


<b>L2/09-031R</b>
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JTC1/SC2/WG2 N3567  
2009-04-04

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 a Middle Dot letter for Phags-pa transliteration  
**Source:** Andrew West  
**Status:** Individual Contribution  
**Action:** For consideration by JTC1/SC2/WG2 and UTC  
**Date:** 2009-01-24 (revised 2009-04-04)

## 1. Introduction

This is a proposal to encode a middle dot letter for use in transliteration and phonetic transcription. The proposed character is widely used for transliterating U+A856  PHAGS-PA LETTER SMALL A (see Figs.1-7). It is also used to represent a glottal stop in Gong Hwang-cherng's influential phonetic reconstruction of Tangut, which is, for example, used in Li Fanwen's Tangut-Chinese dictionary (see Figs.8-9). It is quite probable that the middle dot letter is also used for transliteration and/or transcription of other languages.

Proposed Code Point	Proposed Character Name	Glyph
A7XX	LATIN LETTER MIDDLE DOT	•

Unicode Character Properties	Script	Line Break Property
A7XX;LATIN LETTER MIDDLE DOT;Lo;0;L;;;;;N;;;;;	Latin	AL

The proposed letter is caseless, and so no case mappings are proposed.

Note that although there are already several middle dot characters, as shown in the table below, these are either script-specific letters or punctuation marks (General Category = Po), and so are not appropriate for general use as a transliteration or transcription letter.

### Middle Dot Characters

Code Point	Character Name	General Category	Script
00B7	MIDDLE DOT	Po	Common
1427	CANADIAN SYLLABICS FINAL MIDDLE DOT	Lo	Canadian Aboriginal
30FB	KATAKANA MIDDLE DOT	Po	Common
FF65	HALFWIDTH KATAKANA MIDDLE DOT	Po	Common

## 2. Examples

27	𐌆𐌿	h
28	𐌆	.
29	𐌶	y
30	𐌵	u

Fig. 1 : Poppe 1957 page 19

## Text I

## Transliteration

1. [moŋ-k'a] -dēŋ-ri-yin-k'u-č'un-dur-
- 2. q'a-nu-su-dur-
3. [ɣ]oŋ-jhi-ŋan-[s]i-'uaŋ-'eu-ge-ma-nu-č'è-ri-'u-dun-no-yad-da-č'è-rig-ha-ra-na-ba-la-qa-du[n]-
4. šil-d[e]-dun-da-ru-qas-da-no-yad-da-yor-č'i-qun-ya-bu-qun-Él-č'i-ne-d'ul-qa-què-
5. bi-č'i[g]-
6. jŋ - [gis] - qa-nu-ba-q'a-nu-ba-ŋar-liq-dur-do-yid-Ér-k'e-'ud-sèn-šhi-ŋud-daš-mad-
7. č'a[ŋ-t'am-qa-da]-č'a-bu-ši-'li-ba-'l-ba-qub-č'i-ri-'eu-lu-'eu-ŋen-
8. [dēŋ]-ri-yi-ŋal-ba-ri-ŋu-hi-ru-'er-'eo-gun-'t'u-qayi-g'ek'-deg-sed-'-ŋu-
9. 'uè-É-du-'e-ber-beo-'e-su-U-ri-da-nu-
10. ŋar-li-qun-yo-su-'ar-č'aŋ-t'am-qa-da-č'a-bu-ši-'li-[ba]-'l-ba-qub-č'i-ri-'eu-lu-'eu-

Fig. 2 : Poppe 1957 page 46

27	石	晓	·h
28	因	匣(合)	ɣ
29	石	匣	h
30	尺	影	·

Fig. 3 : Junast & Yang 1987 page 7

### 四 八思巴字字头转写表

原书页码，一页分为上下两面，今以a代表上一面，b代表下一面。

八思巴字字头原误附后圆括弧内，其中误为其它字母者标出相应的字母，不成字者以⊗表示。校正的情况详见下面《校勘记》。

<b>上八<sup>a</sup></b>	š <sub>2</sub> uŋ	zéuŋ	ziŋ
ji duŋ 一东	š <sub>1</sub> uŋ	zi géiŋ 二庚	š <sub>2</sub> iŋ
guŋ	<b>上九<sup>b</sup></b>	giŋ	š <sub>1</sub> iŋ
k'uŋ	huŋ	k'iŋ	ɣiŋ
duŋ	ɣuŋ	kiŋ	·iŋ
t'uŋ	→ *uŋ	ŋiŋ	jiŋ
		diŋ	jiŋ

Fig. 4 : Junast & Yang 1987 page 150

27	28	29	30
≡	尺	山	因
z	·	y	l

Fig. 5 : Murata 1957 page 149

バクバ大字刻文 東壁 佛頂尊勝陀羅尼

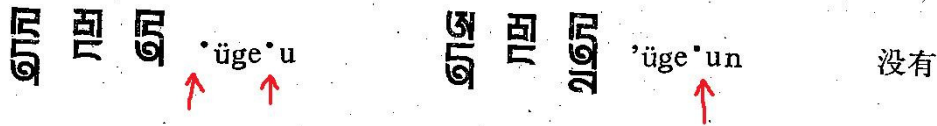
Uṣṇīṣavijaya-dhāraṇī written in 'Phags-pa Script, East Wall

'Phags-pa: [Line 1] bh·rum su·a h'a // om na mo bha ga va × // sar va tray lo kya //  
 Restored Sanskrit: oṃ bhrūṃ svāhā. [1] oṃ namo bhagavate. [5] sarva- trailokya-  
 bra ti × śiṣ ṭ'a ya // bud dh·aya tē na ma × t'a om bh·rum bh·rum bh·rum śo dha ya  
 prativiśiṣṭāya buddhāya [10] te namaḥ. tad yathā, oṃ bhrūṃ [15] bhrūṃ bhrūṃ. śodhaya

