INTERNATIONAL ORGANIZATION FOR STANDARDIZATION ORGANISATION INTERNATIONALE DE NORMALISATION ISO/IEC JTC 1/SC 2/WG 2

Universal Multiple-Octet Coded Character Set (UCS)

ISO/IEC JTC 1/SC 2/WG 2 **N4407R** 2013-06-11

Title: Source:	Proposal to Encode Variants for Siddham Script Taichi KAWABATA, Toshiya SUZUKI, Kiyonori NAGASAKI and Masahiro
000100.	SHIMODA
References:	See "References" section in the document
Status:	Experts' Contribution
Action:	Request for review by ISO/IEC JTC 1/SC 2/WG 2

Proposal to Encode Variant Forms for Siddham Script

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Abstract

This document proposes a set of variants for Siddham script. Encoding of Siddham script was proposed by Anshuman Pandey as WG2 Document N4294 (*"Proposal to Encode the Siddham Script"*), and these characters are planned to be published as ISO/IEC 10646:2012 Amendment 2 (see M60.3 of N4354), which is currently at a stage of PDAM2. PDAM2 specifies specific Siddham variants, and it is sane and useful, as described in the proposal of N4294. On the other hand, in Japan, several Siddham variant glyphs are sometimes distinctively used to denote different religious icons. In this document, authors would like to propose variants of some Siddham characters to distinguish them in such case.

Background

Siddham script is one of Brahmi scripts that was born in 6th or 7th century of India. However, its modern use is limited to Japanese Buddhism and related research activities.

In Buddhism, Siddham scripts are used not only as phonetic characters, but also as symbols for some form of bodhisattvas. By this mean, Siddham characters can be regarded as ideograms. Siddham script has several kinds of variants that are phonetically equivalent. However, some variants may denote different meanings when they are used as ideograms. For example, there are at least three phonetically

equivalent variants for short vowel "I" (***), **), however, they may be treated distinctively when used

as ideograms. For example, as shown in Figure 7 below, ³ denotes *Shoryu (*諸龍), while ³ denotes *Zenrin (*禅林), that are different manifestation of Ksiti Garbha Bodhisattva.

Following tables summarizes Siddhams as ideograms shown in the following figures. It should be noted that subjects of symbolization by these ideograms may vary among the documents or Buddhist sects, but subjects are consistent within a single document, and the shape of these variants are also stable and consistent among the documents and sects.

We have identified that these variants sometimes convey semantic differences, which should not be expressed by the fonts.

Glyphs	Character	Name of Kstigrabhas or others in each figure with the symbol.

60	I	金剛宝(Figure 5), 鶏亀(Figure 6), 諸龍 (Figure 7), 金剛願·光味(Figure 8), 金剛源·諸龍(Figure 9), 金剛源(Figure 10)
00	I	放光王 (Figure 5), 宝性 (Figure 6), 禅林 (Figure 7), 放光・破勝 (Figure 8), 放光・禅林 (Figure 9), 放光王 (Figure 10)
Ş	Ι	讃龍 (Figure 4) 讃龍 (Figure 8)
٥٩	Ī	黒 (Figure 4) 地持地蔵(Figure 6)伏勝(Figure 7) 金剛宝 (Figure 9)
٩ ٩	Ī	弁尼 (Figure 4) 法印地蔵 (Fig 6)
S	U	SIDDHAM LETTER U form 1 烏波難陀龍王 (Figure 2)
5 5	U	SIDDHAM LETTER U form 2 大自在天妃 (Figure 2)
ુ	U	降三世明王 (Figure 1, 11, 12, 13).
্	U	軍荼利明王 (Figure 1, 11, 12, 13)
ે	Ū	Differently treated symbol at Mandala (Figure 14)
্হ	Ū	Differently treated symbol at Mandala (Figure 14)

Proposal

Authors would like to propose the following variants, among with already proposed Siddham characters in PDAM2.

