ-monogram) (Coptic) Barakhia, the king of the *nation* of the Blemmyes, I write to (2) Amn⌜as⌝, her whose *Christian* name is Sophia:

(3) I *order* you (fem.) to remain in the *komerkion* under (= which belongs to?) the (= your?) fa(4)thers in the way that everyone is and to be, yourself, (5) *as* a *free person. It is not permitted* for anyone to ⌜*pass by*⌝ there (6) ever; for ⌜when⌝ I ascended the *throne* ⌜after⌝ King Kharakhen,[896] (7) I myself *ordered* you to be in the *komerkion* in a ⌜town⌝ (*time*); (8) for no one should *hinder* (you) there.

And I *assent* to the (9) *document*; (for) it was at *my command* that Agathon, the *scribe*, wrote this document.

(10) (Greek) Barakhia, king (*basiliskos*), (I am) a witness. Tata, tribal chief (*phylarkh*(os)). (I am) a witness. Eisoeit, sub-despot (*hypotyr*(annos)). (I am)

Figure 15. Sample from Eide et al. 1998. Royal disposition in Coptic and Greek text from Gebelen. The editor, Richard Holton Pierce, informed that the original text gives the KHI RO SYMBOL in line 1 of the Coptic text; it was set with two letters ⳬⲢ because the font had no suitable monogram. The DAGGER is used in line 13 to indicate the Sign of the Cross in the Greek text.

340 Greek document from Gebelen. Acknowledgement of debt.
SB X 10552. Eide-Hägg-Pierce 1984, No. 10.

Greek text

1 ἔχω ἐγὼ [.] Ὡσιαν σοῦ Ὡσε
2 χρυσοῦ [.] νομισμάτια εἴκοσι
3 τέσσερα· γί(νεται) χρ(υσοῦ) νο(μισμάτια) κδ μόνα, καὶ ταῦτα
4 σὺν θ(εῷ) [.]α[....]τισι[..]ρσιν[897] ἐμοῦ καταρχ(ομένου)
5 παρασχῶ σοι ἰγριουεμ[..]
6 ε[.] καὶ [στοιχεῖ μοι]
7 [ὡς] πρόκ(ειται). (sign)
8 † δι' ἐμοῦ Σανσνω(τος) ἐγρ(άφη) μη(νὶ) Φαῶφι ε
ἰνδ(ικτίωνος) δ.

Translation

(1) (Christ-monogram) I have received, I ⌜Osi⌝an, from you, Ose, (2) twenty-four solidi of gold, (3) ma(king) 24 so(lidi) of go(ld) only. And this, (4) G(od) willing, [- - -] when I ⌜come down⌝[898] (5) I shall return to you [- - -] (6) [- - -] And [it is satisfactory to me] (7) [as] above. (sign)

(8) (Sign of the cross) Wri(tten) by me, Sansno(s), on the ⌜5th⌝ of the mo(nth) Phaophi, 4th ind(iction).

Figure 16. Sample from Eide et al. 1998. Acknowledgement of debt in Greek text from Gebelen. The editor informed that the original text gives the CHI RHO symbol in line 1 of the Greek text; it was set with a space left because he did not believe that two letters χϱ was adequate, though the encoded CHI RHO in the Unicode Standard would do for this (though not for the Coptic sample above). The DAGGER is used again in line 8 to indicate the Sign of the Cross.

(earlier apparently they beat a stick; then) [... ^{GIŠ}*p*]*a-a-ḫi-ša UL walḫ*[*zi* ...] *nu=ššan* 1 ^{GIŠ}*pa-aḫ-ḫi-ša* x [... (x x-*anzi*)] / [*maḫḫan=ma=aš*] (var. GIM-[*an* ...]) *parkuišzi* ^{GIŠ}*pa-aḫ-ḫi-ša dān wal~* [(*ḫan*)*zi*] "[...] he does not beat the *p.*; [...] ... thereupon they ... one *p.*; [but] when [he(?)] is pure, they beat the *p.* a second time" Bo 4951 rev. 3-5 (birth rit.), w. dupl. KBo 17.68:2, ed. StBoT 29:124f. On the basis of Bo 4951, Ehelolf in OLZ 32:322f. corrected his earlier reading of the word as ^{GIŠ}"PA"-*aḫ-ḫi-ša* to ^{GIŠ}*pa-aḫ-ḫi-ša*.

