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 two Greek modifier letters for Critical Apparatuses in the UCS
Source: Abteilung für Griechische und Lateinische Philologie der Ludwig-Maximilians-Universität Müchen (Department of Greek and Latin Philology, Ludwig-Maximilians-University of Munich, Germany)
Authors: Martin Schrage, Karl Pentzlin
Status: Expert Contribution
Action: For consideration by JTC1/SC2/WG2 and UTC
Date: 2011-10-15

This document is based on an excerpt of WG2 N3913 and L2/10-358R (Proposal to encode Metrical Symbols and related characters), as it was decided to split that work and to propose the "related characters" separately by subject.

1. Introduction

The critical apparatus of recent editions of classical Greek works uses a set of conventional signs and abbreviations.
While the constituents of most of these are already contained in Unicode, two of them, being raised Greek letters, are missing. They are subject of this proposal.

The provided evidence shows lists of the apparatus characters as well as excerpts of apparatuses from several works printed in the USA, the U.K., and Germany.

Text of critical apparatuses is subject to be stored in text databases, associated with the text pieces (verses, lines, or sentences) they refer to. The set of conventional signs used there, partly consisting of raised Latin or Greek letters, is well-defined and limited.
Thus, the use of these conventional signs is plain text, and they have to be encoded.
As they consists of well-defined pieces which are already encoded (with the exception of the two characters proposed here), it is advisable to use these pieces when storing the plain text (like it is practice to store "ch" as "c" + "h", even if the text language is one which considers "ch" as a single letter).

2. Encoding Considerations

The raised Greek letters are proposed to be placed in the GREEK EXTENDED block, to leave the gaps in the "Greek and Coptic" block for "real" Greek letters if such are still found.

For the letter proposed at U+1F16, the term LAMDA instead of LAMBDA is used in the name, according to the naming of 03BB GREEK SMALL LETTER LAMDA.

While the MODIFIER LETTER SMALL GREEK RHO occurs only paired with the already encoded U+1D5E MODIFIER LETTER SMALL GREEK GAMMA in the context of this proposal, it is proposed as a separate character, rather than proposing a RAISED GREEK SMALL GAMMA RHO in analogy to e.g. U+1F16A RAISED MD.
If this were done, it had to be discussed whether other conventional signs like ᵘᵛ ("ut videtur"), which perfectly can be represented by U+1D58 U+1D5B MODIFIER LETTER SMALL U/V, are to be encoded separately as units also in analogy.

3. Proposed Characters

Block: Greek Extended

Critical Apparatus symbols

λ
U+1F16   MODIFIER LETTER SMALL GREEK LAMDA
    ≈ <super> 03BB

ρ
U+1F17   MODIFIER LETTER SMALL GREEK RHO
    ≈ <super> 03C1
    · usually used following U+1D5E modifier letter small greek gamma

Properties:

```
U+1F16 MODIFIER LETTER SMALL GREEK LAMDA;Lm;0;L;<super> 03BB;;;;N;;;;;
U+1F17 MODIFIER LETTER SMALL GREEK RHO;Lm;0;L;<super> 03C1;;;;N;;;;;
```

4. References

[1973a] Biehl, Werner – Euripides, Orestes – Leipzig 1973

[1980a] Maehler, Hervicus (ed.) – Pindari Carmina cum Fragmentis, vol. I – 6th ed., Leipzig 1980

[1992a] West, Martin L. - Aeschyli Septem contra Thebas - Stuttgart 1992 - ISBN 3-519-01019-4

[1993a] Mastronade, Donald J. – Euripides Phoenissae. Edited with introduction and commentary. – Cambridge 1993, ISBN 0 521 41071 1

[1993b] Dover, Kenneth – Aristophanes, Frogs – Oxford 1993 - ISBN 6-19-814773-2

[1998a] West, Martin L. - Homeri Ilias., vol.I: rhapsodia I-XII continens - Stuttgart+Leipzig 1998 - ISBN 3-519-014301-9

[2001a] Hutchinson, G. O. – Greek Lyric Poetry – New York 2001 – ISBN 0-19-924017-5

5. Examples and Figures

The figures are numbered by the referenced work (consisting of the year of edition and the letter, as in the "references" list, followed by a hyphen the page number, and following by a second letter if more than one figure is taken from a page.

