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**ISO/IEC JTC 1/SC 2/WG 2 N3011**

**L2/05-345**

**PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646**
*Please fill all the sections A, B and C below.*

(Please read Principles and Procedures Document for guidelines and details before filling this form.)
See http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html for latest Form.
See http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html for latest Principles and Procedures document.
See http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html for latest roadmaps.

(Form number: N2352-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09)

## A. Administrative

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1. Title:  Proposal to encode one Tibetan astrological character

2. Requester's name: Andrew C. West_____
3. Requester type: Expert contribution_____
4. Submission date:                                        24th October 2005
5. Requester's reference (if applicable): _____
6. (Choose one of the following:)
  This is a complete proposal:                            Complete proposal
  or, More information will be provided later:                _____
```

## B. Technical - General

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1. (Choose one of the following:)
  a. This proposal is for a new script (set of characters):   _____
   Proposed name of script: _____
  b. The proposal is for addition of character(s) to an existing block: Yes__
   Name of the existing block: _____TIBETAN_____
2. Number of characters in proposal:                       1_____
3. Proposed category (see section II, Character Categories):  A_____
4. Proposed Level of Implementation (1, 2 or 3)
                  (see clause 14, ISO/IEC 10646-1: 2000):   2_____
  Is a rationale provided for the choice?                  No_____
   If Yes, reference: _____
5. 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 ISO/IEC 10646-1: 2000? Yes____
  b. Are the character shapes attached in a legible form suitable for review?
                                                               Yes___
6. Who will provide the appropriate computerized font (ordered preference:
   True Type, or PostScript format) for publishing the standard?
   A font can be provided if required, but it may be better to generate the__
   a glyph for the character from the existing font used for the Tibetan_____
   block. Andrew West _____
   If available now, identify source(s) for the font (include address,
   e-mail, ftp-site, etc.) and indicate the tools used:
   _____
7. References:
  a. Are references (to other character sets, dictionaries, descriptive
    texts etc.) provided?                                  No_____
  b. Are published examples of use (such as samples from newspapers,
    magazines, or other sources) of proposed characters attached? Yes_____
8. 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_____
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## C. Technical - Justification

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1. Has this proposal for addition of character(s) been submitted before? No__
   If YES explain  _____
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? Members of TIBEX mailing list (tibex@unicode.org)_____
      If YES, available relevant documents: TIBEX mailing list archives_____
3. Information on the user community for the proposed characters
   (for example: size, demographics, information technology use, or
   publishing use) is included?                             No_____
    Reference: _____
4. The context of use for the proposed characters (type of use;
   common or rare)                                          Common_____
    Reference: _____
5. Are the proposed characters in current use by the user community? Yes_____
   If YES, where?  Reference: In astrological almanacs published annually in
   China, India, Bhutan, Nepal, etc.
6. 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_____
   If YES, is a rationale provided?                         No_____
    If YES, reference: _____
7. Should the proposed characters be kept together in a contiguous range
   (rather than being scattered)?                           N/A_____
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 (see clauses 4.12 and 4.14
   in ISO/IEC 10646-1: 2000)?                               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)? ___
   If YES, is the equivalent corresponding unified ideographic character(s)
   identified?                                              No_____
    If YES, reference: _____
```

## ADDITIONAL INFORMATION

### 1. PROPOSED CHARACTER

| Code Point | Representative Glyph | Proposed Character Name |
|:---:|:---:|:---|
| 0FD2 | ✕〇 | TIBETAN SIGN RDEL NAG RDEL DKAR |

**Unicode Properties:**

0FD2;TIBETAN SIGN RDEL NAG RDEL DKAR;So;0;L;;;;;N;;dena deka;;;

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### 2. USAGE OF PROPOSED CHARACTER

In Tibetan astrology groups of one, two or three black and white pebbles are used for purposes of divination. These are represented in astrological texts by hollow circles (representing white pebbles) and x-shaped crosses (representing black pebbles). The following seven astrological pebble characters are already encoded :