^{GIŠ}*p.* in KBo 22.135 i 3 occurs in a rit. performed by a ^{LÚ}AZU "exorcist"; the other refs. occur in birth rituals. In view of the use of *walḫ-* elsewhere for playing percussion instruments, one should consider the possibility that *p.* was a noisemaker of some kind, made (partly?) of wood. Starke (StBoT 31:208) posits a Luwian stem *paḫḫit-* and translates "Trommel" or "Gong."

Sommer/Ehelolf, Pap. (1924) 76; Ehelolf, OLZ 32 (1929) 322f.; Friedrich, HW (1952) 153 ("Stock(?), Gerte(?)"); Beckman, StBoT 29 (1983) 122, 288 (tr. "stick(?)" employed only provisionally).

paḫḫeški- iter. v.; (a hostile action).†

Sum. [ḪAR] = Akk. [*a-r*]*a-rum* "to mill, grind" = Hitt. *ḫūwarzakiuwar* "repeated cursing" (tr. of Akk. *arāru* "to curse") / Sum. [ḪAR] = (Akk.) ⌜*za*⌝-*a-u* "resin(??)" = (Hitt.) *pa-aḫ-ḫe-eš-ki-u-wa-ar* "repeated ...-ing" (a hostile action) / (Sum.) [ḪAR] = (Akk.) ZA-*a-rum* = (Hitt.) *kurur appatar* "initiating hostilities" KBo 1.45 obv.! 2-4 (S^{a} vocab., NH),

Figure 17. Sample from Güterbock and Hoffner 1994 showing the DOUBLE HYPHEN distinguished from the HYPHEN as well as from the EQUALS SIGN.

dā- „nehmen"

iššaz=šmit „aus ihrem Mund" (StBoT 8 I 18′); ***kiššaraz=šmet*** „aus ihren Händen" (StBoT 8 II 38); ***ḫalmašuittaz*** „vom Thronsessel", ***ḫaššaz*** „vom Herd" (StBoT 8 II 39); ^{GIŠ}ŠÚ.A-***kaz=šmit*** „von ihrem Sitz", ***kartaz=šmit*** „aus ihrem Herzen", [*tug*]***gaz=šmit*** „aus ihrem Körper" (KBo XVII 7 + = StBoT 8 Rs.IV? 6′–7′); ^{GIŠ}BANŠUR-***az*** „vom Tisch" (KBo VI 2 II 44′ = HG I, § 47a); A.AB.BA-***az*** „aus dem Meere" (KBo XXII 2 Vs. 4); ^{É}***ḫalentuaz*** „aus dem *ḫ.*-Haus" (KBo XVII 1 I 17′ = StBoT 12 I 33).

Figure 18. Sample from Starke 1977 showing the DOUBLE HYPHEN distinguished from the HYPHEN as well as from the EQUALS SIGN.

TABLE XX - Row 2C: COPTIC

	2C8	2C9	2CA	2CB	2CC
0	ⲁ	ⲡ	ⲁ	ⲡ	
1	ⲃ	ⲣ	ⲃ	ⲣ	
2	ⲥ	ⲥ	ⲥ	ⲥ	
3	ⲇ	ⲧ	ⲇ	ⲧ	
4	ⲉ	ⲩ	ⲉ	ⲩ	
5	ⲋ	ⲫ	ⲋ	ⲫ	
6	ⲍ	ⲭ	ⲍ	ⲭ	
7	ⲏ	ⲯ	ⲏ	ⲯ	
8	ⲑ	ⲱ	ⲑ	ⲱ	
9	ⲓ	ⲳ	ⲓ	ⲳ	
A	ⲕ	ⲵ	ⲕ	ⲵ	
B	ⲗ		ⲗ	ⲷ	
C	ⲙ		ⲙ	ⲹ	
D	ⲛ		ⲛ	ⲻ	
E	ⲝ		ⲝ		⸗
F	ⲟ		ⲟ		ⳁ

