L2/05-345R

ISO/IEC JTC 1/SC 2/WG 2 N3011
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 (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*.
Form number: N3002-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10)

A. Administrative

1. **Title:** *Proposal to encode one Tibetan astrological character*
2. Requester's name: *Andrew C. West (andrewcwest@gmail.com)*
3. Requester type (Member body/Liaison/Individual contribution): *Individual contribution*
4. Submission date: *2005-10-24 (revised 2006-01-30)*
5. Requester's reference (if applicable): *N/A*
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: *TIBETAN*
2. Number of characters in proposal: *1*
3. Proposed category (select one from below - see section 2.2 of P&P document):

A-Contemporary *X*   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

4. Proposed Level of Implementation (1, 2 or 3) (see Annex K in P&P document): *3*
   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" *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? *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*
   a. If YES, are the names in accordance with the "character naming guidelines"
   b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? *YES*
8. Special encoding issue
   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*

C. Technical - Justification

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, available relevant documents: **Members of TIBEX mailing list (tibex@unicode.org)**

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 the P&P 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)?   **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: _____

ADDITIONAL INFORMATION

1. PROPOSED CHARACTER

Code Point	Representative Glyph	Proposed Character Name
0FCE	✕○	TIBETAN SIGN RDEL NAG RDEL DKAR

Unicode Properties:

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

Line Break Properties:

0FCE;AL # TIBETAN SIGN RDEL NAG RDEL DKAR

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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 astrological pebble characters are already encoded :

0F1A ○ [TIBETAN SIGN RDEL DKAR GCIG]

0F1B ○ ○ [TIBETAN SIGN RDEL DKAR GNYIS]

0F1C ○ ○ ○ [TIBETAN SIGN RDEL DKAR GSUM]

0F1D ✕ [TIBETAN SIGN RDEL NAG GCIG]

0F1E ✕ ✕ [TIBETAN SIGN RDEL NAG GNYIS]

0F1F ○ ✕ [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 ✕○ also occurs in certain situations. Although the ✕○ 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་རྟེལ། "upper and lower nine burial pebbles" charts. In these charts the ○ ✕ combination indicates good luck earlier and bad luck later, whereas the ✕○ combination indicates bad luck earlier and good luck later (in contrast to normal astrological usage, where the ○ ✕ 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 ○ and ✕, whereas the lower sub-row has the single and double pebble combinations ○, ✕, ○ ✕ and ✕○ (as well as no pebbles in four out of the one hundred columns).

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

Source :

ཁྲི་བོ་ཞེས་པ་འབྱུང་བ་བཞི་ཕྱུན་ཤིང་ལོ་སྐྱང་གི་ལོ་ཐོ་བཀྲ་ཤིས་གཡས་འཁྱིལ་སྐུ་དབྱངས་ཞེས་བུ་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 ✕○ 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
✕	○	○	○	○	○	○	○	✕	✕
○	○	○	○	○	✕○	○	○	○	○

Page 39

Col. 11	Col. 12	Col. 13	Col. 14	Col. 15	Col. 16	Col. 17	Col. 18	Col. 19	Col. 20
○	○	○	○	○	○	✕	✕	✕	○
○	○✕	○	○✕	གཤིད་དུར་ཚུར	✕○	○	✕○	○	○

Page 40

Col. 21	Col. 22	Col. 23	Col. 24	Col. 25	Col. 26	Col. 27	Col. 28	Col. 29	Col. 30
✕	○	○	○	✕	○	✕	✕	○	○
རར་དུར་མ	○	○	○	○	○	○	○	○	✕○

Page 41

Col. 31	Col. 32	Col. 33	Col. 34	Col. 35	Col. 36	Col. 37	Col. 38	Col. 39	Col. 40
O	O	X	O	O	X	X	O	O	O
O	O	O	O	O	OX	O	OX	O	XO

Page 42

Col. 41	Col. 42	Col. 43	Col. 44	Col. 45	Col. 46	Col. 47	Col. 48	Col. 49	Col. 50
X	O	O	O	X	X	O	O	X	O
O	O	O	XO	གཞད་དུར་ཆེ	OX	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	X	X	O	X	O	O	O
རང་དུར་ཆུང	O	O	XO	O	O	O	O	O	OX

Page 44

Col. 61	Col. 62	Col. 63	Col. 64	Col. 65	Col. 66	Col. 67	Col. 68	Col. 69	Col. 70
O	O	X	X	X	O	O	O	O	O
O	OX	O	XO	O	O	O	XO	O	OX

Page 45

Col. 71	Col. 72	Col. 73	Col. 74	Col. 75	Col. 76	Col. 77	Col. 78	Col. 79	Col. 80
O	X	X	O	O	O	O	O	O	O
O	OX	O	O	O	O	O	XO	O	O

Page 46

Col. 81	Col. 82	Col. 83	Col. 84	Col. 85	Col. 86	Col. 87	Col. 88	Col. 89	Col. 90
X	X	O	O	O	O	O	O	X	X
O	O	O	OX	O	OX	O	XO	O	O

Page 47

Col. 91	Col. 92	Col. 93	Col. 94	Col. 95	Col. 96	Col. 97	Col. 98	Col. 99	Col. 100
X	O	O	O	O	O	X	O	X	X
O	XO	O	OX	O	O	O	O	O	O

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 ✕O double-pebble character.