**0F1A** 〇 [TIBETAN SIGN RDEL DKAR GCIG]

**0F1B** 〇 〇 [TIBETAN SIGN RDEL DKAR GNYIS]

**0F1C** 〇〇〇 [TIBETAN SIGN RDEL DKAR GSUM]

**0F1D** ✕ [TIBETAN SIGN RDEL NAG GCIG]

**0F1E** ✕ ✕ [TIBETAN SIGN RDEL NAG GNYIS]

**0F1F** 〇 ✕ [TIBETAN SIGN RDEL DKAR RDEL NAG]

**0FCF** ✕✕✕ [TIBETAN SIGN RDEL NAG GSUM]

In addition to these seven pebble combinations, the missing two-pebble combination of a black pebble followed by a white pebble ✕〇 also occurs in certain situations. Although the ✕〇 combination is considered inauspicious in normal astrological usage, and so does does not occur in most astrological charts, it is used in one particular astrological context, the **steng 'og dgu dur rdel** སྟེང་འོག་དགུ་དུར་རྡེལ། "upper and lower nine burial pebbles" charts. In these charts the 〇 ✕ combination indicates good luck earlier and bad luck later, whereas the ✕〇 combination indicates bad luck earlier and good luck later (in contrast to normal astrological usage, where the 〇 ✕ combination represents neutral fortune).

Illustration 1 shows a page from an astrological almanac for the Wood Ox Year (1985) that was published in Lhasa in 1984. Pages 38-47 of this almanac comprise a table giving various pebble combinations. The upper rows show one- two- and three-pebble combinations corresponding to the already encoded pebble characters. However the bottom row, labelled **steng 'og dgu dur rdel**,comprises two sub-rows separated by a horizontal line. The upper sub-row only has the single pebble combinations 〇 and ✕, whereas the lower sub-row has the single and double pebble combinations 〇, ✕, 〇 ✕ and ✕〇 (as well as no pebbles in four out of the one hundred columns).

**Illustration 1 : Astrological Almanac for Wood Ox Year (1985)**



**Source :**

ཁྲོ་བོ་ཞེས་པ་འབྱུང་བ་བཞི་ཕུན་ཤིང་ལོ་སྐྱང་གི་ལོ་ཐོ་བཀྲ་ཤིས་གཡས་འཁྱིལ་སྐུ་དབྱངས་ཞེས་བྱ་བ་བཞུགས་སོ།

西藏木牛年(1985)气象历书 (Lhasa : Tibet People's Publishing House, 1984) page 44.

The **steng 'og dgu dur rdel** row for columns 1-100 over pages 38-47 of this almanac is transcribed below, with the currently unencoded ✕Ο combination shown in red (columns 6, 16, 18, 30, 40, 44, 54, 64, 68, 78, 88, and 92) :

## Page 38

| Col. 1 | Col. 2 | Col. 3 | Col. 4 | Col. 5 | Col. 6 | Col. 7 | Col. 8 | Col. 9 | Col. 10 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| ✕ | Ο | Ο | Ο | Ο | Ο | Ο | Ο | ✕ | ✕ |
| Ο | Ο | Ο | Ο | Ο | ✕Ο | Ο | Ο | Ο | Ο |

## Page 39

| Col. 11 | Col. 12 | Col. 13 | Col. 14 | Col. 15 | Col. 16 | Col. 17 | Col. 18 | Col. 19 | Col. 20 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Ο | Ο | Ο | Ο | Ο | Ο | ✕ | ✕ | ✕ | Ο |
| Ο | Ο✕ | Ο | Ο✕ | གཤེད་དུར་ཆུང | ✕Ο | Ο | ✕Ο | Ο | Ο |

**Page 40**

| Col. 21 | Col. 22 | Col. 23 | Col. 24 | Col. 25 | Col. 26 | Col. 27 | Col. 28 | Col. 29 | Col. 30 |
|---|---|---|---|---|---|---|---|---|---|
| × | O | O | O | × | O | × | × | O | O |
| རང་དུར་ཆེ | O | O | O | O | O | O | O | O | ×O |

**Page 41**

| Col. 31 | Col. 32 | Col. 33 | Col. 34 | Col. 35 | Col. 36 | Col. 37 | Col. 38 | Col. 39 | Col. 40 |
|---|---|---|---|---|---|---|---|---|---|
| O | O | × | O | O | × | × | O | O | O |
| O | O | O | O | O | O× | O | O× | O | ×O |