2055

=

G = 00
P = 00

TABLE XX - Row 2C: COPTIC

hex	Name
80	COPTIC CAPITAL LETTER ALFA
81	COPTIC CAPITAL LETTER VIDA
82	COPTIC CAPITAL LETTER GAMMA
83	COPTIC CAPITAL LETTER DALDA
84	COPTIC CAPITAL LETTER EIE
85	COPTIC CAPITAL LETTER SOU
86	COPTIC CAPITAL LETTER ZATA
87	COPTIC CAPITAL LETTER HATE
88	COPTIC CAPITAL LETTER THETHE
89	COPTIC CAPITAL LETTER IAUDA
8A	COPTIC CAPITAL LETTER KAPA
8B	COPTIC CAPITAL LETTER LAULA
8C	COPTIC CAPITAL LETTER MI
8D	COPTIC CAPITAL LETTER NI
8E	COPTIC CAPITAL LETTER KSI
8F	COPTIC CAPITAL LETTER O
90	COPTIC CAPITAL LETTER PI
91	COPTIC CAPITAL LETTER RO
92	COPTIC CAPITAL LETTER SIMA
93	COPTIC CAPITAL LETTER TAU
94	COPTIC CAPITAL LETTER UA
95	COPTIC CAPITAL LETTER FI
96	COPTIC CAPITAL LETTER KHI
97	COPTIC CAPITAL LETTER PSI
98	COPTIC CAPITAL LETTER OOU
99	COPTIC CAPITAL LETTER AKHMIMIC KHEI
9A	COPTIC CAPITAL LETTER RO WITH STROKE
9B	(This position shall not be used)
9C	(This position shall not be used)
9D	(This position shall not be used)
9E	(This position shall not be used)
9F	(This position shall not be used)
A0	COPTIC SMALL LETTER ALFA
A1	COPTIC SMALL LETTER VIDA
A2	COPTIC SMALL LETTER GAMMA
A3	COPTIC SMALL LETTER DALDA
A4	COPTIC SMALL LETTER EIE
A5	COPTIC SMALL LETTER SOU
A6	COPTIC SMALL LETTER ZATA
A7	COPTIC SMALL LETTER HATE
A8	COPTIC SMALL LETTER THETHE
A9	COPTIC SMALL LETTER IAUDA
AA	COPTIC SMALL LETTER KAPA
AB	COPTIC SMALL LETTER LAULA
AC	COPTIC SMALL LETTER MI
AD	COPTIC SMALL LETTER NI
AE	COPTIC SMALL LETTER KSI
AF	COPTIC SMALL LETTER O
B0	COPTIC SMALL LETTER PI
B1	COPTIC SMALL LETTER RO
B2	COPTIC SMALL LETTER SIMA
B3	COPTIC SMALL LETTER TAU
B4	COPTIC SMALL LETTER UA
B5	COPTIC SMALL LETTER FI
B6	COPTIC SMALL LETTER KHI
B7	COPTIC SMALL LETTER PSI
B8	COPTIC SMALL LETTER OOU
B9	COPTIC SMALL LETTER AKHMIMIC KHEI
BA	COPTIC SMALL LETTER RO WITH STROKE
BB	COPTIC SYMBOL MI RO
BC	COPTIC SYMBOL KHI RO
BD	COPTIC SYMBOL KHRISTOS
BE	(This position shall not be used)
BF	(This position shall not be used)
C0	(This position shall not be used)
C1	(This position shall not be used)
C2	(This position shall not be used)
C3	(This position shall not be used)
C4	(This position shall not be used)
C5	(This position shall not be used)
C6	(This position shall not be used)
C7	(This position shall not be used)
C8	(This position shall not be used)
C9	(This position shall not be used)
CA	(This position shall not be used)
CB	(This position shall not be used)
CC	(This position shall not be used)
CD	(This position shall not be used)
CE	COPTIC FULL STOP
CF	COPTIC FRACTION ONE HALF

hex	Name
2055	DOUBLE HYPHEN