Glyphs	Proposal	Description
00	115E0	SIDDHAM LETTER I VARIANT FORM A
ş	115E1	SIDDHAM LETTER I VARIANT FORM B
a Po	115E2	SIDDHAM LETTER II VARIANT FORM A
J.	115E3	SIDDHAM LETTER U VARIANT FORM A
्र	115E4	SIDDHAM VOWEL SIGN U VARIANT FORM A

Character Properties

Character properties given in the data format of UnicodeData.txt

115E5

115E0;SIDDHAM LETTER I VARIANT FORM A;Lo;0;L;;;;N;;;; 115E1;SIDDHAM LETTER I VARIANT FORM B;Lo;0;L;;;;N;;;; 115E2;SIDDHAM LETTER II VARIANT FORM A;Lo;0;L;;;;N;;;; 115E3;SIDDHAM LETTER U VARIANT FORM A;Lo;0;L;;;;N;;;; 115E4;SIDDHAM VOWEL SIGN U VARIANT FORM A;Mn;0;L;;;;N;;;; 115E5;SIDDHAM VOWEL SIGN UU VARIANT FORM A;Mn;0;L;;;;N;;;;

115E0 to 115E3 are Indic independent vowels, while 115E4 and 115E5 are dependent vowels.

Acknowledgements

Authors are thankful to Anshuman Pandey and SBII for their eager work for the original proposal of Siddham script and would like to thank Prof. Giryu Kodama (Shuchiin University) for his comprehensive advice and providing the valuable evidences and The SAT Daizōkyō Text Database Committee (led by Prof. Masahiro Shimoda, University of Tokyo) especially Prof. Koju Motoyama (Taisho University) and Dr. Kenichi Kurahisni (Taisho University) regarding providing of their expertise.

References

Anshuman Pandey (2012), "Proposal to Encode the Siddham Script in ISO/IEC 10646", JTC 1/SC 2/WG 2 N4294

Bibliography of Figures

Tokuyama, Kijun (徳山暉純), Illustration and Explanation of Siddham Script (図説 梵字), Published by Mokujisha (木耳社), 1974 Somekawa, Eisuke (染川英輔), Illustrations of Mandala (曼荼羅図典), 1993 Kodama, Giryu (児玉義隆) (1991), Comanion for Siddham Script (梵字必携) Kodama, Giryu (児玉義隆) (2002), Daiho-Rinkaku (大法輪閣) Tendai-Sect (天台宗) Comanion for Buddhism, Revised edition (改訂仏事必携版) 『大正新脩大藏經』[Taisho-Shinshu-Daizokyo], 1924-1934 『大正新脩大藏經 図像部』[Taisho-Shinshu-Daizokyo Zuzoubu], 1924-1934 Classical books from the collection of Prof. Giryu Kodama 『諸尊種字 [Shoson-Shuji] 』 『諸真言要集[Shoshingon-youshu] 』巻一 (Vol.1)



不動曼荼羅・中央尊



(from [Tokuyama:1974], p. 34)



Figure 2. Two variants of SIDDHAM LETTER U are semantically different. (Excerpt from 染川英輔(Somekawa, Eisuke)『曼荼羅図典』(Mandara-zuten), 1993)



Figure 3. Two variants of SIDDHAM LETTER II have different semantics. (from 『大正新脩大藏經』(Taisho-Shinshu-Daizokyo), 1924-1934, vol. 84, p. 407)



Figure 4. Three variants of SIDDHAM LETTER I and two variants of SIDDHAM LETTER II have respectively different semantics. (from [Kodama:1991], p. 233.)

放 預 重 王 天 光 地 剛願 剛 E 那 地

Figure 5. Two variants of SIDDHAM LETTER II have different semantics. (from 『諸尊種字(Shoson-Shuji)』, A collection of Prof. Giryu Kodama)

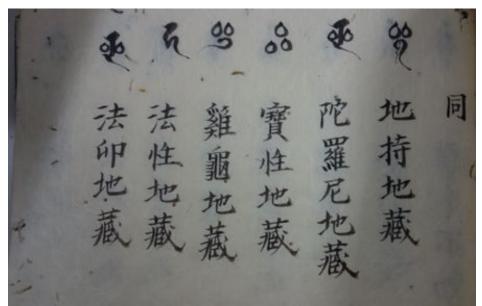


Figure 6. Two variants of SIDDHAM LETTER I and two variants of SIDDHAM LETTER II have respectively different semantics.

