## PROPOSAL SUMMARY FORM

## A. Administrative

| 1. Title |
| :--- |
| Proposal for encoding Greek Metrical Symbols in the UCS |
| 2. Requester's name |
| Thesaurus Linguae Graecae Project (University of California, Irvine) |
| 3. Requester type |
| Expert contribution |
| 4. Submission date: |
| 2002-11-07 |
| 5. Requester's reference |
| 6. Completion |
| This is a complete proposal. |

## B. Technical-General

1. The proposal is for addition of character(s) to an existing block. Name of the existing block:
Miscellaneous Symbols
2. Number of characters in proposal:

9 characters (2692-269A)
3. Proposed category

Category A
4. Proposed Level of Implementation (1, 2 or 3):

Level 1
5a. Character names provided?
Yes.
5b. Character names in accordance with guidelines
Yes.
5c. Character shapes reviewable?
Yes
6a. Who will provide the appropriate computerized font for publishing the standard?
David Perry and TLG Project
6b. Font currently available?
Yes.
6c. Font format
True Type
7a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? Yes.
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?

No.

## C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?

No.
2. Has contact been made to members of the user community?

Yes. The TLG has been in contact with a great number of experts. Several versions of this proposal have been posted online and received extensive comments by members of the profession.
3. Information on the user community for the proposed characters

Scholarly community in the general area of literature.
4. The context of use for the proposed characters (type of use; common or rare)

Common in publications and studies related to ancient and modern poetry, meter, and music.
5. Are the proposed characters in current use by the user community?

Yes. Characters are present in various scholarly discussions of ancient and modern literary texts. General references provided in attached bibliography.
6. After giving due considerations to the principles in Principles and Procedures document, must the proposed characters be entirely in the BMP?
Yes.
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.
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?
Yes. However, existing characters produce unworkable results.
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?
No.
11a. Does the proposal include use of combining characters and/or use of composite sequences?
No.
12. Does the proposal contain characters with any special properties such as control function or similar semantics?
No.
13. Does the proposal contain any Ideographic compatibility character(s)?

No.

## Proposal

The ancient Greek metrical system was developed between the $8^{\text {th }}$ and $4^{\text {th }}$ centuries B.C. and has been preserved on ancient papyri and codices. A standard set of non-combining metrical symbols is found both in ancient texts as well as modern editions and studies of Greek and Roman poetry. The use of these symbols, however, extends beyond ancient literature and is, in fact, present in editions of contemporary poetry and discussions of modern works of literature. Therefore these characters are extensively used in modern typography and as such they should properly be encoded in the Unicode Standard.

Two examples are presented below, one from a study on ancient Greek metrics, and one from a discussion of modern English poetry. ${ }^{1}$
sche Rhythmen) sind oder eine Kombination dieser
beiden, ......x-u-... bzw. -v-x-v-....
(asymmetrische Rhythmen). Jede Sequenz kann astei-
gend" ( $\| x-$ - oder $\|-\cdots$ ) oder mallend ( $\|$ - - ) beginnen, und sie kann entweder nstumpfo ( $--\|$ ) oder nklingende $(--\times \|)$ enden.

```
*"This is the forest primeval, but where are the hearts that beneath
    it,"-
and at first sight we call each a dactylic hexameter
verse. We give a scheme :-
```



All possible non-stacking characters used in the Greek metrical notation are given in the table Overview of Greek Metrical Notation below. There are a few other, rarely used, symbols which are stacked versions of the characters also provided. The majority of characters required for the representation of Greek meter are already present in Unicode Standard 3.2. Nine (9) additional characters are proposed for inclusion.