E.g.: "Fig. 1992a-42" means "See ref. [1992a], p.42").

Fig. 1973a-xvi: *Showing a specimen for MODIFIER LETTER SMALL GREEK RHO.*

Fig. 1980a-27/103: *Showing specimens for MODIFIER LETTER SMALL GREEK RHO from two different pages of [1980a] (above, p.27; below, p.103).*

Fig. 1992a-VIII: *Showing specimens for MODIFIER LETTER SMALL GREEK RHO (red) and MODIFIER LETTER SMALL GREEK LAMDA (green)*

VIII

INDEX SIGLORVM

SIGLA CETERA

Ω	lectio omnium codicum vel utique archetypi
Σ	scholium vetus (Σᵏ scholii lemma; Σₗ scholium in cod. I)
Σ*	scholium incertae aetatis
Φ	commentarius paraphrasticus in triadem, saec. fere xii
Θ	Thomae Magistri textus
Tᵍ	Triclinius in scholio suo
A¹, A²	A a prima /ab altera manu correctus
Aᵃ, Aᶜ	A ante/post correctionem
Aᵃ?, Aᵃ?	A, fort. a.c./fort. A a.c.
Aᵃ², Aᵃˢ	A ante correctionem ab altera manu/a scholiorum scriba factam
Aˣ	A ante vel post correctionem (incertum utrum)
Aᵍˡ	glossema in A, vel lectio quasi glossema adscripta
Aᵞᵖ	varia lectio cum γρ. in A adscripta
Aᵐᵍ	A in margine
Aʳ	A in rasura
Aˢ	A tum correctus cum scholia addita sunt
Aˢˢ	lectio in A super lineam scripta
Aˣ	A in textu, altera lectione inter lineas vel in margine adscripta
Aᵘᵛ	A ut videtur

Fig. 1992a-42: *Showing a specimen MODIFIER LETTER SMALL GREEK RHO (green).*

719 ἐκφύγοις Mᵗ: -οι fere cett.   720 ἔφριξα Bᵞᵖ, πέφριξα Hʳ ὤλεσί- MBOλ: οὐλεσί- H: ὄλεσι- cett.   721 post h.v. sch. ᾶ γὰρ νύκτωρ παρεκελεύσατο καὶ γέγονε in textu habent codd. praeter MKT (in mg. K)   722 παναληθῆ Ω: corr. Dind.⁵ (cf. 946)   725 βλαψίφρονος (-ας Hᵃ¹Nˢˢ+) οἰδιπόδα (-ποδος V, -πόδαο HBᶜ?Y) Ω: corr. T   726 δ' om. IʳV   727 κλήρους Mᵃ?Θξ: -οις cett.   728 σκυθῶν Ω: corr. Dind.¹²   732 καὶ] ᾶν καὶ WεQᶜλ   φθιμένοισι Ω (-σιν T): φθιμένους (Bourdelot) ⟨ᾶν⟩ Blomf.⁴, ⟨ἐγ⟩κατέχειν Headlam⁵ 57   734 αὐτοκτόνως κλ: αὐτόκτονοι Fbᶜ: αὐτοκτόνωσιν Mᵃ: αὐτοκτάνωσιν MˢI: αὐτοὶ κτάνωσι(ν) cett.   736 γαῖα Dind.⁴ 640: χθονία Ω: νερτέρα Weil⁷: κἀγχωρία Newman¹ 56

Fig. 1993a-58: *Showing specimens for MODIFIER LETTER SMALL GREEK RHO.*

THE TEXT

* after test. or specific author cited for testimonium indi-
cates some mss of the test. author(s)

Modifications of symbols

A¹ — first hand in manuscript A

A², A³ — second, third hand in A

Aᶜ — corrector in A

Aʳ — rubricator in A

Aˢ — above the line in A

Aᵍ — supralinear gloss in A

Aʸᵖ — variant or correction in A introduced by γρ(ἄφεται/ἄφε) (καὶ)