(from 『諸尊種字(Shoson-Shuji)』, A collection of Prof. Giryu Kodama)

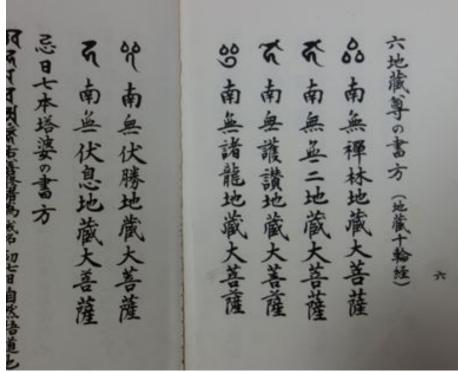


Figure 7. Two variants of SIDDHAM LETTER I have different semantics. (from a textbook of the Chizan school)

放檀金坨 电光光 今明 武 如福和金赦 A 16 副行

Figure 8. Three variants of SIDDHAM LETTER I and two variants of SIDDHAM LETTER II have respectively different semantics. (from 『諸真言要集(Shoshingon-youshu)』, A collection of Prof. Giryu Kodama)

「加天賀地蔵(度大上)」の(供鳥地蔵 い会開茶地蔵(度大上)」の(供鳥地蔵 たる) (1)会開茶地蔵(度振見)」の(無林地蔵 たる) (1)会開茶地蔵(度振見)」の(無林地蔵 たる) (1)会開茶地蔵(度振見)」の(一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一		会開枝の作り方、
(度地獄) 合調林地蔵 (度和集) 合調林地蔵 (度和集) 合語能地蔵 (度修羅) 合語能地蔵 (度修羅) 合語能地蔵 (高部手) て 読読地蔵 (高部手) (大陸地蔵 (高部手))	6. 放光土地藏 4. 金剛幅地藏	7 金剛遊地藏 行金開遊地藏
の伏島地蔵 で、長田一地蔵 で、長田一地蔵 で、長田一地蔵 で、長田一地蔵 で、長田一地蔵 下品のの 下品のの 下品のの	(度人間)	、上部を紙に7 (度) (度) (度) (度) 音生)
ると略下失金の許正記のの	6 伏島地蔵	60 再林地截 「長讃地藏
記名で開		る。 特記するこ なる たち許され
* * * * * *	5 5 5	5 5 5

Figure 9. Two variants of SIDDHAM LETTER I have different semantics. (from 天台宗(Tendai-shu)『改訂仏事必携』(Kaitei-butsuji-hikkei))

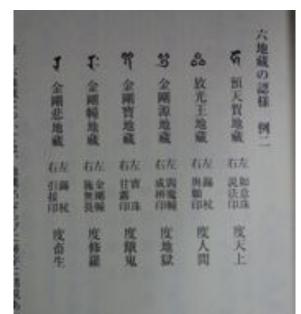


Figure 10. Two variants of SIDDHAM LETTER I have different semantics. (from 天台宗(Tendai-shu)『改訂仏事必携』(Kaitei-butsuji-hikkei))



Figure 11. Two variants of SIDDHAM LETTER I have different semantics. (from 『諸真言要集 [Shoshingon-youshu] 』巻一 (Vol.1))



Figure 12. SIDDHAM VOWEL SIGN U are semantically different.



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Figure 13. SIDDHAM VOWEL SIGN U are semantically different. (from 『大正新脩大藏經 図像部』(Taisho-Shinshu-Daizokyo Zuzoubu), vol. 5, p. 741.)