**Page 42**

| Col. 41 | Col. 42 | Col. 43 | Col. 44 | Col. 45 | Col. 46 | Col. 47 | Col. 48 | Col. 49 | Col. 50 |
|---|---|---|---|---|---|---|---|---|---|
| × | O | O | O | × | × | O | O | × | O |
| O | O | O | ×O | གཞིད་དུར་ཆེ | O× | O | O | O | O |

**Page 43**

| Col. 51 | Col. 52 | Col. 53 | Col. 54 | Col. 55 | Col. 56 | Col. 57 | Col. 58 | Col. 59 | Col. 60 |
|---|---|---|---|---|---|---|---|---|---|
| O | O | O | × | × | O | × | O | O | O |
| རང་དུར་ཆུར | O | O | ×O | O | O | O | O | O | O× |

**Page 44**

| Col. 61 | Col. 62 | Col. 63 | Col. 64 | Col. 65 | Col. 66 | Col. 67 | Col. 68 | Col. 69 | Col. 70 |
|---|---|---|---|---|---|---|---|---|---|
| O | O | × | × | × | O | O | O | O | O |
| O | O× | O | ×O | O | O | O | ×O | O | O× |

**Page 45**

| Col. 71 | Col. 72 | Col. 73 | Col. 74 | Col. 75 | Col. 76 | Col. 77 | Col. 78 | Col. 79 | Col. 80 |
|---|---|---|---|---|---|---|---|---|---|
| O | × | × | O | O | O | O | O | O | O |
| O | O× | O | O | O | O | O | ×O | O | O |

**Page 46**

| Col. 81 | Col. 82 | Col. 83 | Col. 84 | Col. 85 | Col. 86 | Col. 87 | Col. 88 | Col. 89 | Col. 90 |
|---|---|---|---|---|---|---|---|---|---|
| × | × | O | O | O | O | O | O | × | × |
| O | O | O | O× | O | O× | O | ×O | O | O |

**Page 47**

| Col. 91 | Col. 92 | Col. 93 | Col. 94 | Col. 95 | Col. 96 | Col. 97 | Col. 98 | Col. 99 | Col. 100 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| ✕ | ○ | ○ | ○ | ○ | ○ | ✕ | ○ | ✕ | ✕ |
| ○ | ✕○ | ○ | ○✕ | ○ | ○ | ○ | ○ | ○ | ○ |

In some astrological charts the horizontal dividing line between the two sub-rows is dispensed with, resulting in what superficially looks like vertical two-pebble combinations and various mixed black-and-white triangular three-pebble combinations. This situation is typified by Illustration 2, an almanac from 2000, in which the bottom row labelled **steng 'og dgu dur rdel** comprises cells with one black or white pebble above one or two black and/or white pebbles (or no pebbles in some cases).

**Illustration 2 : Astrological Almanac for 2000**



**Source :** Tibetan Annual Almanac published in India by Men-Tsee-Khang, page 61.

This gives the appearance of the following vertical two-pebble combinations and mixed black-and-white triangular three-pebble combinations :

| ○ | ○ | ○ | ○ | ✕ | ✕ | ✕ | ✕ |
| ○ | ✕ | ○✕ | ✕○ | ○ | ✕ | ○✕ | ✕○ |

However, it is clear from comparison with the almanac for 1985 that the above combinations should be considered as two-line formatting of single-pebble characters above single- or double-pebble characters. This interpretation is further strengthened by the cases where one pebble occurs above text rather one or two pebbles (see 1956 and 1950 columns in Illustration 2).

Thus I believe that for this particular astrological usage (**steng 'og dgu dur rdel**) there is no need to encode the vertical two-pebble combinations "OO", "OX", "XO" or "XX", or the triangular three-pebble combinations "OOX", "OXO", "XOX" or "XXO" that are shown above. All that is needed to represent the pebble combinations used for **steng 'og dgu dur rdel** calculations are the existing pebble characters and the proposed ✕○ double-pebble character.