155

Fig. 6 : Murata 1957 page 155

2. 在词首元音前，“·”与零声母“”和字头符（实际上也是一种零声母符号）交替并存，这方面各有一例：


 'üge·u      'üge'un      没有

• 31 •

Fig. 7 : Junast 1989 page 31

聲		母		
p	ph	b	m	
t	th	d	n	
k	kh	g	ṅ	
ts	tsh	dz	s	z
tś	tśh	dź	ś	ź
·	(w)	j	x	y
l	lh	r		

Fig. 8 : Li Fanwen 2008 page 19

0163	𠬞	mji	2.29	I
0494	𠬞	·ji	1.16	VIII
0505	𠬞	la	2.14	IX
1616	𠬞	·o	2.42	VIII
0239	𠬞	lhji	1.30	IX
1598	𠬞	gji	1.14	V
1592	𠬞	lji	2.60	IX

Fig. 9 : Li Fanwen 2008 page 1024

### 3. Bibliography

- Junast 1989.** Junast 照那斯图. "Bāsībāzì zhōng de líng shēngmǔ fúhào" 八思巴字中的零声母符号; in *Mínzú Yǔwén* 民族语文 1989.2 : 29-36.
- Junast & Yang 1987.** Junast 照那斯图 and Yáng Nǎisī 杨耐思. *Měnggǔ Ziyùn Jiàoběn* 蒙古字韵校本. Beijing : Minzu Chubanshe 民族出版社, 1987.
- Li Fanwen 2008.** Lǐ Fànwén 李範文. *Xià-Hàn Zìdiàn* 夏漢字典. Beijing : Zhongguo Shehui Kexue Chubanshe 中國社會科學出版社, 2008.
- Murata 1957.** Murata Jiro 村田治郎 (ed.), *Chū-Yung-Kuan* 居庸關 (The Buddhist Arch of the Fourteenth Century A.D. at the Pass of the Great Wall Northwest of Peking). Kyoto : Kyoto University Faculty of Engineering 京都大學工學部, 1957.
- Poppe 1957.** Poppe, Nicholas. *The Mongolian Monuments in ᠬᠢᠯᠠᠭᠰᠢᠯᠠ Script*. Translated and edited by John R. Krueger. Wiesbaden : Otto Harrassowitz, 1957.

**ISO/IEC JTC 1/SC 2/WG 2**  
**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:** N3452-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, 2007-03, 2008-05)

### A. Administrative

1. Title:	<i>Proposal to encode a Middle Dot letter for Phags-pa transliteration</i>
2. Requester's name:	<i>Andrew West</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Individual contribution</i>
4. Submission date:	<i>2009-01-24</i>
5. Requester's reference (if applicable):	<i>N/A</i>
6. Choose one of the following:	
This is a complete proposal:	<i>YES</i>
(or) More information will be provided later:	<i>NO</i>

### B. Technical - General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<i>NO</i>
Proposed name of script:	<i>N/A</i>
b. The proposal is for addition of character(s) to an existing block:	<i>YES</i>
Name of the existing block:	<i>Latin Extended-D</i>
2. Number of characters in proposal:	<i>1</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary <input checked="" type="checkbox"/> B.1-Specialized (small collection) <input type="checkbox"/> B.2-Specialized (large collection) <input type="checkbox"/>	
C-Major extinct <input type="checkbox"/> D-Attested extinct <input type="checkbox"/> E-Minor extinct <input type="checkbox"/>	
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/> G-Obscure or questionable usage symbols <input type="checkbox"/>	
4. Is a repertoire including character names provided?	<i>YES</i>
a. If YES, are the names in accordance with the "character naming guidelines"?	<i>YES</i>
b. Are the character shapes attached in a legible form suitable for review?	<i>YES</i>
5. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?	<i>Andrew West</i>
If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:	
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<i>YES</i>
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<i>YES</i>
7. 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)?	<i>N/A</i>
8. 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 <a href="http://www.unicode.org">http://www.unicode.org</a> for such information on other scripts. Also see <a href="http://www.unicode.org/Public/UNIDATA/UCD.html">http://www.unicode.org/Public/UNIDATA/UCD.html</a> 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? If YES explain	<i>N/A</i>	<i>NO</i>
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.)? If YES, available relevant documents:	<i>N/A</i>	<i>NO</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	<i>N/A</i>	<i>Scholarly use.</i>
4. The context of use for the proposed characters type of use; common or rare) Reference:	<i>N/A</i>	<i>Common</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	<i>N/A</i>	<i>YES</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If Yes, reference:	<i>N/A</i>	<i>YES</i> <i>NO</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?		<i>N/A</i>
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If Yes, reference:	<i>N/A</i>	<i>NO</i> <i>N/A</i>
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If Yes, reference:	<i>N/A</i>	<i>NO</i> <i>N/A</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? If YES, is a rationale for its inclusion provided? If Yes, reference:	<i>See Proposal Summary below</i>	<i>YES</i> <i>YES</i>
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If Yes, reference:	<i>N/A</i>	<i>NO</i> <i>N/A</i>
Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If Yes, reference:	<i>N/A</i>	<i>N/A</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)		<i>NO</i> <i>N/A</i>
13. Does the proposal contain any Ideographic compatibility character(s)? If YES, is the equivalent corresponding unified ideographic character(s) identified? If Yes, reference:	<i>N/A</i>	<i>NO</i> <i>N/A</i>