[^0]
## Overview of Greek Metrical Notation

|  | Name | Unicode | Comment |
| :---: | :---: | :---: | :---: |
| $\times$ | Anceps | 00D7 |  |
| $\smile$ | Breve |  | Similar to 02D8, but 02D8 is positioned too high in the line. |
| - | Longum | 2012 or 2013 |  |
| Ј | Metrical Long Over Short |  | Similar to 02D8 + 0305 |
| $\smile$ | Metrical Short Over Long |  | Similar to 02D8 + 0332 |
| $\checkmark$ | Metrical Long Over Two Shorts |  | Similar to 02D8 + $0305+02 \mathrm{D} 8+0305$ |
| 〕 | Metrical Two Shorts Over Long |  | Similar to 02D8 + 0332 + 02D8 + 0332 |
| $\bigcirc \bigcirc$ | Aeolian Basis | $25 \mathrm{EF}+25 \mathrm{EF}$ |  |
| $\sim$ | Metrical Two Shorts Joined |  | Similar to 02D8 + 02D8 |
| $\sim$ | Breve Combining with Longum | 02D8 + 0336 | A second glyph variant may be encoded with $2312+0323$ |
| , | Catalexis indicator | $0020+032 \mathrm{D}$ |  |
| $\vdots$ | Tricolon |  | Proposed separately as a punctuation character |
| 1 | Word End Indicator | 007C |  |
| \|| | Period End Indicator | 2016 |  |
| \||| | Stanza End Indicator | $007 \mathrm{C}+007 \mathrm{C}+007 \mathrm{C}$ |  |
| $\otimes$ | Poem End Indicator | 2297 |  |
| H | Hiatus | <superscript> 0048 | The character \{ may also be used to represent a hiatus ${ }^{2}$ the Unicode of which is 2307. |
| J | Dovetail | 0283 or possibly 222B |  |
| $\sim$ | Responsion | 007E |  |
| . | Anaclasis | 00A8 |  |
| \% | Ictus | 0301 |  |
| $\widetilde{\alpha \alpha}$ | Bridge | 0361 |  |
| - | Metrical Triseme |  |  |
| $\square$ | Metrical Tetraseme |  |  |
| ப | Metrical Pentaseme |  |  |

[^1]
## Bibliography

Gummere, F.R., A Handbook of Poetics (Boston, 1892)
Maas, P., Greek Metre. Tr. Lloyd-Jones, H. (Oxford, 1962)
Parker, L.P.E., "Metre, Greek" in $O C D^{3}$ (1996) 970
Pauly, A.F. von et al. (eds.), Paulys Realencyclopädie der classischen Altertumwissenschaft. (Stuttgart, 1856-1972)
Raven, D.S., Latin Metre: An Introduction (London, 1965)
West, M.L. "Metrik. IV Griechisch" in DNP 8 (2000) 115-122
West, M.L. Greek Metre (Oxford, 1982)

## Table of New Characters Proposed

Full documentation for the proposed characters available at:
http://www.tlg.uci.edu/Uni.prop.html

|  |  | Name | Unicode | Comment |
| :--- | :---: | :--- | :--- | :--- |
| 1 | $\smile$ | Metrical Breve Symbol | 2692 |  |
| 2 | $\smile$ | Metrical Long Over Short Symbol | 2693 |  |
| 3 | $\smile$ | Metrical Short Over Long Symbol | 2694 |  |
| 4 | $\smile$ | Metrical Long Over Two Shorts Symbol | 2695 |  |
| 5 | $\smile$ | Metrical Two Shorts Over Long Symbol | 2696 |  |
| 6 | $\sim$ | Metrical Two Shorts Joined Symbol | 2697 |  |
| 7 | - | Metrical Triseme Symbol | 2698 |  |
| 8 | $\boxed{ }$ | Metrical Tetraseme Symbol | 2699 |  |
| 9 | $\sqcup-$ | Metrical Pentaseme Symbol | 269 A |  |

## Character Properties

"Symbol, other" (So).

## Notes

Approximations of characters 2-6 may be created using characters in the Unicode Standard; however there are several problems with these representations. For example,

- they are visually inaccurate;
- on occasion a character which is semantically one character may have to be encoded in such a way as to make into two characters (e.g., Long over two Shorts);
- it is necessary to occasionally stack metrical characters. So, for instance, it may be necessary to have Two Shorts over Long stacked over an Anceps. This becomes extremely difficult to effect were the Two Shorts over Long to be encoded as two separate characters.
- Further, in the specific case of the Double Short, to encode it with two Shorts would be visually confusing as the same meter will often contain both Shorts and Double Shorts (e.g. aeolo-chori-ambic and the dactylo-epitric).

Characters 7-9 cannot currently be encoded in Unicode.

METRICAL CHARACTERS: CODE CHART
269


METRICAL CHARACTERS: NAME CHART

| hex | Name |
| :--- | :--- |
| 2692 | METRICAL BREVE |
| 2693 | METRICAL LONG OVER SHORT |
| 2694 | METRICAL SHORT OVER LONG |
| 2695 | METRICAL LONG OVER TWO SHORTS |
| 2696 | METRICAL TWO SHORTS OVER LONG |
| 2697 | METRICAL TWO SHORTS JOINED |
| 2698 | METRICAL TRISEME |
| 2699 | METRICAL TETRASEME |
| $269 A$ | METRICAL PENTASEME |


[^0]:    ${ }^{1}$ Greek example taken from Der Neue Pauly Volume 8 (2000) 118; English example taken from Gummere, F.R., A Handbook of Poetics (Boston, 1892) 138.

[^1]:    ${ }^{2}$ See Raven (1965) 13

