

JTC1/SC2/WG2 N5012  
2018-08-30

Universal Multiple-Octet Coded Character Set  
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**Title: Discussion of 'Glyph Error of 'Phags-pa Alternate YA'**

**Source: Andrew West**

**Status: Individual Contribution**

**Action: For consideration by JTC1/SC2/WG2 and UTC**

**Date: 2018-08-30**

In L2/18-278 "A Glyph Error of 'Phags-pa Alternate YA(U+A86D)", Lo Dyih-Yuaan correctly points out that the code chart glyph for U+A86D does not correspond to the shape of the alternative form of the letter given in the source for this letter, *Měnggǔ Zìyùn* 蒙古字韵.

In my original proposal to encode the Phags-pa script (see WG2 N2622, L2/03-229 section 9), the alternative form of the letter YA was correctly identified as the rounded form with trumpeted lips on the left bowl (circled in red in Lo's document), and was proposed for representation as a standardized variant of the normal letter YA (U+A857, circled in blue in Lo's document).

At the WG2 meeting held at Xiamen, China in January 2005, as part of the agreement to encode the Phags-pa script (see WG2 N2922, L2/05-036) it was decided to encode PHAGS-PA LETTER ALTERNATE YA as a separate character (U+A86D). It was also decided to use a font supplied by China for the Phags-pa code chart. This font introduced the incorrect glyph form of U+A86D.





During review of the draft Phags-pa code chart I noticed this error, and reported the issue in August 2005 as document "Glyph Forms for PHAGS-PA LETTER YA and PHAGS-PA LETTER ALTERNATE YA" (WG2 N2972, L2/05-255). This document provided extensive evidence for the glyph shapes of the standard and alternate forms of the letter YA, and concluded that the code chart glyphs for these two characters were incorrect:

In conclusion, in *Menggu Ziyun* the Context A form of the letter YA is not distinguished by a square bowl but is mostly written using the normal form of the letter YA (i.e. should be represented using A857), and the Context B form of the letter YA is mostly written using a variant form of the letter YA with a trumpeted bowl (i.e. should be represented using A86D). Because the representative glyph for A86D in N2936 does not reflect this distinction, and because the character name for A86D does not indicate which phonetic context it should be used in (in contrast to A86E..A870 for which the character names indicate their phonetic context), users may be confused as to which of A857 or A86D should be used to represent the letter YA in the two phonetic contexts of *Menggu Ziyun*, and

consequently different users may represent the same Phags-pa entries in *Menggu Ziyun* using different characters, which would be extremely undesirable.

My document finally recommended changing the code chart glyphs as shown below:











**Table 5 : Recommended Glyphs for A857 and A86D**

Code Point	Character Name	Current Glyph	Proposed Glyph
A857	PHAGS-PA LETTER YA		
A86D	PHAGS-PA LETTER ALTERNATE YA		

To further reduce confusion, I also recommended that the character name for A86D be changed to PHAGS-PA LETTER PALATAL YA in order to indicate that it represents an historic [j] or [ɲ] initial (Initial 34: 喻) rather than an historic null initial (Initial 33: 影).

It seems that my recommendation to change the glyph of A857 was accepted, but my recommendations to change the glyph shape of A86D and give it a name that indicates its phonetic context were not accepted. At that time, I was a novice at character encoding (the proposal to encode the Phags-pa script being my first encoding proposal), and I was not a member of the WG2 committee (and UK was not a P-member of SC2), so there was little I could do to rectify the situation.

In the end I decided to release my Unicode Phags-pa font with the correct glyph forms for A857 and A86D, and promote the forms used in my font. A survey of four popular Phags-pa fonts shows that only James Kass' Code2000 font follows the code chart glyph forms, whereas the fonts produced by Microsoft and Google both use a glyph with a trumpeted left bowl for A86D.

Font	A857	A86D
Code chart font from China		
Code2000		
BabelStone Phags-pa Book		
Microsoft PhagsPa		
Noto Sans Phags Pa		

As major vendors already use the correct glyph form for A86D, it would not be disruptive to correct the code chart glyph for A86D, and so I recommend that the code chart glyph for A86D is changed to reflect the correct glyph shape used in the BabelStone, Microsoft and Noto fonts.