Aᵐᵃʳᵍ — in the margin in A

Aᵃᶜ — A before correction

Aᵖᶜ — A after correction

Aᵘᵛ — A *ut videtur*

Σ — scholion, scholiast on *Phoen.*

Σᴬ — scholion as found in manuscript A

ˡᵉΣ — lemma of Σ

ⁱΣ — reading implied by interpretation of Σ

ᵖΣ — word or form used in paraphrase of Σ

ᵍΣ — gloss used in Σ

ʸᵖΣ — γράφεται variant in Σ

Fig. 1993b-160: *Showing a specimen for MODIFIER LETTER SMALL GREEK LAMDA.*

1004 in. ὁ χοᵖ ἔτι K (cf. Σᴿⱽ)   ὤ] ὁ ΣPac.   ἑλλήνηνων V   1005 λῆρον]
κλῆρον λΣⱽ: λῆρόν Radermacher   1006 Aἰ. om. R   1007 τοῦτον] αὐτὸν R
φάσκει R: φάσκης Mᵃᶜ   διαπορεῖν A   ἐμέ A K   1008 in. Εὐ. V   ἀπό-
κριναί μοι] πυνθάνομαι S.E.   χρῆ] δεῖ R   1009 Εὐ.] Aἰ. V   ὅτι] ὅτι τε A
βελτίστους A   1010 πόλεσιν Eᵖᶜ U Vsɪ: -σι a   Aἰ.] dic. R: om. Vᵃᶜ   ταῦτ'
R   1011 μοχθηρούς R A: -ροτάτους K   τ' ἀπέ- V   1013 Aἰ. om. Kᵃᶜ
1014 -δρησι- Phryn.   1015 μηδ'... μηδὲ] μήτ'... μήτε V A K   μηδ' ἐπα- R
1016 -λόφας R   1018 Εὐ.] Δι. A   ante κρα-] Δι. R V K   -ψεις V K
1019 in. Εὐ. a: del. Θᵖᶜ: om. Vb3   σὺ τί V A K   δρᾶς A   αὐτοὺς οὕτως A   γεν-
ναίους] ἀνδρείους V K: -ως A   ἐδίδαξας R A: ἐξέδειξας V   1020 Δι. om. R
1021 ἄρεος A K   Δι.] dic. R: Εὐ. A K   alt. Aἰ.] dic. R   1023 Δι.] Εὐ. Mᵃᶜ
1024 ἕνεκα R V K: εἵνεκα U Vsɪ

Fig. 1998a-156: *Showing a specimen for U+MODIFIER LETTER SMALL GREEK RHO.*

394 καί Ar³ 1008 *b* F°: κέν Ar^b 474c t Z C^{γρ} Ω*, κέ F^a   μιν Ar Z C^{γρ} Ω*: περ 404 1008
t *b* F   396 ὡυτὸς 474c 1008 h126 tt Z Ω: αὐτὸς Ernesti (cf. M 225, Ψ 480): οὗτος Wack.
KS 1587   397 πύλωι tamquam (Ἄιδου) πύληι interpr. Ar   398–402 damn. Koechly:
hab. 16 400 1008 Z Ω   399 κῆρ h126 D B F R:κῆρ' 16 Z Ω*   400 ἕνι Barnes: ἐνὶ (ve.
ἐνι) Hdn Ω   401 ἐπὶ (vel ἐπι) Hdn Ω: ἔπι D³?   402 γ' ἐτέτυκτο Z Ω: γε τέτ- O   403
αἰσυλοεργός Ar tt* (ad figuram cf. E 63, I 124, M 295 sq., P 5, α 299 sq.): ὀβριμοεργός 1008
Eudoc. Z Ω   ὅ τ' Ar *b*^s: ὃς 400 tt* Z Ω   404 damn. Heyne: hab. 16 400 1015 Z
Ω   405 ἐπὶ Hdn Z Ω: ἔπι rr   406 Τυδέος υἱός 16 Ω: καὶ] κατα θυμον 474 :
Eust.   407 μάχηται 1 Ω*:-οιτο t *b* W G   408 τί Ar³ 1 w5 t Ω: τέ Ar^b   παππάζουσιν
1 tt Z Ω: [πα]παζ- h126: παμπαζ- w5   410 τὼ D³ F^x: τῶ(ι) 1 Ω