Figure 14. SIDDHAM VOWEL SIGN UU are semantically different. (from [Kodama: 2002], p. 105.)

(end of document)

ISO/IEC JTC 1/SC 2/WG 2 PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS			
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646 ¹			
Please fill all the sections A, B and C below.	oo/principles.html		
Please read Principles and Procedures Document (P & P) from .http://www.dkuug.dk/JTC1/SC2/WG2/do guidelines and details before filling this form.			
Please ensure you are using the latest Form from _http://www.dkuug.dk/JTC1/SC2/WG2/docs/sum See also _http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html_ for latest Roadma	<u>maryform.html</u> ps .		
A. Administrative			
1. Title: Proposal to encode Variants for Siddham Script			
2. Requester's name: SAT Project, Kiyonori Nagasaki			
2. Requester's name: SAT Project, Kiyonori Nagasaki 3. Requester type (Member body/Liaison/Individual contribution): Individual contribution	bution		
4. Submission date: 2013-06-11	1		
5. Requester's reference (if applicable):			
6. Choose one of the following:	Vee		
This is a complete proposal: (or) More information will be provided later:	Yes		
B. Technical – General			
 Choose one of the following: a. This proposal is for a new script (set of characters): 	No		
Broposed name of corint:			
b. The proposal is for addition of character(s) to an existing block:	Yes		
Name of the existing block: Siddham Script			
2. Number of characters in proposal:	6		
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 co	llection)		
C-Major extinct D-Attested extinct E-Minor extinct	,		
F-Archaic Hieroglyphic or Ideographic G-Obscure or questionable usag	e symbols		
4. Is a repertoire including character names provided?			
a. If YES, are the names in accordance with the "character naming guidelines"			
in Annex L of P&P document?	Yes		
b. Are the character shapes attached in a legible form suitable for review?	Yes		
5. Fonts related:	1 - I- 1		
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publ standard?	lisning the		
SAT Project			
b. Identify the party granting a license for use of the font by the editors (include address, e-n	nail. ftp-site. etc.):		
Taichi Kawabata (NTT)			
6. References:			
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	yes		
b. Are published examples of use (such as samples from newspapers, magazines, or other	sources)		
of proposed characters attached? Yes			
7. Special encoding issues:			
Does the proposal address other aspects of character data processing (if applicable) such a			
presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose informat	ion)? <u>No</u>		
8. Additional Information:			
Submitters are invited to provide any additional information about Properties of the proposed Cha	ractor(s) or Soriot		
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 <u>http://www.unicode.org</u> for such information on other scripts. Also			
see Unicode Character Database (<u>http://www.unicode.org/reports/tr44/</u>) and associated Unicode for information needed for consideration by the Unicode Technical Committee for inclusion in the			
	Unicoue Stanualu.		

¹ Form number: N4102-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, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?	Yes
If YES explain Variants needed for specific region (Japan)	
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? SAT Committee, Indic script experts	
If YES, available relevant documents:	
3. Information on the user community for the proposed characters (for example:	
size, demographics, information technology use, or publishing use) is included?	Yes
Reference:	
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:	
6. After giving due considerations to the principles in the P&P document must the proposed charac	ters be entirely
in the BMP?	N/A
If YES, is a rationale provided?	
If YES, reference:	
7. Should the proposed characters be kept together in a contiguous range (rather than being scatte	ered)? 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 eithe	r
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, or could be confused with, 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?	Vac
If YES, is a rationale for such use provided?	Yes Yes
If YES, reference: Dependent vowel signs.	103
Is a list of composite sequences and their corresponding glyph images (graphic symbols) pro-	wided2
If YES, reference: 12. Does the proposal contain characters with any special properties such as	
control function or similar semantics?	No
	110
If YES, describe in detail (include attachment if necessary)	
12 Dece the proposed contain any Ideographic compatibility characters?	
13. Does the proposal contain any Ideographic compatibility characters?	No
If YES, are the equivalent corresponding unified ideographic characters identified?	
If YES, reference:	