Fig. 2001a-2: *Showing a specimen for MODIFIER LETTER SMALL GREEK RHO.*

^{ac}, a.c.	ante correctionem
^{pc}, p.c.	post correctionem
^c	post correctionem, si prior lectio legi non potest
^{il}, i.l.	in linea
^{sl}, s.l.	supra lineam
^{sscr}, sscr.	suprascriptum, suprascripsit
^{gl}	in codice lectio tamquam glossema scripta est
^{γρ}	in codice lectioni praepositum est γράφεται, sim.
^v	verso
^r	recto
acc.	accentus
codd.	codices
coni.	coniecit
corr.	correxit, correcto, etc.
del.	deleuit, deleto, etc.
e.p.	editor primus
recc.	recentiores
rell.	reliqui
[α]	α deest in omnibus testibus
͵α͵	α deest in uno teste, non omnibus
{ἁ̃}	ἁ̃ contra testes delendum est
⟦α⟧	α in Π deletum est
`α´	α addidit Π supra lineam

<table>
<tr><td colspan="2">
ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646[1]
Please fill all the sections A, B and C below.
Please read Principles and Procedures Document (P & P) from http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html for guidelines and details before filling this form.
Please ensure you are using the latest Form from http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html.
See also http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html for latest Roadmaps.
</td></tr>
</table>

A. Administrative

1. **Title:**	*Proposal to encode two Greek modifier letters for Critical Apparatuses in the UCS*
2. Requester's name:	*Martin Schrage; Karl Pentzlin*
3. Requester type (Member body/Liaison/Individual contribution):	*Expert Contribution*
4. Submission date:	*2011-10-15*
5. Requester's reference (if applicable):	*University of Munich, Germany (M. S.)*
6. Choose one of the following:	
This is a complete proposal:	*Yes*
(or) More information will be provided later:	

B. Technical – General

1. Choose one of the following:
   - a. This proposal is for a new script (set of characters):   *No*
     - Proposed name of script:
   - b. The proposal is for addition of character(s) to an existing block: *Yes*
     - Name of the existing block: *Greek Extended*
2. Number of characters in proposal: *2*
3. Proposed category (select one from below - see section 2.2 of P&P document):

A-Contemporary		B.1-Specialized (small collection) X	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	

4. Is a repertoire including character names provided?   *Yes*
   - a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?   *Yes*
   - b. Are the character shapes attached in a legible form suitable for review?   *Yes*
5. Fonts related:
   - a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?
     The authors (if requested)
   - b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):
     The authors (if requested)
6. References:
   - a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?   *Yes*
   - b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?   *Yes*
7. Special encoding issues:
   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)?   *No*

8. Additional Information:
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 http://www.unicode.org/Public/UNIDATA/UCD.html and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? *Yes*
    If YES explain *They are contained in WG2 N3913 = L2/10-358R and are separated here from its revision*
2. 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*
        If YES, with whom? *One of the authors (M. S.) is a member of the scientific community himself*
        If YES, available relevant documents: *See text*
3. Information on the user community for the proposed characters (for example:
    size, demographics, information technology use, or publishing use) is included? *Yes*
    Reference: *See text*
4. The context of use for the proposed characters (type of use; common or rare) *Common scientific*
    Reference: *See text*
5. Are the proposed characters in current use by the user community? *Yes*
    If YES, where? Reference: *See text*
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely
    in the BMP? *Yes*
        If YES, is a rationale provided? *Yes*
        If YES, reference: *To keep them in line with related characters*
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)? *Yes*
8. Can any of the proposed characters be considered a presentation form of an existing
    character or character sequence? *No*
        If YES, is a rationale for its inclusion provided?
        If YES, reference:
9. Can any of the proposed characters be encoded using a composed character sequence of either
    existing characters or other proposed characters? *No*
        If YES, is a rationale for its inclusion provided?
        If YES, reference:
10. Can any of the proposed character(s) be considered to be similar (in appearance or function)
    to an existing character? *No*
        If YES, is a rationale for its inclusion provided?
        If YES, reference:
11. Does the proposal include use of combining characters and/or use of composite sequences? *No*
    If YES, is a rationale for such use provided?
        If YES, reference:
    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?
        If YES, reference:
12. Does the proposal contain characters with any special properties such as
    control function or similar semantics? *No*
        If YES, describe in detail (include attachment if necessary)

13. Does the proposal contain any Ideographic compatibility character(s)? *No*
    If YES, is the equivalent corresponding unified ideographic character(s) identified?
        If YES, reference: