

# Proposal to Encode the Siddham Script in ISO/IEC 10646

Anshuman Pandey  
Department of History  
University of Michigan  
Ann Arbor, Michigan, U.S.A.  
pandey@umich.edu

August 1, 2012

## 1 Introduction

**Purpose** This is a formal proposal to encode the Siddham script in the Universal Character Set (ISO/IEC 10646). It replaces “Preliminary Proposal to Encode Siddham in ISO/IEC 10646” (N4185 L2/12-011R). The proposed encoding is a collaborative effort between the Script Encoding Initiative (SEI) at the University of California, Berkeley and the Shingon Buddhist International Institute, Fresno, California.

**Principles of the Encoding** Siddham is a Brahmi-based writing system that originated in India, which at present is used primarily in East Asia. It is associated nowadays with esoteric Buddhist traditions in Japan. The technical description for Siddham given here may differ from the traditional analysis and philosophical interpretations of the script and its constituent characters and glyphs. Siddham is structurally an Indic script and its proposed encoding adheres to the UCS model for Brahmi-based writing systems, such as Devanagari and similar scripts. An attempt has been made to encode all distinct characters attested in Siddham records, although more characters may be uncovered through additional research. The characters that are proposed for encoding have been analyzed in accordance with the character-glyph model of the UCS. As a result, the proposed encoding may contain characters that are not part of traditional character repertoires. It may also exclude characters that are traditionally regarded as independent letters, such as conjuncts, which are to be represented in the manner specified by the UCS encoding model for Indic scripts.

**Script Name** The script is assigned the name ‘Siddham’. It is also known as ‘Siddhamāṭṛkā’ and ‘Kuṭiḷa’, which are specified as aliases in the names list. It has been suggested that ‘Siddhamatrika’ is more suitable than ‘Siddham’ because it broadly accommodates historical and regional forms of the script. However, the script is most commonly known by the identifier ‘Siddham’. Expert comments on the name are available in L2/12-221 and L2/12-237.

**Unification** The encoding for Siddham is to serve as a unifying block for all regional variants of the script, such as ‘Siddhamāṭṛkā’ and ‘Kuṭiḷa’. The representative glyphs are based upon Japanese forms of Siddham characters on account of active usage of the script by Japanese Buddhist communities.

**Characters Proposed** A total of 72 Siddham characters is proposed for encoding, as shown in the code chart and names list (figures 1 and 2). Character names follow the UCS convention for Brahmi-based scripts. Other characters have been identified, but are not yet proposed for encoding because additional information regarding their usage is required (see Section 4).

**Allocation** The Siddham block is allocated to the Supplementary Multilingual Plane (SMP) at the range U+11580..U+115FF.

**Font** Representative glyphs are based upon the ‘Tenchiiji’ font designed by the Shingon Buddhist International Institute with assistance from Lee Collins and Peter Lofting. The present author has added new glyphs and made some modifications to existing glyphs.

## 2 Background

The Siddham script ((𑖀𑖃𑖆 *siddham*, (𑖀𑖃𑖆𑖅 *siddhām*; Sans. सिद्धं *siddham*; Chi. 悉曇文字 *xītán wénzì*; Jap. 悉曇 *shittan*; Kor. 실담 *siltam*) is a Brahmi-based script historically used for writing Sanskrit in China, Japan, and Korea. It is also known in Japan as *bonji* (梵字; Chi. *fànzi*; “Brahmā letters” < Sans. ब्रह्मा *brahmā*). At present, Siddham is used predominantly in Japan, where it is associated with the Shingon (真言) and Tendai (天台) schools of Japanese esoteric Buddhism (密教 *mikkyō*). Siddham was used for writing Buddhist manuscripts, but it is now mainly used for ceremonial and ritualistic purposes, such as the copying of *sūtra*-s and the writing of *mantra*-s and *bījākṣara*-s “seed syllables” associated with esoteric Buddhist practices. It was also used for inscriptions on statuary, amulets, and other artefacts.

Tradition states that the esoteric philosophy for Siddham was introduced in Japan in 806 by the Buddhist monk Kūkai (空海) (774–835), who learned the script in China from Prajñā (Sans. प्रज्ञा; Chi. 般若三藏 *Bōrě Sāncáng*) (734–c.810), a monk from Kashmir who served the Buddhist community of Chang’an (modern 西安 *Xi’an*) as an expert of Sanskrit and translator of Buddhist texts (van Gulik 1980: 114; Abe 1999: 117–119). Known better by his posthumous title Kōbō-Daishi (弘法大師), Kūkai was the founder of the Shingon (“True Word”) school. Another proponent of Siddham in Japan was Saichō (最澄) (767–822), also called Dengyō-Daishi (伝教大師), who was the founder of the Tendai school.

There are several regional forms of Siddham. The Japanese form is described here and it is presented as the normative form for the encoding. In Japan, Siddham calligraphy is classified as ‘formal’ or ‘informal’ based upon the implement used for writing. The ‘formal’ script is written using a wooden stylus called *bokuhitsu* (木筆; Chi. *mù-bǐ*), while the ‘informal’ or ‘brush’ style is written using the common hair-tipped *fude* (筆; Chi. 毛筆 *máo-bǐ*). The ‘formal’ and ‘informal’ styles of letters are shown in figures 12–17. The forms of Siddham letters used in Korea (see figures 21–26) differ significantly from those of Japanese and Chinese Siddham. However, given the close relationships between the regional forms and their identities as ‘Siddham’, it is practical to unify these variants with the proposed script block.

Siddham is most closely related to Sharada (see tables 1 and 2), a Brahmi-based script that originated in Kashmir and that was used throughout northwestern India for producing manuscripts and inscriptions (see Pandey 2009). The use of Sharada spread from India into Central Asia and travelled from there to China with Buddhist monks. Although there are not many records in Central Asian Siddham, an example of it is found on the palm-leaf manuscripts of the Hōryū-ji (法隆寺) temple in Nara, Japan (see figure 6), which were brought there from China in 609. Unlike Siddham written with the *bokuhitsu* or *fude*, the Siddham letters on the Hōryū-ji manuscripts were written with the typical Indian reed-pen. A detailed palaeographical description of the Siddham of these manuscripts was presented by Georg Bühler (1884).

### 3 Writing System

#### 3.1 Structure

The general structure (phonetic order, *mātrā* reordering, use of *virāma*, etc.) of Siddham is similar to that of Devanagari.

#### 3.2 Directionality

Siddham is written horizontally left-to-right and also vertically top-to-bottom with lines proceeding from right-to-left. See figure 5 for an example of text written top-to-bottom.

#### 3.3 Virāma

The Siddham sign ् VIRAMA is identical to the corresponding character in Devanagari. It is used for silencing the inherent vowel of a consonant. The default rendering of VIRAMA is as a visible sign. The VIRAMA is known in Sanskrit as हलन्त *halanta* and in Japanese as 恒達点 *tatatsu-ten*.

#### 3.4 Vowel Letters

Fourteen vowel letters are proposed for encoding:

𑖀	A	𑖄	U	𑖛	VOCALIC L	𑖚	O
𑖁	AA	𑖅	UU	𑖜	VOCALIC LL	𑖛	AU
𑖂	I	𑖆	VOCALIC R	𑖝	E		
𑖃	II	𑖇	VOCALIC RR	𑖞	AI		

**Encoding Order** The encoding order for vowel signs follows that of Brahmi-based scripts in the UCS. In the Japanese arrangement for Siddham, the vocalic letters appear at the end of the vowel order.

**Graphical variants** Variant forms of vowel letters are attested, eg. 𑖁 AA is also written as 𑖁 (see figure 12). These are to be managed through fonts.

#### 3.5 Vowel Signs

Eleven dependent vowel signs are proposed for encoding:

𑖠	VOWEL SIGN AA	𑖡	VOWEL SIGN UU	𑖣	VOWEL SIGN AI
𑖢	VOWEL SIGN I	𑖢	VOWEL SIGN VOCALIC R	𑖣	VOWEL SIGN O
𑖣	VOWEL SIGN II	𑖣	VOWEL SIGN VOCALIC RR	𑖣	VOWEL SIGN AU
𑖤	VOWEL SIGN U	𑖤	VOWEL SIGN E		

**Unattested vowel signs** Dependent forms of 𑖦 VOWEL LETTER VOCALIC L and 𑖧 VOWEL LETTER VOCALIC LL are as of yet unattested. Space has been reserved in the code chart in the event that additional research uncovers such characters.

**Encoding Order** The encoding order for vowel signs follows that of Brahmi-based scripts in the UCS. In the Japanese arrangement for Siddham, the signs for the vocalic letters appear at the end of the vowel-sign order.

**Graphical variants** There are glyphic variants of vowel signs (see figures 12 and 19), which are to be managed through fonts. One of the most common variants is the use of 𑖦 for 𑖦 VOWEL SIGN AI.

**Alternate forms** There is an alternate form for VOWEL SIGN VOCALIC RR. Normally, this sign is written as 𑖦. The two-part form 𑖦 is also attested; it is a combination of 𑖦 VOWEL SIGN VOCALIC R and 𑖦 VOWEL SIGN AA, in which the latter sign acts as a vowel-length mark.

### 3.6 Vowel-Modifier Signs

Three vowel-modifier signs are proposed for encoding:

1. 𑖦 SIGN ANUSVARA This sign indicates nasalization.
2. 𑖦 SIGN CANDRABINDU This sign indicates nasalization.
3. 𑖦 SIGN VISARGA This sign represents post-vocalic aspiration (/h/). In Sanskrit phonology, it indicates an allophone of 𑖦 SA or 𑖦 RA in word-final position.

**Ordering of multiple signs** In certain cases, such as when writing ‘seed syllables’, a base letter that is combined with the signs ANUSVARA OR CANDRABINDU may also be combined with the sign VISARGA, eg. 𑖦 or 𑖦. In such cases the VISARGA is written last: <𑖦 AA, 𑖦 CANDRABINDU, 𑖦 VISARGA> → 𑖦. Rendering engines should recognize such sequences of combining marks as valid.

### 3.7 Consonants

Thirty-three consonant letters are proposed for encoding:

𑖦	KA	𑖦	NYA	𑖦	DHA	𑖦	LA
𑖦	KHA	𑖦	TTA	𑖦	NA	𑖦	VA
𑖦	GA	𑖦	TTHA	𑖦	PA	𑖦	SHA
𑖦	GHA	𑖦	DDA	𑖦	PHA	𑖦	SSA
𑖦	NGA	𑖦	DDHA	𑖦	BA	𑖦	SA
𑖦	CA	𑖦	NNA	𑖦	BHA	𑖦	HA
𑖦	CHA	𑖦	TA	𑖦	MA		
𑖦	JA	𑖦	THA	𑖦	YA		
𑖦	JHA	𑖦	DA	𑖦	RA		

Each consonant bears the inherent vowel /a/, represented by  $\text{𑖀}$  A, which is silenced using  $\text{𑖄}$  VIRAMA. Variant forms of consonants are attested (see figures 13–17); these are to be managed at the font level.

### 3.8 NUKTA

The sign  $\text{𑖅}$  NUKTA is used for transcribing sounds for which distinct characters do not natively exist in the writing system (see figure 43). The NUKTA is not a traditional Siddham character, but it is part of 現代悉曇 *gendai shittan* “modern Siddham”, which is an extension of Siddham that accommodates the writing of Japanese and English. The name of the character is derived from the Arabic word *نقطة nuqṭah = nukta* “dot” and corresponds to characters such as  $\text{𑖅}$  U+093C DEVANAGARI SIGN NUKTA.

The NUKTA is generally written with a letter that has the closest phonetic proximity to the target sound. For example, in figure 44 it is shown combined with  $\text{𑖆}$  JA (/dʒ/) for representing /z/. The NUKTA is always combined with the letter that it modifies. When it occurs with a consonant that is also combined with a vowel sign, then NUKTA is written immediately after the consonant, eg.  $\text{𑖆}$  JA,  $\text{𑖅}$  SIGN NUKTA,  $\text{𑖇}$  VOWEL SIGN U >  $\text{𑖆𑖅𑖇}$  zu. Its positioning with regard to the base letter depends upon the shape of the letter and the presence of any below-base vowel signs.

### 3.9 Consonant Conjuncts

Consonant clusters in Siddham are written as conjuncts and follow the same model as conjuncts in Devanagari. Conjuncts are represented using VIRAMA, which is written after each consonant in a cluster. They may be written vertically, horizontally, and as independent ligatures.

There are traditional Chinese and Japanese tabulations for Siddham conjuncts. One such classification system was described in the manual *Xītán Zìjì* (悉曇字記) by the Chinese monk Zhì-guǎng (智廣) (d. 806), who organized the various combinations of Siddham consonant clusters into eighteen categories (see figure 45). Examples of several conjuncts are shown in figures 46–61.

**Shaping** The shapes of some consonants change when they occur in conjunct-initial position (eg.  $\text{𑖆}$  KA  $\rightarrow$   $\text{𑖆}$ ;  $\text{𑖇}$  RA  $\rightarrow$   $\text{𑖇}$  *repha*), some are written using post-base forms when they are non-initial (eg.  $\text{𑖈}$  YA  $\rightarrow$   $\text{𑖈}$ ). These ligating forms are illustrated in figures 13–17 (column labeled “in combination”) and figures 19–20.

**Depth** Siddham conjuncts may represent clusters with large numbers of consonants. For example, a conjunct of six consonants is  $\text{𑖆𑖇𑖈𑖉𑖊𑖋}$  *rksvrya*, which is produced using the sequence  $\text{𑖇}$  RA,  $\text{𑖄}$  VIRAMA,  $\text{𑖆}$  KA,  $\text{𑖄}$  VIRAMA,  $\text{𑖈}$  SSA,  $\text{𑖄}$  VIRAMA,  $\text{𑖇}$  VA,  $\text{𑖄}$  VIRAMA,  $\text{𑖇}$  RA,  $\text{𑖄}$  VIRAMA,  $\text{𑖈}$  YA >.

**Special Conjuncts** The glyphs  $\text{𑖆𑖇}$  *kṣa* and  $\text{𑖆𑖇𑖈}$  *llam* are often shown as independent letters in Siddham charts. The *kṣa* represents conjuncts of different consonant letters and *llam* represents conjuncts of geminate consonants. Based upon the UCS encoding model, they are not independent letters, but conjuncts. They are to be represented using the following sequences:  $\text{𑖆𑖇}$  =  $\text{𑖆}$  KA,  $\text{𑖄}$  VIRAMA,  $\text{𑖈}$  SSA > (compare Devanagari  $\text{क्ष}$  *kṣa* =  $\text{𑖆}$  KA,  $\text{𑖄}$  VIRAMA,  $\text{𑖈}$  SSA >);  $\text{𑖆𑖇𑖈}$  =  $\text{𑖆}$  LA,  $\text{𑖄}$  VIRAMA,  $\text{𑖆}$  LA,  $\text{𑖅}$  ANUSVARA >.

**Default Representation** It is expected that a basic Siddham font will contain the necessary glyphs for properly representing conjuncts. A consonant cluster is depicted with the appropriate conjunct glyph only if such a glyph is available in the font. If the conjunct glyph is unavailable, the bare consonants in the cluster are depicted using their full forms combined with a visible VIRAMA. While these depictions of conjuncts may not be used in Siddham orthography, they are necessary for the representation of the script in plain text. In

order to render Siddham text appropriately in the absence of distinct glyphs for any possible conjunct, it is recommended that a set of condensed forms of letters in conjunct-initial and non-initial positions be available so that arbitrary conjuncts may be rendered in the vertical orientation used in Siddham orthography.

### 3.10 Consonant-Vowel Combinations

Vowel signs combine with consonant letters and conjuncts as in Devanagari. Some consonant shapes are modified when they are written with vowels (eg. क KA → क् when combining with उ VOWEL SIGN U: कु ku). Some vowel signs are written as contextual forms when they occur with certain consonants. For example, उ VOWEL SIGN U → ू and उ VOWEL SIGN UU → ू when combined with ङ NGA, ञ JA, ट TTA, ठ THA, ध DDHA, न NA, प PA, व VA. These signs have specific forms when written with र RA: रू ru and रू rū.

### 3.11 Head Marks

The ॐ SIGN SIDDHAM is written at the beginning of a text (see figures 6 and 38). Palaeographically, the sign corresponds to characters used in other scripts, such as ॐ U+0FD3 TIBETAN MARK INITIAL BRDA RNYING YIG MGO MDUN MA. It represents the Sanskrit word सिद्धम् *siddham* “accomplished” and the phrase सिद्धिरस्तु *siddhirastu* “may there be success”. The sign is often glossed as ‘om’ (see figure 27). There is a vertically-oriented glyphic variant: ॐ (see figure 33). In the Japanese tradition, SIDDHAM is analyzed as being formed from the lower portion of ॐ I.

### 3.12 Punctuation

Four punctuation characters are proposed for encoding:

1. ॥ DANDA This mark is used for marking the end of sentences and other short text sections (see figures 32, 40, 41). It has a graphical variant ॥ that is used in ‘informal’ Japanese Siddham. The Siddham DANDA corresponds to, but is graphically distinct from, U+0964 DEVANAGARI DANDA.
2. ॥ DOUBLE DANDA This mark is used at the end of paragraphs and larger text blocks (see figures 32, 40, 41). It is also written with an underdot as ॥. The graphical variant ॥ is used in ‘informal’ Japanese writing. The Siddham DOUBLE DANDA corresponds to, but is graphically distinct from, U+0965 DEVANAGARI DOUBLE DANDA.
3. ॥ SEPARATOR-1 This sign is used for marking boundaries between syllables, words, and phrases. It is written at the head-height and is distinct from the ॥ middle dot. Usage of SEPARATOR-1 is shown in figure 38.
4. ॥ SEPARATOR-2 This sign is used for marking boundaries between syllables, words, phrases. Its usage is shown in figures 40, 41, 42, where it appears alongside ॥ DANDA and ॥ DOUBLE DANDA.

### 3.13 Repetition Marks

The ॥ REPETITION MARK-1, ॥ REPETITION MARK-2, and ॥ REPETITION MARK-3 are used for indicating the repetition of text. They are written after the text intended to be repeated.

The ॥ REPETITION MARK-1 has the glyphic variants ॥ and ॥ (see figures 32, 33, 35). Based upon its graphical shape and function, it is likely that REPETITION MARK-1 is derived from an Indic digit ‘2’ (compare Devanagari २). A common practice in manuscript traditions of northern India is to indicate the repetition of

words using digits. The digit used indicates the number of repetitions, eg. ‘2’ for twice, ‘3’ for thrice. As there are no attested digits for Siddham, it appears that the original link between REPETITION MARK-1 and a numeric value was forgotten and the original digit for ‘2’ was preserved as a symbol. This explains the serialized usage of REPETITION MARK-1 in the text excerpt in figure 36 for indicating a triple reading, ie. Devanagari “हूँ २ २” instead of “हूँ ३” for *hūṃ hūṃ hūṃ*).

The ് REPETITION MARK-2 is used in the vertical version of the *Uṣṇīṣa Vijaya Dhāraṇī Sūtra* shown in figure 5. An excerpt of the *Sūtra* with the repetition marks highlighted is shown in figure 37. Here, the mark appears after ് *ya* (3rd character), another *ya* (7th character), and ് *ra* (10th character). The mark prompts the reader to parse the text as “*jaya jaya, vijaya vijaya, smara smara*”. It is possible that REPETITION MARK-2 is used only in a vertical environment. This is supported by the accompanying Japanese annotation, which glosses ് using < U+3031 VERTICAL KANA REPEAT MARK.

The ് REPETITION MARK-3 is shown in several Siddham manuals. It is proposed for encoding because it is a graphically-distinct character.

### 3.14 Terminal Mark

The ് END OF TEXT MARK is used for indicating the end or completion of a text.

## 4 Characters Not Proposed for Encoding

Several characters attested in Siddham sources are not presently proposed for encoding. Additional research is needed for determining the suitability of encoding these characters, which are described below.

### 4.1 Conjuncts

The glyphs ് *kṣa* and ് *llam* are conjuncts and are to be represented as such (see Section 3.9).

### 4.2 Digits





Additional research is needed in order to determine the existence of digits in the various regional forms of Siddham. There is no traditional set of digits in Japanese Siddham; however, there are modern innovations named “Bonji numerals” (see figure 18), which resemble Devanagari forms. They may be considered for future inclusion.

### 4.3 Punctuation

















The following punctuation-like characters are not proposed for encoding:

1. The mark ് is used for indicating end of text in figure 6. It appears to be composed the following sequence < ് DOUBLE DANDA, ് SIGN VISARGA, ് DOUBLE DANDA >.
2. Word and phrase separation is also indicated using a ് middle dot (see figure 39). This mark differs from ് SEPARATOR-I in terms of its vertical placement. It is to be written using the generic ് U+00B7 MIDDLE DOT.



#### 4.4 Om

The syllable  *om* is not proposed for encoding as an atomic character. It is to be represented using the sequence < O,  CANDRABINDU> → .

#### 4.5 Ornaments

Various ornaments are used for marking the ends of sections. The following are attested in script manuals (see figures 32, 33, 35) and manuscripts (see figures 6, 39): , , , , , , , , , , , , , , , . These ornaments are decorative and do not express textual information. For this reason, they are not proposed for encoding at present. If additional information about these ornaments indicates that they possess textual value, then they may be proposed for encoding in the future.

#### 4.6 Editorial Marks

Siddham manuscripts contain editorial marks, such as those used for indicating the insertion or deletion of text. The characters  and  are used for marking deletions (see figure 35). Another character is a caret-like mark that is written below the baseline to indicate the insertion of text. These editorial marks are not unique to Siddham and are used in various Indic manuscript traditions. These characters should be represented using already-encoded characters with similar functions.

#### 4.7 Pedagogical Characters

There are several pedagogical characters used for describing Siddham letters in script manuals. Some of these are discussed below. These characters may be candidates for encoding, but additional research is required regarding their usage and suitability for encoding, as per the UCS encoding model.

**Character Strokes** Siddham manuals describe elemental character strokes that are used for writing letters (see figure 65). Some of these are described below.
















1.  *myō-ten* The stroke  is the initial mark made when a brush is pressed upon a surface for writing any Siddham letter (see the stroke order in figures 66 and 67). It is known in Japanese as 命点 *myō-ten* “life mark”. The *myō-ten* corresponds to the Chinese simple stroke  (點 *diǎn* “dot”), which is encoded in the UCS as  CJK STROKE D.
2.  *a-ten* The stroke  is shown in some historical and modern Siddham handbooks as a dependent vowel sign of  A (see figures 19, 63, 64) or as a ‘variation’ of the letter (see figure 12). For this reason it is called ア点 *a-ten* “a mark” in Japanese. It is a horizontally elongated form of  *myō-ten*. The *a-ten* is not a true ‘vowel sign’, but a portion of the top-stroke of each consonant letter.
3.  *gyōgatsu-ten* The stroke  is known in Japanese as 仰月点 *gyōgatsu-ten* “moon-viewing mark” and in Sanskrit as अर्धचन्द्र *ardhacandra* “half-moon”. It is the foundational stroke of the sign  CANDRABINDU, which is produced by writing  ANUSVARA with *gyōgatsu-ten*. The stroke is considered 莊嚴 *shougōn* (Sans. अलंकार *alaṃkāra*) “adornment” or “decoration” in that it does not change the phonological value of ANUSVARA. The use of *gyōgatsu-ten* is shown in figure 68, where it appears as an independent graphical element.

Figure 13 (row 11) shows the below-base character  listed along with  CANDRABINDU and  ANUSVARA. What is this character? Is this the *gyōgatsu-ten*?



4. ㄣ *u-ten* The stroke ㄣ is known as ウ点 *u-ten* “u mark” in Japanese. It is used for forming characters like ㄣ I, ㄣ U, and ㄣ UU.
5. 〇 *en-ten* The stroke 〇 is known as 円点 *en-ten* “circle mark” in Japanese. It is used for forming characters like 〇 ANUSVARA and 〇 TTHA.

**‘Headless’ Letters** Some Japanese treatises on Siddham offer explanations about the phonological properties of Siddham consonants by using ‘headless’ letters, which are the regular consonants written without the top-stroke (*myō-ten*; Sans. *mātrā*). One such work, the *Shittan Bunsho* (悉曇聞書) of Jiun Sonja (慈雲尊者) (1718–1804), expounds upon the alphasyllabic and alphabetic natures of Siddham consonants by using ‘headless’ letters. Jiun explains that removing the top-stroke of 𑖀 KA produces the ‘headless’ form 𑖀 in which the inherent vowel is absent: /ka/ → /k/. According to this view, the inherent vowel /a/ is contained in the top-stroke and eliminating it produces an alphabetic form of a letter. Secondly, when this ‘headless’ *ka* is combined with a ् VIRAMA as 𑖀, the remaining consonantal value is removed: /k/ → ∅. In this case, the VIRAMA essentially eradicates the entire letter. A table of ‘headless’ letters is given by Jōgon (淨嚴) (1639–1702) in his *Shittan Sanmitsushō* (三密鈔), which is presented here in figure 62. While ‘headless’ forms of Siddham consonants are required for accurately representing Jiun’s *Shittan Bunsho*, they are to be considered as glyphic variants of regular letters and are to be managed through fonts.

## 4.8 *Bījākṣara-s*

A *bījākṣara* or *bīja* “seed syllable” may be written such that the constituent characters are joined to form a highly-stylized ligature (see figures 70, 71, 72, 73). For example, the word 𑖀𑖄 *phaṭ* (<𑖀 PHA, 𑖄 TTA, ् VIRAMA>) may be written as 𑖀𑖄 *phaṭ*. A more complex example is a *bīja* of Ācala (Sans. अचल; Chi. 不動明王 Búdòng Míngwáng; Jap. Fudō Myōō), which is a ligature formed by joining 𑖀 *hām* and 𑖀 *mām*, the last two syllables of his *mantra*, into a monogram written as 𑖀 or 𑖀 or 𑖀 *hāmmām*.

These types of ligatures cannot be represented in plain text using characters proposed for encoding. They are calligraphic innovations and are to be managed through the application of font features or text attributes.

## 5 Character Data

### 5.1 Collation

The primary collating order for Siddham is as follows:

𑖀 A < 𑖀 AA < 𑖀 I < 𑖀 II < 𑖀 U < 𑖀 UU < 𑖀 E < 𑖀 AI < 𑖀 O < 𑖀 AU <  
 𑖀 VOCALIC R < 𑖀 VOCALIC RR < 𑖀 VOCALIC L < 𑖀 VOCALIC LL < 𑖀 KA < 𑖀 KHA <  
 𑖀 GA < 𑖀 GHA < 𑖀 NGA < 𑖀 CA < 𑖀 CHA < 𑖀 JA < 𑖀 JHA < 𑖀 NYA <  
 𑖀 TTA < 𑖀 TTHA < 𑖀 DDA < 𑖀 DDHA < 𑖀 NNA < 𑖀 TA < 𑖀 THA < 𑖀 DA <  
 𑖀 DHA < 𑖀 NA < 𑖀 PA < 𑖀 PHA < 𑖀 BA < 𑖀 BHA < 𑖀 MA < 𑖀 YA < 𑖀 RA <  
 𑖀 LA < 𑖀 VA < 𑖀 SHA < 𑖀 SSA < 𑖀 SA < 𑖀 HA < 𑖀 SIGN AA < 𑖀 SIGN I <  
 𑖀 SIGN II < 𑖀 SIGN U < 𑖀 SIGN UU < 𑖀 SIGN E < 𑖀 SIGN AI < 𑖀 SIGN O <  
 𑖀 SIGN AU < 𑖀 SIGN VOCALIC R < 𑖀 SIGN VOCALIC RR < 𑖀 VIRAMA

The following signs have secondary weights: ॐ CANDRABINDU, ॐ ANUSVARA, ॐ VISARGA, ॐ NUKTA.

## 5.2 Character Properties

Character properties given in the data format of UnicodeData.txt:

```

11580;SIDDHAM LETTER A;Lo;0;L;;;;;N;;;;;
11581;SIDDHAM LETTER AA;Lo;0;L;;;;;N;;;;;
11582;SIDDHAM LETTER I;Lo;0;L;;;;;N;;;;;
11583;SIDDHAM LETTER II;Lo;0;L;;;;;N;;;;;
11584;SIDDHAM LETTER U;Lo;0;L;;;;;N;;;;;
11585;SIDDHAM LETTER UU;Lo;0;L;;;;;N;;;;;
11586;SIDDHAM LETTER VOCALIC R;Lo;0;L;;;;;N;;;;;
11587;SIDDHAM LETTER VOCALIC RR;Lo;0;L;;;;;N;;;;;
11588;SIDDHAM LETTER VOCALIC L;Lo;0;L;;;;;N;;;;;
11589;SIDDHAM LETTER VOCALIC LL;Lo;0;L;;;;;N;;;;;
1158A;SIDDHAM LETTER E;Lo;0;L;;;;;N;;;;;
1158B;SIDDHAM LETTER AI;Lo;0;L;;;;;N;;;;;
1158C;SIDDHAM LETTER O;Lo;0;L;;;;;N;;;;;
1158D;SIDDHAM LETTER AU;Lo;0;L;;;;;N;;;;;
1158E;SIDDHAM LETTER KA;Lo;0;L;;;;;N;;;;;
1158F;SIDDHAM LETTER KHA;Lo;0;L;;;;;N;;;;;
11590;SIDDHAM LETTER GA;Lo;0;L;;;;;N;;;;;
11591;SIDDHAM LETTER GHA;Lo;0;L;;;;;N;;;;;
11592;SIDDHAM LETTER NGA;Lo;0;L;;;;;N;;;;;
11593;SIDDHAM LETTER CA;Lo;0;L;;;;;N;;;;;
11594;SIDDHAM LETTER CHA;Lo;0;L;;;;;N;;;;;
11595;SIDDHAM LETTER JA;Lo;0;L;;;;;N;;;;;
11596;SIDDHAM LETTER JHA;Lo;0;L;;;;;N;;;;;
11597;SIDDHAM LETTER NYA;Lo;0;L;;;;;N;;;;;
11598;SIDDHAM LETTER TTA;Lo;0;L;;;;;N;;;;;
11599;SIDDHAM LETTER TTHA;Lo;0;L;;;;;N;;;;;
1159A;SIDDHAM LETTER DDA;Lo;0;L;;;;;N;;;;;
1159B;SIDDHAM LETTER DDHA;Lo;0;L;;;;;N;;;;;
1159C;SIDDHAM LETTER NNA;Lo;0;L;;;;;N;;;;;
1159D;SIDDHAM LETTER TA;Lo;0;L;;;;;N;;;;;
1159E;SIDDHAM LETTER THA;Lo;0;L;;;;;N;;;;;
1159F;SIDDHAM LETTER DA;Lo;0;L;;;;;N;;;;;
115A0;SIDDHAM LETTER DHA;Lo;0;L;;;;;N;;;;;
115A1;SIDDHAM LETTER NA;Lo;0;L;;;;;N;;;;;
115A2;SIDDHAM LETTER PA;Lo;0;L;;;;;N;;;;;
115A3;SIDDHAM LETTER PHA;Lo;0;L;;;;;N;;;;;
115A4;SIDDHAM LETTER BA;Lo;0;L;;;;;N;;;;;
115A5;SIDDHAM LETTER BHA;Lo;0;L;;;;;N;;;;;
115A6;SIDDHAM LETTER MA;Lo;0;L;;;;;N;;;;;
115A7;SIDDHAM LETTER YA;Lo;0;L;;;;;N;;;;;
115A8;SIDDHAM LETTER RA;Lo;0;L;;;;;N;;;;;
115A9;SIDDHAM LETTER LA;Lo;0;L;;;;;N;;;;;
115AA;SIDDHAM LETTER VA;Lo;0;L;;;;;N;;;;;
115AB;SIDDHAM LETTER SHA;Lo;0;L;;;;;N;;;;;
115AC;SIDDHAM LETTER SSA;Lo;0;L;;;;;N;;;;;
115AD;SIDDHAM LETTER SA;Lo;0;L;;;;;N;;;;;
115AE;SIDDHAM LETTER HA;Lo;0;L;;;;;N;;;;;
115AF;SIDDHAM VOWEL SIGN AA;Mc;0;L;;;;;N;;;;;
115B0;SIDDHAM VOWEL SIGN I;Mc;0;L;;;;;N;;;;;
115B1;SIDDHAM VOWEL SIGN II;Mc;0;L;;;;;N;;;;;
115B2;SIDDHAM VOWEL SIGN U;Mn;0;NSM;;;;;N;;;;;
115B3;SIDDHAM VOWEL SIGN UU;Mn;0;NSM;;;;;N;;;;;
115B4;SIDDHAM VOWEL SIGN VOCALIC R;Mn;0;NSM;;;;;N;;;;;
115B5;SIDDHAM VOWEL SIGN VOCALIC RR;Mn;0;NSM;;;;;N;;;;;

```

```

115B6;<reserved>
115B7;<reserved>
115B8;SIDDHAM VOWEL SIGN E;Mn;0;L;;;;;N;;;;;
115B9;SIDDHAM VOWEL SIGN AI;Mn;0;L;;;;;N;;;;;
115BA;SIDDHAM VOWEL SIGN O;Mc;0;L;115B8 115AF;;;;;N;;;;;
115BB;SIDDHAM VOWEL SIGN AU;Mc;0;L;115B9 115AF;;;;;N;;;;;
115BC;SIDDHAM SIGN CANDRABINDU;Mn;0;NSM;;;;;N;;;;;
115BD;SIDDHAM SIGN ANUSVARA;Mn;0;NSM;;;;;N;;;;;
115BE;SIDDHAM SIGN VISARGA;Mc;0;L;;;;;N;;;;;
115BF;SIDDHAM SIGN VIRAMA;Mn;9;NSM;;;;;N;;;;;
115C0;SIDDHAM SIGN NUKTA;Mn;7;NSM;;;;;N;;;;;
115C1;SIDDHAM SIGN SIDDHAM;So;0;L;;;;;N;;;;;
115C2;SIDDHAM DANDA;Po;0;L;;;;;N;;;;;
115C3;SIDDHAM DOUBLE DANDA;Po;0;L;;;;;N;;;;;
115C4;SIDDHAM SEPARATOR-1;Po;0;L;;;;;N;;;;;
115C5;SIDDHAM SEPARATOR-2;Po;0;L;;;;;N;;;;;
115C6;SIDDHAM REPETITION MARK-1;Po;0;L;;;;;N;;;;;
115C7;SIDDHAM REPETITION MARK-2;Po;0;L;;;;;N;;;;;
115C8;SIDDHAM REPETITION MARK-3;Po;0;L;;;;;N;;;;;
115C9;SIDDHAM END OF TEXT MARK;Po;0;L;;;;;N;;;;;

```

### 5.3 Linebreaking

Linebreaking properties given in the format of LineBreak.txt:

```

11580..115AE; AL # LETTER A .. LETTER HA
115AF..115C0; CM # SIGN AA .. SIGN NUKTA
115C1; BB # SIGN SIDDHAM
115C2..115C5; BA # DANDA .. SEPARATOR-2
115C6..115C8; AL # REPETITION MARK-1 .. REPETITION MARK-3
115C9; BA # END OF TEXT MARK

```

### 5.4 Syllabic Categories

Syllabic categories given in the format of IndicSyllabicCategory.txt:

```

# Indic_Syllabic_Category=Bindu
115BC..115BD ; Bindu # Mn [2] SIGN CANDRABINDU .. SIGN ANUSVARA

# Indic_Syllabic_Category=Visarga
115BE ; Visarga # Mc SIGN VISARGA

# Indic_Syllabic_Category=Virama
115BF ; Virama # Mn SIGN VIRAMA

# Indic_Syllabic_Category=Nukta
115C0 ; Nukta # Mn SIGN NUKTA

# Indic_Syllabic_Category=Vowel_Independent
11580..1158D ; Vowel_Independent # Lo [14] LETTER A .. LETTER AU

# Indic_Syllabic_Category=Vowel_Dependent
115AF..115B1 ; Vowel_Dependent # Mc [3] VOWEL SIGN AA .. VOWEL SIGN II
115B2..115B9 ; Vowel_Dependent # Mn [6] VOWEL SIGN U .. VOWEL SIGN AI
115BA..115BB ; Vowel_Dependent # Mc [2] VOWEL SIGN O .. VOWEL SIGN AU

# Indic_Syllabic_Category=Consonant
1158E..115AE ; Consonant # Lo [33] LETTER KA .. LETTER HA

```

## 5.5 Matra Categories

Matra categories given in the format of `IndicMatraCategory.txt`:

```
# Indic_Matra_Category=Right
115AF          ; Right # Mc      VOWEL SIGN AA
115B1          ; Right # Mc      VOWEL SIGN II

# Indic_Matra_Category=Left
115B0          ; Left  # Mc      VOWEL SIGN I

# Indic_Matra_Category=Top
115B8..115B9  ; Top   # Mn   [2] VOWEL SIGN E .. VOWEL SIGN AI

# Indic_Matra_Category=Top_And_Right
115BA..115BB  ; Top_And_Right # Mc [2] VOWEL SIGN O .. VOWEL SIGN AU

# Indic_Matra_Category=Bottom
115B2..115B3  ; Bottom # Mn   [2] VOWEL SIGN U .. VOWEL SIGN UU
115B4..115B5  ; Bottom # Mn   [2] VOWEL SIGN VOCALIC R .. VOWEL SIGN VOCALIC RR
115BC          ; Bottom # Mn      SIGN VIRAMA
```

## 6 References

- Abe, Ryūichi. 1999. *The Weaving of Mantra: Kūkai and the Construction of Esoteric Buddhist Discourse*. New York: Columbia University Press.
- Baums, Stefan and Andrew Glass. 2012. “Comments on the name of the ‘Siddham’ script”. L2/12-237. July 11, 2012. <http://www.unicode.org/L2/L2012/12237-siddham-name.pdf>
- 梵字貴重資料刊行会 [Bonji Kichō Shiryō Kankōkai]. 1980 [昭和 Shōwa 55]. 梵字貴重資料集成 [Bonji kichō shiryō shūsei]. 初版 [Shohan]. 東京：東京美術 [Tōkyō : Tōkyō Bijutsu].
- Bühler, Georg. 1884. “Palaeographical Remarks on the Horiuzi Palm-Leaf MSS”. In *The Ancient Palm-Leaves*, edited by Friedrich Max Müller and Bunyiu Nanjio, *Anecdota Oxoniensia*, Aryan Series, Vol. I, Pt. III, pp. 61–95. Oxford: Clarendon Press.
- Chaudhuri, Saroj Kumar. 1998. “Siddham in China and Japan”. *Sino-Platonic Papers*, no. 88, December 1998. Philadelphia: Department of Asian and Middle Eastern Studies, University of Pennsylvania.
- Everson, Michael. 1999. Siddham code chart. <http://www.evertype.com/standards/iso10646/pdf/siddham.pdf>
- 淨嚴 [Jōgon]. 1682. (三密鈔 [Shittan Sanmitsushō]). In *Taishō Shinshū Daizōkyō* (大正新脩大藏經), vol. 84, no. 2710, 715–810. Accessed electronically at the SAT Daizōkyō Text Database [http://21dzk.1.u-tokyo.ac.jp/SAT/ddb-sat3.php?s=&mode=detail&useid=2710\\_,84](http://21dzk.1.u-tokyo.ac.jp/SAT/ddb-sat3.php?s=&mode=detail&useid=2710_,84)
- 児玉義隆 [Kodama, Giryū]. 1991. 梵字必携：書写と解説 [Bonji hikkei : shosha to kaidoku]. 初版 [Shohan]. 大阪：朱鷺書房 [Ōsaka : Toki Shobō].
- . 2005 [平成 Heisei 17]. 梵字の書法：真言密教・ほとけの文字 [Bonji no shohō : Shingon Mikkyō hotoke no moji]. 東京：大法輪閣 [Tōkyō : Daihōrinkaku].
- 林東熙 [Lim, Tonghuy] (ed). 2005. 真言集 (전언집) [Cen'en-cip = “Collection of Mantras”]. 서울시: 寶蓮閣 [Sōul-si: Bolyenkak].

- Lokesh Chandra; Sō-gen. 1965. *Sanskrit Bījas and Mantras in Japan*. Śata-Piṭaka Series, v. 39. New Delhi: International Academy of Indian Culture.
- ; Jiun Sonja. 1972. *Sanskrit Manuscripts from Japan*. Vols. 1 & 2. Śata-Piṭaka Series. v. 93 & 94. New Delhi.
- . 1988. *The Thousand-Armed Avalokiteśvara*. Foreword by Kapila Vatsyayan. New Delhi: Abhinav Publications, Indira Gandhi National Centre for the Arts.
- Müller, Friedrich Max and Bunyiu Nanjio [eds]. 1884. *The Ancient Palm-Leaves*. Containing the Pragñā-pāramitā-hridaya-sūtra and the Ushnīsha-vigaya-dhāranī. *Anecdota Oxoniensia: Texts, documents, and extracts chiefly from manuscripts in the Bodleian and other Oxford libraries*. Aryan Series, Vol. I, Pt. III. With an appendix by Georg Bühler. Oxford: Clarendon Press.
- 中村瑞隆 [Nakamura, Zuiryū]. 1977 [昭和 Shōwa 52]. 梵字事典 [Bonji jiten]. 東京 : 雄山閣 [Tōkyō : Yūzankaku].
- ओझा, गौरीशंकर हीराचन्द्र [Ojhā, Gaurīśaṅkara Hīrācanda]. 1971. भारतीय प्राचीन लिपिमाला [Bhāratīya prācīna lipimālā = The Palæography of India]. Reprint of the rev. and enl. 2nd ed., 1918; first ed. published in 1894 under the title *Prācīna lipimālā*. New Delhi: Munshiram Manoharlal.
- Pandey, Anshuman. 2009. “Proposal to Encode the Sharada Script in ISO/IEC 10646.” ISO/IEC JTC1/SC2/WG2 N3595 L2/09-074R2. August 5, 2009. <http://std.dkuug.dk/jtc1/sc2/wg2/docs/n3595.pdf>
- . 2012. “Preliminary Proposal to Encode Siddham in ISO/IEC 10646”. ISO/IEC JTC1/SC2/WG2 N4185 L2/12-011R. May 3, 2012. <http://std.dkuug.dk/jtc1/sc2/wg2/docs/n4185.pdf>
- Rajan, Vinodh and Shriramana Sharma. 2012. “Comments on naming the ‘Siddham’ encoding”. L2/12-221. June 28, 2012. <http://www.unicode.org/L2/L2012/12221-siddham-naming.pdf>
- शाक्यवंश, हेमराज [Śākyavaṃśa, Hemarāja]. vs 2042 [1985]. नेपाल लिपि संग्रह [Nepāla Lipi Saṃgraha] – Nepalese Alphabet. 7th ed. of original printed by Mānadāsa Sugatadāsa, 1953. Kathmandu: Vasantarāja Tulādhara.
- 信範 [Shinpan]. 悉曇祕傳記 [Shittan Hidenki]. In *Taishō Shinshū Daizōkyō* (大正新脩大藏經), vol. 84, no. 2708, 643–653. Accessed electronically at the SAT Daizōkyō Text Database [http://21dzk.1.u-tokyo.ac.jp/SAT/ddb-sat3.php?s=&mode=detail&useid=2708\\_,84](http://21dzk.1.u-tokyo.ac.jp/SAT/ddb-sat3.php?s=&mode=detail&useid=2708_,84)
- Stevens, John. 1981. *Sacred Calligraphy of the East*. Boulder, Colorado: Shambala.
- 徳山暉純 [Tokuzan, Kijun]. 1974. 図説梵字 – 密教の壁 : 悉曇参究 [Zusetsu Bonji – mikkyō no kabe : shittan sankyū]. 東京 : 木耳社 [Tōkyō : Mokujiisha].
- . 1976 [昭和 Shōwa 51]. 梵字手帖 [Bonji techō]. 東京 : 木耳社 [Tōkyō : Mokujiisha].
- van Gulik, Robert Hans. 1980. *Siddham: An Essay on the History of Sanskrit Studies in China and Japan*. Śata-Piṭaka series. Indo-Asian literatures; v. 247. Reprint. Originally published: Nagpur: International Academy of Indian Culture, 1956 (Sarasvati Vihara Series; v. 36). New Delhi: Sharada Rani.
- Yamamoto, Chikyo. 1990. *Mahāvairocana-sūtra*. Translated into English from Ta-p’i lu che na ch’eng-fo shen-pien chia-ch’ih ching, the Chinese version of Śubhākarasimha and I-hsing, A.D. 725. Preface by Lokesh Chandra. Tripiṭaka. Sūtrapiṭaka. Mahāvairocanasūtra. New Delhi: International Academy of Indian Culture and Aditya Prakashan.

## **7 Acknowledgments**

I am thankful to Lee Collins (Apple Computer, Inc.) for reviewing drafts of this proposal, for offering background and usage information on Siddham, and for providing samples of Korean Siddham, as well as the ‘Tenchiji’ font used here. Equally important are the contributions of Eijun Eidson of the Shingon Buddhist International Institute, who is headmaster of the Koyasan Shingon Temple of North America. I am grateful to Shriramana Sharma for offering corrections on technical matters regarding the representation of VIRAMA and alternate forms of vowel signs; also to Vinodh Rajan for identifying the use of NUKTA in ‘modern’ Siddham. I am indebted to Micah Auerback (Asian Languages and Cultures, University of Michigan, Ann Arbor) and Wang Xiyue (王夕越) for patiently answering my questions about Japanese and Chinese sources, respectively, and for providing insight into texts through their own expert translations. Stefan Baums (University of California, Berkeley), Andrew Glass (Microsoft), Kengo Harimoto (Nepal-German Manuscript Cataloguing Project), Vinodh Rajan, Shriramana Sharma, and Iain Sinclair (Monash University) provided comments on the name for the script block.

This project was made possible in part by a grant from the United States National Endowment for the Humanities, which funded the Universal Scripts Project (part of the Script Encoding Initiative at the University of California, Berkeley). Any views, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect those of the National Endowment for the Humanities.

	1158	1159	115A	115B	115C	115D	115E	115F
0	𑖀 11580	𑖁 11590	𑖂 115A0	𑖃 115B0	𑖄 115C0			
1	𑖅 11581	𑖆 11591	𑖇 115A1	𑖈 115B1	𑖉 115C1			
2	𑖊 11582	𑖋 11592	𑖌 115A2	𑖍 115B2	𑖎 115C2			
3	𑖏 11583	𑖐 11593	𑖑 115A3	𑖒 115B3	𑖓 115C3			
4	𑖔 11584	𑖕 11594	𑖖 115A4	𑖗 115B4	𑖘 115C4			
5	𑖙 11585	𑖚 11595	𑖛 115A5	𑖜 115B5	𑖝 115C5			
6	𑖞 11586	𑖟 11596	𑖠 115A6		𑖡 115C6			
7	𑖢 11587	𑖣 11597	𑖤 115A7		𑖥 115C7			
8	𑖦 11588	𑖧 11598	𑖨 115A8	𑖩 115B8	𑖪 115C8			
9	𑖫 11589	𑖬 11599	𑖭 115A9	𑖮 115B9	𑖯 115C9			
A	𑖰 1158A	𑖱 1159A	𑖲 115AA	𑖳 115BA				
B	𑖴 1158B	𑖵 1159B	𑖶 115AB	𑖷 115BB				
C	𑖸 1158C	𑖹 1159C	𑖺 115AC	𑖻 115BC				
D	𑖼 1158D	𑖽 1159D	𑖾 115AD	𑖿 115BD				
E	𑗀 1158E	𑗁 1159E	𑗂 115AE	𑗃 115BE				
F	𑗄 1158F	𑗅 1159F	𑗆 115AF	𑗇 115BF				

Figure 1: Proposed code chart for Siddham.

The script is also known by the names 'Siddhamatrika' and 'Kutila'.

### Independent vowels

11580	𑖀	SIDDHAM LETTER A
11581	𑖁	SIDDHAM LETTER AA
11582	𑖂	SIDDHAM LETTER I
11583	𑖃	SIDDHAM LETTER II
11584	𑖄	SIDDHAM LETTER U
11585	𑖅	SIDDHAM LETTER UU
11586	𑖆	SIDDHAM LETTER VOCALIC R
11587	𑖇	SIDDHAM LETTER VOCALIC RR
11588	𑖈	SIDDHAM LETTER VOCALIC L
11589	𑖉	SIDDHAM LETTER VOCALIC LL
1158A	𑖊	SIDDHAM LETTER E
1158B	𑖋	SIDDHAM LETTER AI
1158C	𑖌	SIDDHAM LETTER O
1158D	𑖍	SIDDHAM LETTER AU

### Consonants

1158E	𑖎	SIDDHAM LETTER KA
1158F	𑖏	SIDDHAM LETTER KHA
11590	𑖐	SIDDHAM LETTER GA
11591	𑖑	SIDDHAM LETTER GHA
11592	𑖒	SIDDHAM LETTER NGA
11593	𑖓	SIDDHAM LETTER CA
11594	𑖔	SIDDHAM LETTER CHA
11595	𑖕	SIDDHAM LETTER JA
11596	𑖖	SIDDHAM LETTER JHA
11597	𑖗	SIDDHAM LETTER NYA
11598	𑖘	SIDDHAM LETTER TTA
11599	𑖙	SIDDHAM LETTER TTHA
1159A	𑖚	SIDDHAM LETTER DDA
1159B	𑖛	SIDDHAM LETTER DDHA
1159C	𑖜	SIDDHAM LETTER NNA
1159D	𑖝	SIDDHAM LETTER TA
1159E	𑖞	SIDDHAM LETTER THA
1159F	𑖟	SIDDHAM LETTER DA
115A0	𑖠	SIDDHAM LETTER DHA
115A1	𑖡	SIDDHAM LETTER NA
115A2	𑖢	SIDDHAM LETTER PA
115A3	𑖣	SIDDHAM LETTER PHA
115A4	𑖤	SIDDHAM LETTER BA
115A5	𑖥	SIDDHAM LETTER BHA
115A6	𑖦	SIDDHAM LETTER MA
115A7	𑖧	SIDDHAM LETTER YA
115A8	𑖨	SIDDHAM LETTER RA
115A9	𑖩	SIDDHAM LETTER LA
115AA	𑖪	SIDDHAM LETTER VA
115AB	𑖫	SIDDHAM LETTER SHA
115AC	𑖬	SIDDHAM LETTER SSA
115AD	𑖭	SIDDHAM LETTER SA
115AE	𑖮	SIDDHAM LETTER HA

### Dependent vowel signs

115AF	𑖯	SIDDHAM VOWEL SIGN AA
115B0	𑖰	SIDDHAM VOWEL SIGN I
115B1	𑖱	SIDDHAM VOWEL SIGN II
115B2	𑖲	SIDDHAM VOWEL SIGN U
115B3	𑖳	SIDDHAM VOWEL SIGN UU
115B4	𑖴	SIDDHAM VOWEL SIGN VOCALIC R
115B5	𑖵	SIDDHAM VOWEL SIGN VOCALIC RR
115B6	𑖶	<reserved>
115B7	𑖷	<reserved>
115B8	𑖸	SIDDHAM VOWEL SIGN E
115B9	𑖹	SIDDHAM VOWEL SIGN AI

115BA 𑖺 SIDDHAM VOWEL SIGN O  
≡ 115B8 𑖸 115AF 𑖯

115BB 𑖻 SIDDHAM VOWEL SIGN AU  
≡ 115B9 𑖹 115AF 𑖯

### Various signs

115BC	𑖼	SIDDHAM SIGN CANDRABINDU
115BD	𑖽	SIDDHAM SIGN ANUSVARA
115BE	𑖾	SIDDHAM SIGN VISARGA
115BF	𑖿	SIDDHAM SIGN VIRAMA
115C0	𑖿̣	SIDDHAM SIGN NUKTA

- used for writing foreign sounds

### Head mark

115C1	𑖿̇	SIDDHAM SIGN SIDDHAM = siddhirastu
-------	----	---------------------------------------

- used at the beginning of texts

### Punctuation

115C2	𑖿̈	SIDDHAM DANDA
115C3	𑖿̉	SIDDHAM DOUBLE DANDA
115C4	𑖿̊	SIDDHAM SEPARATOR-1

- used for separating syllables and words

115C5	𑖿̋	SIDDHAM SEPARATOR-2
-------	----	---------------------

- used for separating syllables and words

### Repetition marks

115C6	𑖿̌	SIDDHAM REPETITION MARK-1
115C7	𑖿̍	SIDDHAM REPETITION MARK-2
115C8	𑖿̎	SIDDHAM REPETITION MARK-3

### Terminal mark

115C9	𑖿̏	SIDDHAM END OF TEXT MARK
-------	----	--------------------------

- indicates the completion of a text

Figure 2: Proposed names list for Siddham.



	Siddham	Sharada	Nagari		Siddham	Sharada	Nagari
A	𑖀	𑖑	अ	-A	—	—	—
AA	𑖁	𑖒	आ	-AA	𑖀	𑖑	ा
I	𑖂	𑖃	इ	-I	𑖀	𑖁	ि
II	𑖃	𑖄	ई	-II	𑖁	𑖂	ी
U	𑖄	𑖅	उ	-U	𑖀	𑖁	ु
UU	𑖅	𑖆	ऊ	-UU	𑖁	𑖂	ू
R	𑖆	𑖇	ऋ	-R	𑖀	𑖁	ृ
RR	𑖇	𑖈	ॠ	-RR	𑖁	𑖂	ॠ
L	𑖈	𑖉	ऌ	-L	—	𑖁	ॡ
LL	𑖉	𑖊	ॡ	-LL	—	𑖂	ॢ
E	𑖊	𑖋	ए	-E	𑖀	𑖁	े
AI	𑖋	𑖌	ऐ	-AI	𑖁	𑖂	ै
O	𑖌	𑖍	ओ	-O	𑖀	𑖁	ो
AU	𑖍	𑖎	औ	-AU	𑖁	𑖂	ौ

Table 1: Comparison of vowel letters and signs of Siddham, Sharada, and Devanagari.

	Siddham	Sharada	Nagari		Siddham	Sharada	Nagari
KA	𑀓	क	क	DA	𑀏	द	द
KHA	𑀘	ख	ख	DHA	𑀑	ध	ध
GA	𑀛	ग	ग	NA	𑀚	न	न
GHA	𑀞	घ	घ	PA	𑀜	प	प
NGA	𑀟	ङ	ङ	PHA	𑀝	फ	फ
CA	𑀡	च	च	BA	𑀟	ब	ब
CHA	𑀣	छ	छ	BHA	𑀠	भ	भ
JA	𑀤	ज	ज	MA	𑀡	म	म
JHA	𑀥	झ	झ	YA	𑀢	य	य
NYA	𑀦	ञ	ञ	RA	𑀣	र	र
TTA	𑀧	ट	ट	LA	𑀤	ल	ल
TTHA	𑀨	ठ	ठ	VA	𑀥	व	व
DDA	𑀩	ड	ड	SHA	𑀦	श	श
DDHA	𑀪	ढ	ढ	SSA	𑀧	ष	ष
NNA	𑀫	ण	ण	SA	𑀨	स	स
TA	𑀬	त	त	HA	𑀩	ह	ह
THA	𑀭	थ	थ				

Table 2: Comparison of consonant letters of Siddham, Sharada, and Devanagari.



Figure 3: Seed-syllables for the thirteen Buddhas (from Tokuzan 1974: 27).







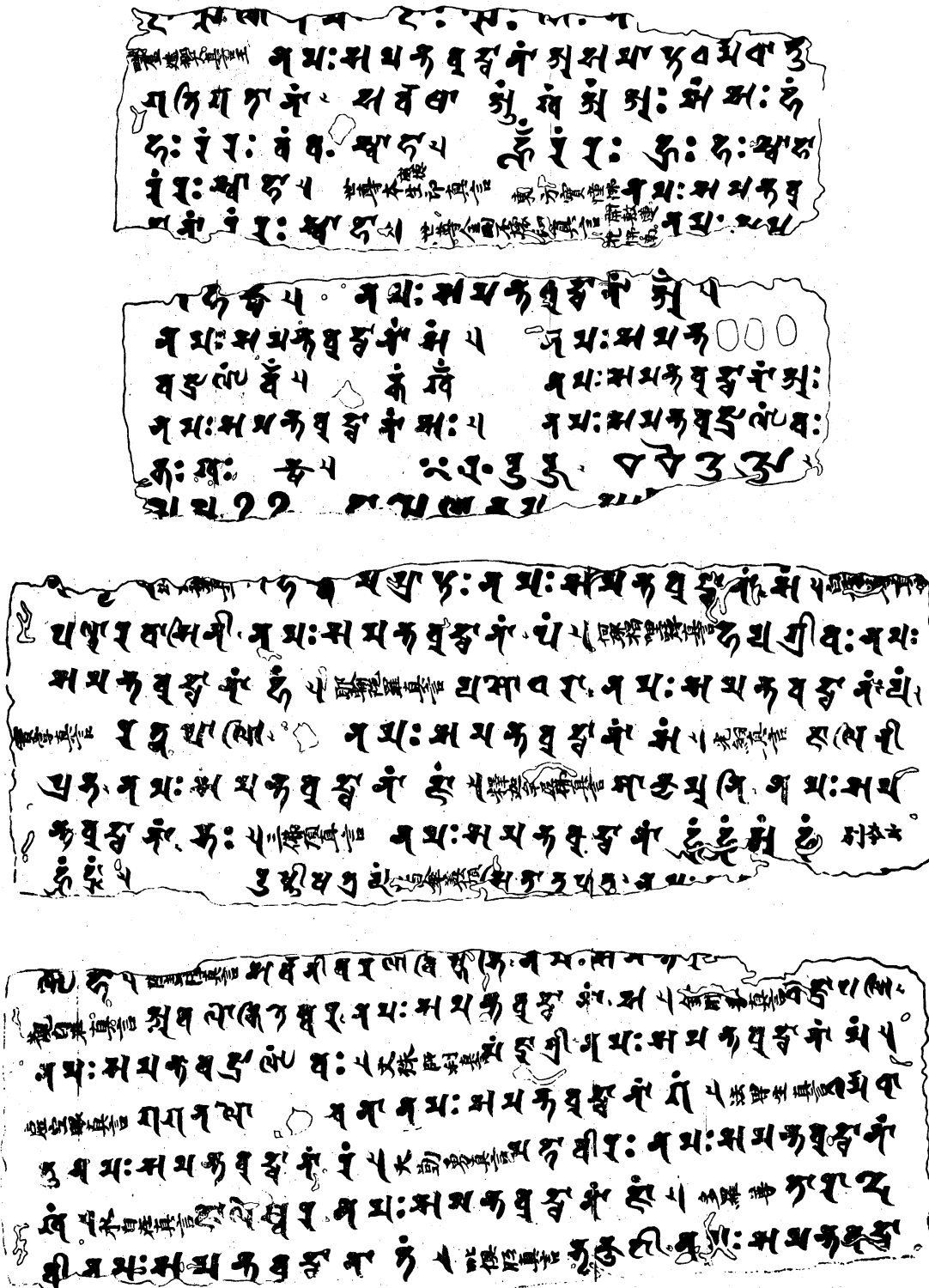


Figure 7: Folio fragments from a Siddham manuscript written by Prajñātāra (Sans. प्रज्ञातार; Chi. 般若多羅 Bōrě Duōluó) in the 9th century (from Lokesh Chandra 1965: fascicle 1, section 7). The folios are facsimiles traced by the Japanese monk Sōgen (宗源) and published using wooden-block printing in his *Ashara-jō* (1837).







Figure 9: Siddham inscriptions (from Nakamura 1977: Plate 30).



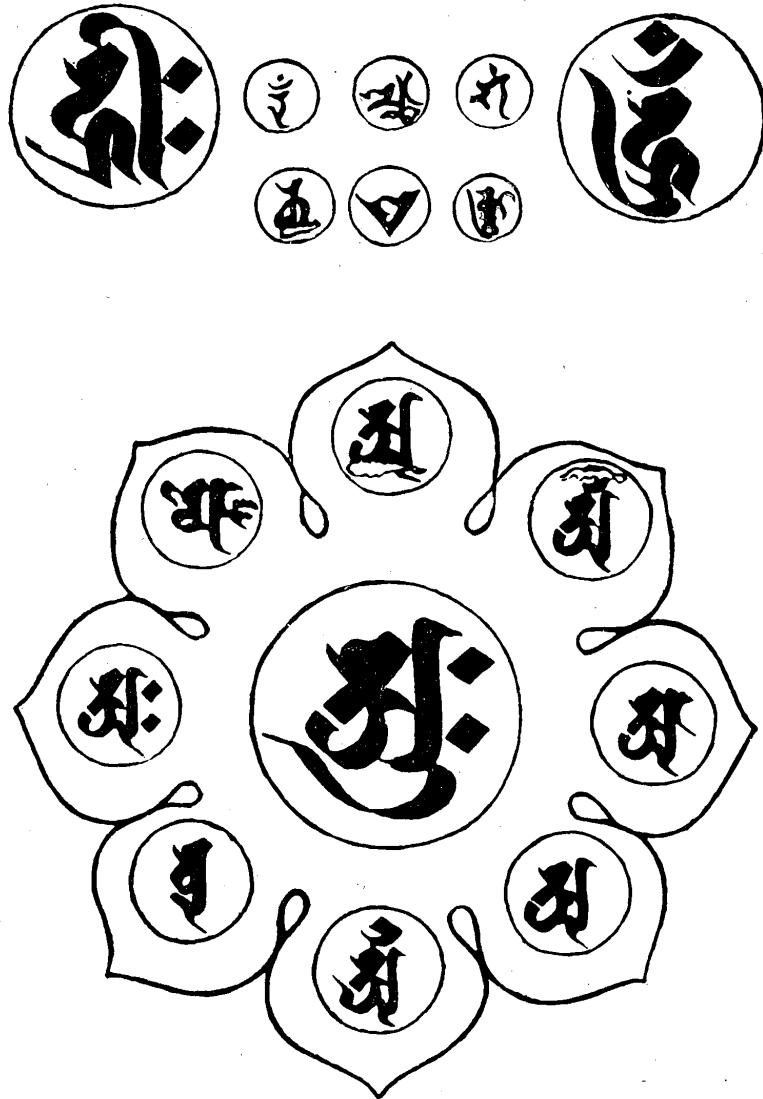


Figure 11: A *maṇḍala* inscribed by Saichō (from van Gulik 1980: Plate X).

VOWELS (MĀTĀ)

	formal	brush	stroke order	variations	in combination	Devanāgarī	roman letter	esoteric meaning
1						अ	a	anutpāda unborn
2						आ	ā	ākāśa space
3						इ	i	indriya sense organ
4						ई	ī	iti calamity
5						उ	u	upamā simile
6						ऊ	ū	ūna incomplete
7						ए	e	eṣāṇā seeking
8						ऐ	ai	aiśvarya sovereignty
9						ओ	o	ogha flood
10						औ	au	aupapāduka self-produced

Figure 12: Description of Siddham letters and dependent signs for the vowels A .. AU (from Stevens 1981: 34).

	formal	brush	stroke order	variations	in combination	Devanāgarī	roman letter	esoteric meaning
11						ॐ	a ṃ	anta limit
12						ः	a ḥ	astamgama setting

EXTRA VOWELS

13						ॠ	ṛ	rddhi supernatural power
14						ॡ	ṝ	analogy
15						ॢ	ṝ̇	dye
16						ॣ	ṝ̈	submerge

CONSONANTS (VYAÑJANA)

17						क	ka	karma action
18						ख	kha	kha sky

Figure 13: Description of Siddham signs ANUSVARA and VISARGA, the vocalic letters, and the consonants KA, KHA (from Stevens 1981: 35).

	formal	brush	stroke order	variations	in combination	Devanāgarī	roman letter	esoteric meaning
19						ग	ga	gati going
20						घ	gha	ghana dense
21						ङ	ña	aṅga part
22						च	ca	cyuti transition
23						छ	cha	chāya shadow
24						ज	ja	jāti birth
25						झ	jha	jhaṣabala warring enemies
26						ञ	ña	jñāna knowledge
27						ट	ṭa	ṭaṅka pride
28						ठ	ṭha	viṭhavana flourish

Figure 14: Description of Siddham consonants GA .. TTHA (from Stevens 1981: 36).

	formal	brush	stroke order	variations	in combination	Devanāgarī	roman letter	esoteric meaning
29						ड	ḍa	ḍamara tumult
30						ढ	ḍha	mḍha disappear
31						ण	ṇa	ṇaṇa battle
32						ट	ṭa	tathātā suchness
33						थ	ṭha	sthāna dwelling
34						द	ḍa	dāna generosity
35						ध	ḍha	dharmadhātu dharma realm
36						न	ṇa	nāman name
37						प	pa	paramārtha ultimate meaning
38						फ	pha	phena foam

Figure 15: Description of Siddham consonants DDA .. PHA (from Stevens 1981: 37).

	formal	brush	stroke order	variations	in combination	Devanāgarī	roman letter	esoteric meaning
39						ब	ba	bandhana binding
40						भ	bha	bhava existence
41						म	ma	mama my
42						य	ya	yāna vehicle
43						र	ra	rajas passion
44						ल	la	lakṣaṇa mark
45						व	va	vāc speech
46						श	śa	śānti peace
47						ष	ṣa	ṣaḍāyatana six senses
48						स	sa	satya truth

Figure 16: Description of Siddham consonants BA .. SA (from Stevens 1981: 38).



	formal	brush	stroke order	variations	in combination	Devanāgarī	roman letter	esoteric meaning
49						ह	ha	hetu cause

SPECIAL COMBINATIONS

50						ल्लं	llaṃ	
51						क्ष	kṣa	kṣaya destruction

Figure 17: Description of Siddham consonant letter HA and the conjuncts *kṣa* and *llaṃ* (from Stevens 1981: 39).

Numeral		English sound							
Sanskrit–Bonji									
0	shuunya	1	eeka	2	dvi	3	tri	4	chatur
s'u:nyā		e+ka		dvi		tri		c'a+tu+r	
5	pancha	6	shash	7	sapta	8	ashta	9	nava
paṃ,c'a		s,a+ṣṭa		sa+pta		a+s,t,a		na+va	
Bonji–Character Pronunciation Diagram									

Figure 18: A set of ‘Bonji’ digits (Source: [http://www.mandalar.com/DisplayJ/Bonji/index6\\_E.html](http://www.mandalar.com/DisplayJ/Bonji/index6_E.html)). These closely resemble Devanagari forms.

梵字悉曇字母表

一、摩多十二字・別摩多四字												
番号	悉曇文字	異体字 (別体)	摩多 点画	漢字	音記		讀法		発音種別	字義		
					字義記	ロイマ	中天音	南天音				
1	𑖀	𑖀 𑖀 𑖀	□	阿	ア	a	ア	ア	以下六字母音喉音	本不生		
2	𑖁	𑖁 𑖁 𑖁	□	阿引	ア	ā	ア	ア	同	寂靜(虚空)		
3	𑖂	𑖂 𑖂 𑖂	□	伊	イ	i	イ	イ	顎音	根		
4	𑖃	𑖃 𑖃 𑖃	□	伊引	イ	ī	イ	イ	同	災禍		
5	𑖄	𑖄 𑖄 𑖄	□ □ □	塢	ウ	u	ウ	ウ	唇音	譬喩		
6	𑖅	𑖅 𑖅 𑖅	□ □ □ □ □	汚引	ウ	ū	ウ	ウ	同	損減		
7	𑖆	𑖆 𑖆 𑖆	□	噎	エ	e	エ	エ	以下四字母音喉字顎複	求		
8	𑖇	𑖇 𑖇 𑖇	□	愛	ア	ai	ア	ア	同	自在(自相)		
9	𑖈	𑖈 𑖈 𑖈	□	汚	オ	o	オ	オ	喉・唇	瀑流 (軌流迹)		
10	𑖉	𑖉 𑖉 𑖉	□	奧	ア	au	ア	ア	同	化生(変化)		
11	𑖊	𑖊 𑖊 𑖊	□ □	闍	ア	am	ア	ア	隨韻	辺際		
12	𑖋	𑖋 𑖋 𑖋	□	惡	ア	ah	ア	ア	止声	遠離		
二、体文 三十三字												
番号	悉曇文字	異体字 (別体)	切繼		漢字	音記		讀法		発音種別	字義	
			上部	下部		字義記	ロイマ	中天音	南天音			
13	𑖌	𑖌 𑖌 𑖌	□	𑖌	哩	リ	r	リ	キリ		神通	
14	𑖍	𑖍 𑖍 𑖍	□	𑖍	哩引	リ	r̄	リ	キリ		類例	
15	𑖎	𑖎 𑖎 𑖎			唎	リ	l	リ	ヨ	リ	染	
16	𑖏	𑖏 𑖏 𑖏			噓	リ	l̄	リ	ヨ	リ	沈没	
五類声二句												
17	𑖐	𑖐 𑖐 𑖐	𑖐	𑖐	迦	カ	ka	カ	キヤ	カ	以下五字清・無喉	離作業(作業)
18	𑖑	𑖑 𑖑 𑖑	𑖑	𑖑	佉	カ	kha	カ	キヤ	カ	同・有	等虚空(等空)
19	𑖒	𑖒 𑖒 𑖒	𑖒	𑖒	𑖒	ガ	ga	ガ	ギヤ	ガ	濁・無	行
20	𑖓	𑖓 𑖓 𑖓	𑖓	𑖓	𑖓	ガ	gha	ガ	ギヤ	ガ	同・有	一合二合相
21	𑖔	𑖔 𑖔 𑖔	𑖔	𑖔	𑖔	カ	na	カ	ギヤウ	カ	鼻音	支分
22	𑖕	𑖕 𑖕 𑖕	𑖕	𑖕	遮	サ	ca	サ	シヤ	サ	以下五字清・無	離一辺遷變 (遷變)
23	𑖖	𑖖 𑖖 𑖖	𑖖	𑖖	𑖖	サ	cha	サ	シヤ	サ	同・有	影像
24	𑖗	𑖗 𑖗 𑖗	𑖗	𑖗	𑖗	ザ	ja	ザ	ジヤ	ザ	濁・無	生
五類声一句												
13	𑖘	𑖘 𑖘 𑖘	𑖘	𑖘	哩	リ	r	リ	キリ		神通	
14	𑖙	𑖙 𑖙 𑖙	𑖙	𑖙	哩引	リ	r̄	リ	キリ		類例	
15	𑖚	𑖚 𑖚 𑖚			唎	リ	l	リ	ヨ	リ	染	
16	𑖛	𑖛 𑖛 𑖛			噓	リ	l̄	リ	ヨ	リ	沈没	

Figure 19: Chart of Siddham (from Kodama 1991: 65-66). Note the variant form 𑖏 of 𑖏 VOWEL SIGN VOCALIC RR.

遍口声		遍口声								同五句		
51	50	49	48	47	46	45	44	43	42	41	40	39
𑖀	𑖁	𑖂	𑖃	𑖄	𑖅	𑖆	𑖇	𑖈	𑖉	𑖊	𑖋	𑖌
𑖍	𑖎	𑖏	𑖐	𑖑	𑖒	𑖓	𑖔	𑖕	𑖖	𑖗	𑖘	𑖙
𑖚	𑖛	𑖜	𑖝	𑖞	𑖟	𑖠	𑖡	𑖢	𑖣	𑖤	𑖥	𑖦
𑖧	𑖨	𑖩	𑖪	𑖫	𑖬	𑖭	𑖮	𑖯	𑖰	𑖱	𑖲	𑖳
𑖴	𑖵	𑖶	𑖷	𑖸	𑖹	𑖺	𑖻	𑖼	𑖽	𑖾	𑖿	𑗀
𑗁	𑗂	𑗃	𑗄	𑗅	𑗆	𑗇	𑗈	𑗉	𑗊	𑗋	𑗌	𑗍
𑗎	𑗏	𑗐	𑗑	𑗒	𑗓	𑗔	𑗕	𑗖	𑗗	𑗘	𑗙	𑗚
𑗛	𑗜	𑗝	𑗞	𑗟	𑗠	𑗡	𑗢	𑗣	𑗤	𑗥	𑗦	𑗧
𑗨	𑗩	𑗪	𑗫	𑗬	𑗭	𑗮	𑗯	𑗰	𑗱	𑗲	𑗳	𑗴
𑗵	𑗶	𑗷	𑗸	𑗹	𑗺	𑗻	𑗼	𑗽	𑗾	𑗿	𑘀	𑘁
𑘂	𑘃	𑘄	𑘅	𑘆	𑘇	𑘈	𑘉	𑘊	𑘋	𑘌	𑘍	𑘎
𑘏	𑘐	𑘑	𑘒	𑘓	𑘔	𑘕	𑘖	𑘗	𑘘	𑘙	𑘚	𑘛
𑘜	𑘝	𑘞	𑘟	𑘠	𑘡	𑘢	𑘣	𑘤	𑘥	𑘦	𑘧	𑘨
𑘩	𑘪	𑘫	𑘬	𑘭	𑘮	𑘯	𑘰	𑘱	𑘲	𑘳	𑘴	𑘵
𑘶	𑘷	𑘸	𑘹	𑘺	𑘻	𑘼	𑘽	𑘾	𑘿	𑙀	𑙁	𑙂
𑙃	𑙄	𑙅	𑙆	𑙇	𑙈	𑙉	𑙊	𑙋	𑙌	𑙍	𑙎	𑙏
𑙐	𑙑	𑙒	𑙓	𑙔	𑙕	𑙖	𑙗	𑙘	𑙙	𑙚	𑙛	𑙜
𑙝	𑙞	𑙟	𑙠	𑙡	𑙢	𑙣	𑙤	𑙥	𑙦	𑙧	𑙨	𑙩
𑙪	𑙫	𑙬	𑙭	𑙮	𑙯	𑙰	𑙱	𑙲	𑙳	𑙴	𑙵	𑙶
𑙷	𑙸	𑙹	𑙺	𑙻	𑙼	𑙽	𑙾	𑙿	𑚀	𑚁	𑚂	𑚃
𑚄	𑚅	𑚆	𑚇	𑚈	𑚉	𑚊	𑚋	𑚌	𑚍	𑚎	𑚏	𑚐
𑚑	𑚒	𑚓	𑚔	𑚕	𑚖	𑚗	𑚘	𑚙	𑚚	𑚛	𑚜	𑚝
𑚞	𑚟	𑚠	𑚡	𑚢	𑚣	𑚤	𑚥	𑚦	𑚧	𑚨	𑚩	𑚪
𑚫	𑚬	𑚭	𑚮	𑚯	𑚰	𑚱	𑚲	𑚳	𑚴	𑚵	𑚶	𑚷
𑚸	𑚹	𑚺	𑚻	𑚼	𑚽	𑚾	𑚿	𑛀	𑛁	𑛂	𑛃	𑛄
𑛅	𑛆	𑛇	𑛈	𑛉	𑛊	𑛋	𑛌	𑛍	𑛎	𑛏	𑛐	𑛑
𑛒	𑛓	𑛔	𑛕	𑛖	𑛗	𑛘	𑛙	𑛚	𑛛	𑛜	𑛝	𑛞
𑛟	𑛠	𑛡	𑛢	𑛣	𑛤	𑛥	𑛦	𑛧	𑛨	𑛩	𑛪	𑛫
𑛬	𑛭	𑛮	𑛯	𑛰	𑛱	𑛲	𑛳	𑛴	𑛵	𑛶	𑛷	𑛸
𑛹	𑛺	𑛻	𑛼	𑛽	𑛾	𑛿	𑜀	𑜁	𑜂	𑜃	𑜄	𑜅
𑜆	𑜇	𑜈	𑜉	𑜊	𑜋	𑜌	𑜍	𑜎	𑜏	𑜐	𑜑	𑜒
𑜓	𑜔	𑜕	𑜖	𑜗	𑜘	𑜙	𑜚	𑜛	𑜜	𑜝	𑜞	𑜟
𑜠	𑜡	𑜢	𑜣	𑜤	𑜥	𑜦	𑜧	𑜨	𑜩	𑜪	𑜫	𑜬
𑜭	𑜮	𑜯	𑜰	𑜱	𑜲	𑜳	𑜴	𑜵	𑜶	𑜷	𑜸	𑜹
𑜺	𑜻	𑜼	𑜽	𑜾	𑜿	𑝀	𑝁	𑝂	𑝃	𑝄	𑝅	𑝆
𑝇	𑝈	𑝉	𑝊	𑝋	𑝌	𑝍	𑝎	𑝏	𑝐	𑝑	𑝒	𑝓
𑝔	𑝕	𑝖	𑝗	𑝘	𑝙	𑝚	𑝛	𑝜	𑝝	𑝞	𑝟	𑝠
𑝡	𑝢	𑝣	𑝤	𑝥	𑝦	𑝧	𑝨	𑝩	𑝪	𑝫	𑝬	𑝭
𑝮	𑝯	𑝰	𑝱	𑝲	𑝳	𑝴	𑝵	𑝶	𑝷	𑝸	𑝹	𑝺
𑝻	𑝼	𑝽	𑝾	𑝿	𑞀	𑞁	𑞂	𑞃	𑞄	𑞅	𑞆	𑞇
𑞈	𑞉	𑞊	𑞋	𑞌	𑞍	𑞎	𑞏	𑞐	𑞑	𑞒	𑞓	𑞔
𑞕	𑞖	𑞗	𑞘	𑞙	𑞚	𑞛	𑞜	𑞝	𑞞	𑞟	𑞠	𑞡
𑞢	𑞣	𑞤	𑞥	𑞦	𑞧	𑞨	𑞩	𑞪	𑞫	𑞬	𑞭	𑞮
𑞯	𑞰	𑞱	𑞲	𑞳	𑞴	𑞵	𑞶	𑞷	𑞸	𑞹	𑞺	𑞻
𑞼	𑞽	𑞾	𑞿	𑟀	𑟁	𑟂	𑟃	𑟄	𑟅	𑟆	𑟇	𑟈
𑟉	𑟊	𑟋	𑟌	𑟍	𑟎	𑟏	𑟐	𑟑	𑟒	𑟓	𑟔	𑟕
𑟖	𑟗	𑟘	𑟙	𑟚	𑟛	𑟜	𑟝	𑟞	𑟟	𑟠	𑟡	𑟢
𑟣	𑟤	𑟥	𑟦	𑟧	𑟨	𑟩	𑟪	𑟫	𑟬	𑟭	𑟮	𑟯
𑟰	𑟱	𑟲	𑟳	𑟴	𑟵	𑟶	𑟷	𑟸	𑟹	𑟺	𑟻	𑟼
𑟽	𑟾	𑟿	𑠀	𑠁	𑠂	𑠃	𑠄	𑠅	𑠆	𑠇	𑠈	𑠉
𑠊	𑠋	𑠌	𑠍	𑠎	𑠏	𑠐	𑠑	𑠒	𑠓	𑠔	𑠕	𑠖
𑠗	𑠘	𑠙	𑠚	𑠛	𑠜	𑠝	𑠞	𑠟	𑠠	𑠡	𑠢	𑠣
𑠤	𑠥	𑠦	𑠧	𑠨	𑠩	𑠪	𑠫	𑠬	𑠭	𑠮	𑠯	𑠰
𑠱	𑠲	𑠳	𑠴	𑠵	𑠶	𑠷	𑠸	𑠹	𑠺	𑠻	𑠼	𑠽
𑠾	𑠿	𑡀	𑡁	𑡂	𑡃	𑡄	𑡅	𑡆	𑡇	𑡈	𑡉	𑡊
𑡋	𑡌	𑡍	𑡎	𑡏	𑡐	𑡑	𑡒	𑡓	𑡔	𑡕	𑡖	𑡗
𑡘	𑡙	𑡚	𑡛	𑡜	𑡝	𑡞	𑡟	𑡠	𑡡	𑡢	𑡣	𑡤
𑡥	𑡦	𑡧	𑡨	𑡩	𑡪	𑡫	𑡬	𑡭	𑡮	𑡯	𑡰	𑡱
𑡲	𑡳	𑡴	𑡵	𑡶	𑡷	𑡸	𑡹	𑡺	𑡻	𑡼	𑡽	𑡾
𑡿	𑢀	𑢁	𑢂	𑢃	𑢄	𑢅	𑢆	𑢇	𑢈	𑢉	𑢊	𑢋
𑢌	𑢍	𑢎	𑢏	𑢐	𑢑	𑢒	𑢓	𑢔	𑢕	𑢖	𑢗	𑢘
𑢙	𑢚	𑢛	𑢜	𑢝	𑢞	𑢟	𑢠	𑢡	𑢢	𑢣	𑢤	𑢥
𑢦	𑢧	𑢨	𑢩	𑢪	𑢫	𑢬	𑢭	𑢮	𑢯	𑢰	𑢱	𑢲
𑢳	𑢴	𑢵	𑢶	𑢷	𑢸	𑢹	𑢺	𑢻	𑢼	𑢽	𑢾	𑢿
𑣀	𑣁	𑣂	𑣃	𑣄	𑣅	𑣆	𑣇	𑣈	𑣉	𑣊	𑣋	𑣌
𑣍	𑣎	𑣏	𑣐	𑣑	𑣒	𑣓	𑣔	𑣕	𑣖	𑣗	𑣘	𑣙
𑣚	𑣛	𑣜	𑣝	𑣞	𑣟	𑣠	𑣡	𑣢	𑣣	𑣤	𑣥	𑣦
𑣧	𑣨	𑣩	𑣪	𑣫	𑣬	𑣭	𑣮	𑣯	𑣰	𑣱	𑣲	𑣳
𑣴	𑣵	𑣶	𑣷	𑣸	𑣹	𑣺	𑣻	𑣼	𑣽	𑣾	𑣿	𑤀
𑤁	𑤂	𑤃	𑤄	𑤅	𑤆	𑤇	𑤈	𑤉	𑤊	𑤋	𑤌	𑤍
𑤎	𑤏	𑤐	𑤑	𑤒	𑤓	𑤔	𑤕	𑤖	𑤗	𑤘	𑤙	𑤚
𑤛	𑤜	𑤝	𑤞	𑤟	𑤠	𑤡	𑤢	𑤣	𑤤	𑤥	𑤦	𑤧
𑤨	𑤩	𑤪	𑤫	𑤬	𑤭	𑤮	𑤯	𑤰	𑤱	𑤲	𑤳	𑤴
𑤵	𑤶	𑤷	𑤸	𑤹	𑤺	𑤻	𑤼	𑤽	𑤾	𑤿	𑥀	𑥁
𑥂	𑥃	𑥄	𑥅	𑥆	𑥇	𑥈	𑥉	𑥊	𑥋	𑥌	𑥍	𑥎
𑥏	𑥐	𑥑	𑥒	𑥓	𑥔	𑥕	𑥖	𑥗	𑥘	𑥙	𑥚	𑥛
𑥜	𑥝	𑥞	𑥟	𑥠	𑥡	𑥢	𑥣	𑥤	𑥥	𑥦	𑥧	𑥨
𑥩	𑥪	𑥫	𑥬	𑥭	𑥮	𑥯	𑥰	𑥱	𑥲	𑥳	𑥴	𑥵
𑥶	𑥷	𑥸	𑥹	𑥺	𑥻	𑥼	𑥽	𑥾	𑥿	𑦀	𑦁	𑦂
𑦃	𑦄	𑦅	𑦆	𑦇	𑦈	𑦉	𑦊	𑦋	𑦌	𑦍	𑦎	𑦏
𑦐	𑦑	𑦒	𑦓	𑦔	𑦕	𑦖	𑦗	𑦘	𑦙	𑦚	𑦛	𑦜
𑦝	𑦞	𑦟	𑦠	𑦡	𑦢	𑦣	𑦤	𑦥	𑦦	𑦧	𑦨	𑦩
𑦪	𑦫	𑦬	𑦭	𑦮	𑦯	𑦰	𑦱	𑦲	𑦳	𑦴	𑦵	𑦶
𑦷	𑦸	𑦹	𑦺	𑦻	𑦼	𑦽	𑦾	𑦿	𑧀	𑧁	𑧂	𑧃
𑧄	𑧅	𑧆	𑧇	𑧈	𑧉	𑧊	𑧋	𑧌	𑧍	𑧎	𑧏	𑧐
𑧑	𑧒	𑧓	𑧔	𑧕	𑧖	𑧗	𑧘	𑧙	𑧚	𑧛	𑧜	𑧝
𑧞	𑧟	𑧠	𑧡	𑧢	𑧣	𑧤	𑧥	𑧦	𑧧	𑧨	𑧩	𑧪
𑧫	𑧬	𑧭	𑧮	𑧯	𑧰	𑧱	𑧲	𑧳	𑧴	𑧵	𑧶	𑧷
𑧸	𑧹	𑧺										

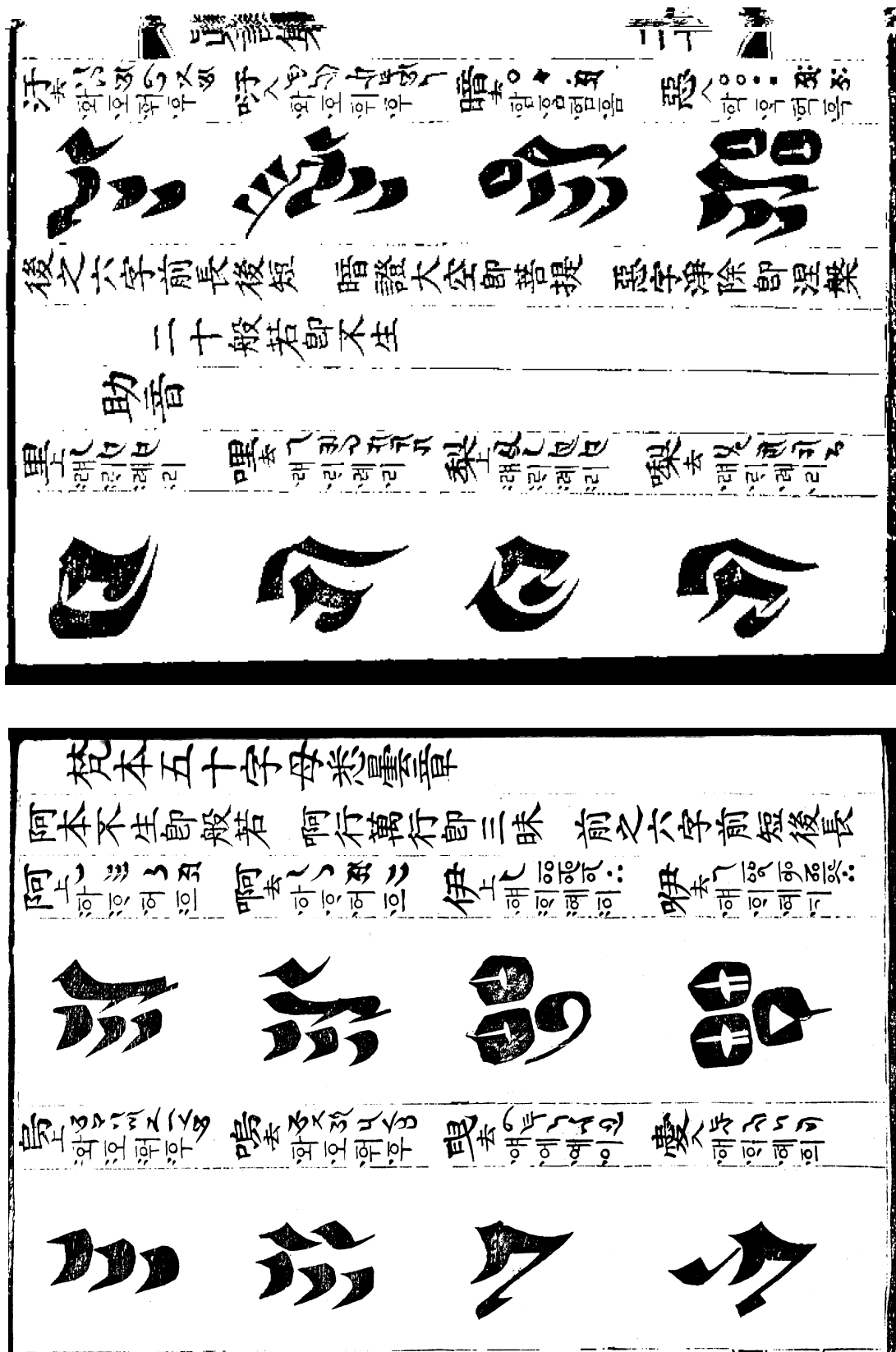


Figure 21: Siddham letters used in Korea (from Lim 2005). Courtesy of Lee Collins.



Figure 22: Siddham letters used in Korea (from Lim 2005). Courtesy of Lee Collins.

沙 平 沙 々 々 々 々 薩 平 々 々 々 々 々 賀 去 々 々 々 々 々 乞 平 々 々 々 々 々 灑 平 々 々 々 々 々 二 二 二 二

# 𑖀 𑖁 𑖂 𑖃

八 超 涅 槃 卽 淨 除

合則如 若濁分 與上之 十後二 聲反類 上之類 字則以 半訓下 訓全訓

前四須中明能所證及修成 本有之義亦有四智 四字義也 津以息之 入菩提可解 二五聲中 間各初 二八各後 一超平聲 以者八 除轉前

若與分 濁上之 十後二 聲反類 上之類 字則以 半訓下 訓全訓

## 脣音

波 清 叶 々 々 々 々 頗 平 叶 々 々 々 々 摩 上 叶 々 々 々 々 婆 去 叶 々 々 々 々 禁 入 叶 々 々 々 々

# 𑖄 𑖅 𑖆 𑖇

超音亦云和會聲

野 上 叶 々 々 々 々 囉 去 叶 々 々 々 々 擢 平 叶 々 々 々 々 囉 上 叶 々 々 々 々 舍 去 叶 々 々 々 々

# 𑖈 𑖉 𑖊 𑖋

Figure 23: Siddham letters used in Korea (from Lim 2005). Courtesy of Lee Collins.

<p>曳 ㄩ 去</p> <p>憂 ㄩ 入</p> <p>汗 ㄩ 去</p> <p>呀 ㄩ 入</p> <p>暗 ㄩ 去</p> <p>惡 ㄩ 入</p> <p>後之字 前長後短</p> <p>曠證天空即提 惡字淨除即聲</p>	<p>齒音</p> <p>左 ㄩ 平清</p> <p>差 ㄩ 平濁</p> <p>社 ㄩ 上</p> <p>攘 ㄩ 去</p> <p>舌音</p> <p>佗 ㄩ 平清</p> <p>山 ㄩ 平濁</p> <p>拏 ㄩ 上</p> <p>茶 ㄩ 去</p> <p>曩 ㄩ 入</p> <p>八轉三昧即壽</p>	<p>超音亦云和會聲</p> <p>野 ㄩ 上</p> <p>囉 ㄩ 去</p> <p>囉 ㄩ 平</p> <p>囉 ㄩ 上</p> <p>舍 ㄩ 去</p> <p>沙 ㄩ 平</p> <p>薩 ㄩ 上</p> <p>賀 ㄩ 去</p> <p>濁 ㄩ 平吞</p> <p>八超還聲即淨除</p>
--	--	---

<p>阿 ㄩ 上</p> <p>啊 ㄩ 去</p> <p>伊 ㄩ 上</p> <p>伊 ㄩ 去</p> <p>烏 ㄩ 上</p> <p>鳴 ㄩ 去</p> <p>前之字 前短後長</p> <p>阿本不生即聲 啊行萬行即昧</p>	<p>二十聲即生</p> <p>助音</p> <p>里 ㄩ 上</p> <p>哩 ㄩ 去</p> <p>梨 ㄩ 上</p> <p>梨 ㄩ 去</p> <p>牙音</p> <p>迦 ㄩ 平清</p> <p>佉 ㄩ 平濁</p> <p>識 ㄩ 上</p> <p>仰 ㄩ 去</p> <p>引 ㄩ 入</p>	<p>五合聲即天空</p> <p>喉音</p> <p>多 ㄩ 平清</p> <p>佗 ㄩ 平濁</p> <p>那 ㄩ 上</p> <p>娜 ㄩ 去</p> <p>那 ㄩ 入</p> <p>唇音</p> <p>波 ㄩ 平清</p> <p>頗 ㄩ 平濁</p> <p>摩 ㄩ 上</p> <p>婆 ㄩ 去</p> <p>莽 ㄩ 入</p>
--	---	---

Figure 24: Siddham letters used in Korea (from Lim 2005). Courtesy of Lee Collins.



Figure 25: Siddham used in a Korean version of the *Nilakanṭha Dhāraṇī* (नीलकण्ठ धारणी; Chi. 大悲咒 *Dàbēi Zhòu*) of Avalokiteśvara (from Lokesh Chandra 1988: 164).



아 자 차 아 자 아 다 타 나 다 나 다 타 나 다 나 바 파 마 바	誡 抄 擦 惹 𑖀 倪 𑖀 訛 𑖀 疵 茶 拏 𑖀 捷 捺 達 那 鉢 𑖀 未 婆	아 이 이 오 오 리 리 로 로 에 이 오 오 암 악 가 가 아 가	遇 阿 壹 翳 盟 污 哩 梨 魯 盧 伊 愛 𑖀 奧 暗 惡 葛 渴 𑖀 竭	瑜 伽 金 剛 頂 經 字 母	娑 𑖀 泉 𑖀 嘶 蘇 蘇 洗 𑖀 鯢 蘇 騷 𑖀 毘 索
--	---	---	--	--------------------------------------	---

Figure 26: Siddham letters used in Korea (from Stevens 1981: 8)

Plate XIX.

### लिपिपत्र १९वां.

प्राचीन हस्तलिखित पुस्तकों तथा लेखों से.

(ई. स. की छठी शताब्दी).

होर्युजी के मठ (जापान में) से मिली हुई 'उष्णीषविजयधारणी' की ताड़पत्र पर लिखी हुई पुस्तक के अन्त में दी हुई पूरी वर्णमाला.

अ आ इ ई उ ऊ ऋ ॠ ऌ ॡ ए ऐ ओ औ ऌं डं क  
 ॠ ॡं ः ः उ ऊ ऋ ॠ ? ? ष षं उ ऊ ऌं डं क  
 ख ग घ ङ च छ ज झ ञ ट ठ ड ढ ण त थ द  
 ध ण ष र व क ङ ह ण ट ० ३ ४ ५ ६ ७ ८  
 ध न प फ ब भ म य र ल व श ष स ह ल ओ  
 ष न प रु व न य र ल व स ष स रु ङ ७ .

बाबर शाहव की मिली हुई ओजपत्र पर लिखी पुस्तकों से मुख्य मुख्य अक्षर.

इ इ ई उ उ ए ऐ ओ औ ख ख ख झ ट फ व ङ  
 ङं ः ॠ ॡं उ उ ष उ ङ ४ ५ ६ ७ ८ ९ १० ११ १२

आदिरगढ से मिली हुई मौखरी शंभरवर्मन् की मुद्रा से मुख्य मुख्य अक्षर.

इ ई उ ख म म म ह ह ह हे हा य प्रा ख ख ख  
 ः ॠ ॡं ष षं य रु ङ ४ ५ ६ ७ ८ ९ १० ११ १२

मौखरी अक्षरवर्मन् के २ लेखों से. महानामन् के बुद्धगया के ले. (ई. ५८८)

म स हू पौ ङ्ग अ ण्ण षी ओ ओ. ज ए क य य त् वं  
 य म रु ण्णं ण्णं ण्णं ७ ७ . पु व रु य य ३ ७ .

७ सुविश्रुतमरुहिनयकुर्वत सुशुभितकैतिकः सुययानुपदे-  
 कुमुलपयकः सुखल्लुठसुकुपः यशुद्रुगमरुसुकुठिाकषय  
 अरेठपुगेः कल्लेय शिामसुपिनयलिकं वने फयेवद्वियं॥  
 सुज सुवकृपक्षः पाकिः सुधैरः सुयने लैके यदुय-

Figure 27: Chart showing the variety of Siddham used in the Hōryū-ji palm-leaf manuscripts (top portion of figure) (from Ojhā 1971: Plate 19).

[ 38 ] [ 39 ]

38 ] [ 38 ]

Miscellaneous alphabets to be met on the manuscripts and incriptions of Nepal.

This type of Nepalese consonants and vowels is found on the palm leaf manuscript in the monastry of Horyuji in Japan.

ध्व ङ्गु आखल जापानम् होंशुजीपिगु बिहारे उध्शीप विजय धारणी तालपत्रस लुयानःगु नेपाल आखलया स्वर व व्यञ्जन ।

ग आ इ ई ऐ ओ औ अं अः

A A I EE U OO Ri Ree Lri Lree  
अ आ इ ई ऐ ऊ ङ्गु ङ्गु ल लू लू

क ख ग घ ङ्गु च छ ज झ ञ्गु

E Ai O Au Am Ah  
ए ऐ ओ औ अं अः

क ख ग घ ङ्गु च छ ज झ ञ्गु

Ka Kha Ga Gha Na Cha Chha Ja Jha Yan  
क ख ग घ ङ्गु च छ ज झ ञ्गु

क ख ग घ ङ्गु च छ ज झ ञ्गु

Ta Iha Da Dha Na Ta Tha Da Dha Na  
ट ठ ड ङ्गु त थ द ध न

प फ ब भ म य रा ल व

Pa Pha Ba Bha Ma Ya Ra La Wa  
प फ ब भ म य रा ल व

श ष स ह ङ्गु

Sha Sha Sa Ha Ksha  
श ष स ह ङ्गु

This type of consonants and vowels are also available in various incriptions of Nepal.

ध्व ङ्गु आखल नं आपाःयानाः स्थान स्थानान्तरस शिलालेखम् खनेदुया निम्ती च्यागु जुल गुप्त आखलया स्वर व व्यञ्जन ।

क ख ग घ ङ्गु च छ ज झ ञ्गु

A A I EE U OO Ri Ree  
अ आ इ ई ऐ उ ऊ ङ्गु

Figure 28: Chart showing the variety of Siddham used in Nepal and Central Asia (from Śākyavamśa 1985: 38–39). This form of Siddham is apparently that used on the Hōryū-ji palm-leaf manuscripts.





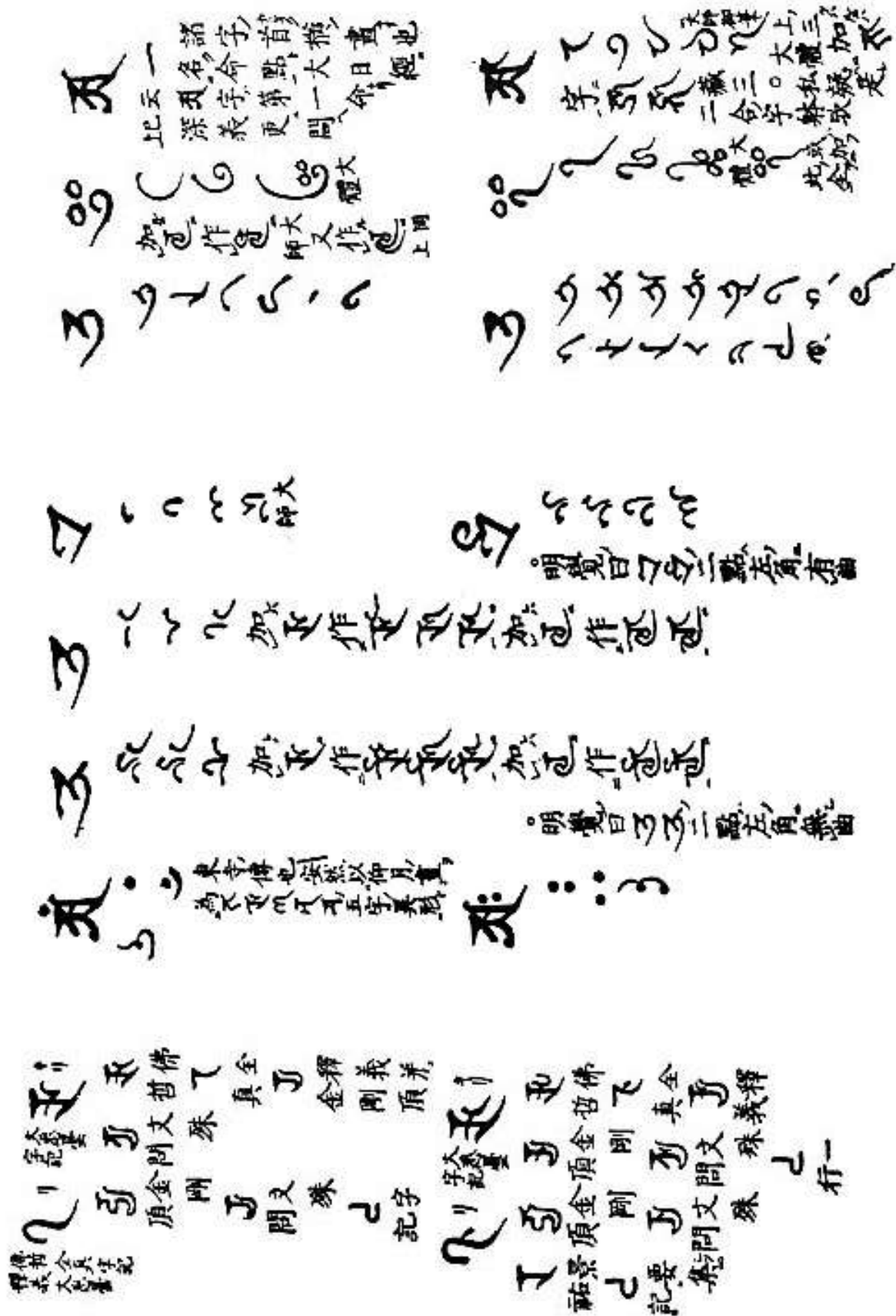
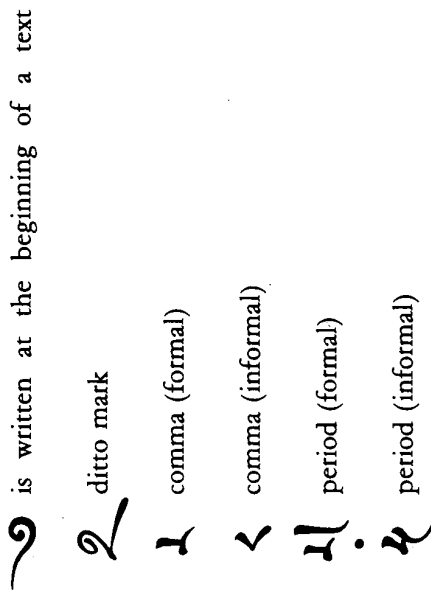


Figure 31: Description of vowel signs and the vocalic letters in the Shittan Sanmitsushō (from Jōgon 1682: 722).

Punctuation marks are as follows:



At the end of a text these marks are often used:

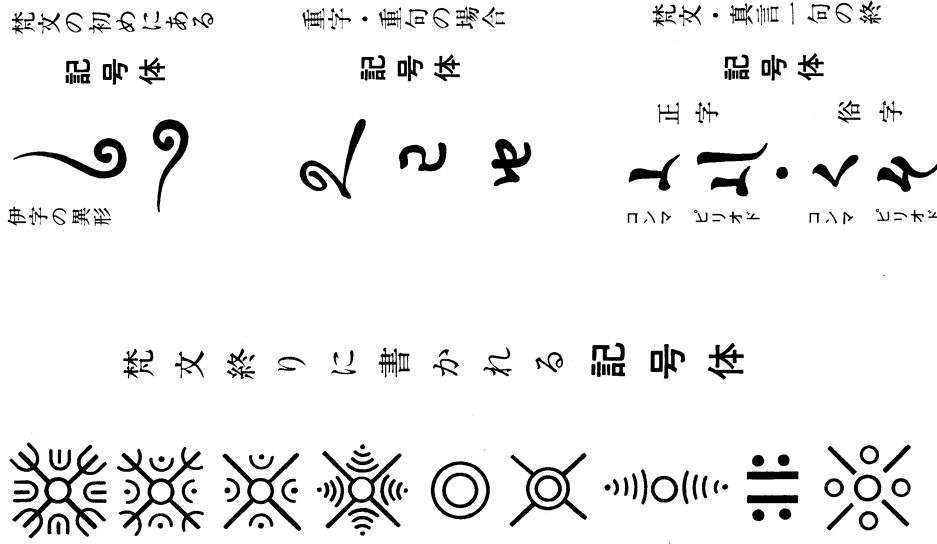
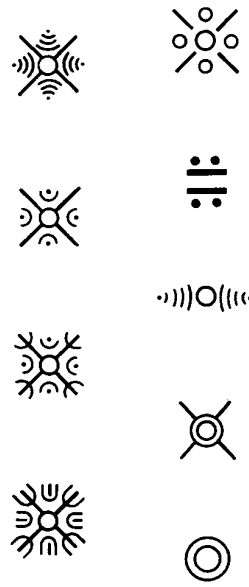


Figure 32: Punctuation and ornaments used in Siddham (from Stevens 1981: 41).

Figure 33: Punctuation and ornaments used in Siddham (from Tokuzan 1974: 227). Many of these are identical to those shown by Stevens (figure 32) and Kodama (figure 35). However, note here the vertical variant of  $\sim$  SIDDHAM.

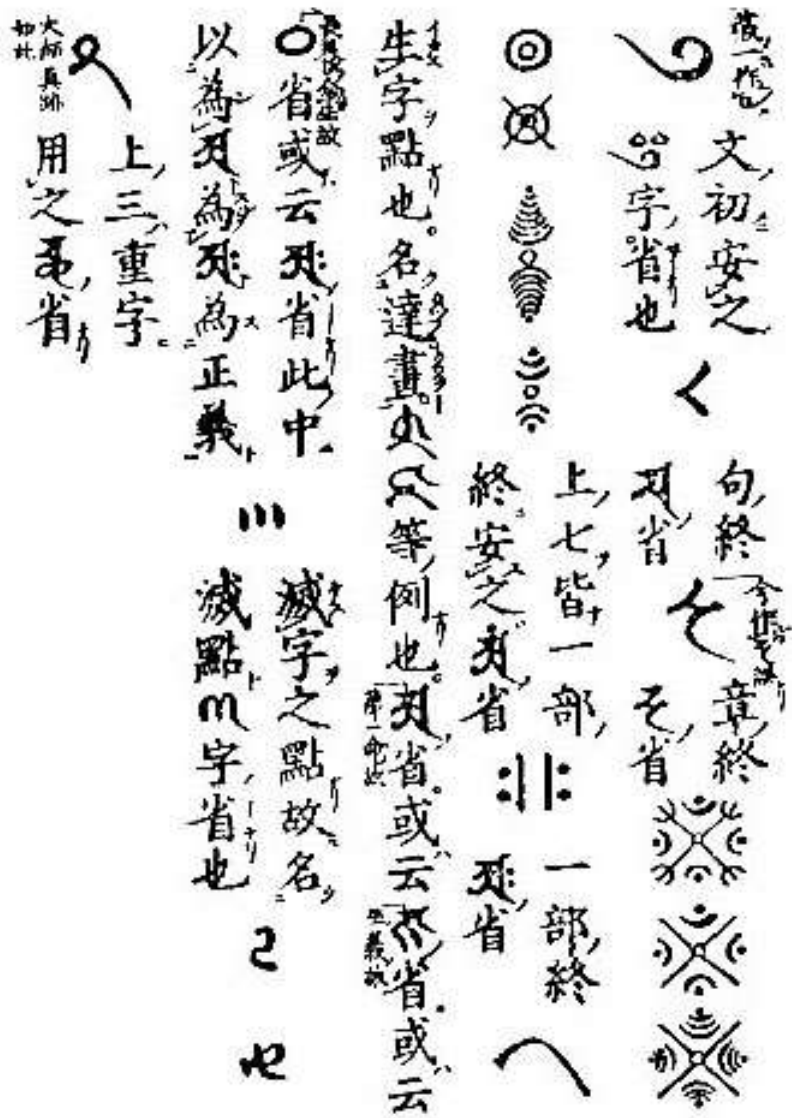


Figure 34: Description of an invocation sign, punctuation marks, ornaments, a variant form of VIRAMA, a deletion mark, and repetition marks in the *Shittan Sanmitsushō* (from Jōgon 1682: 724). Note the enumeration of various ornaments.



		記号
①		恒達 <sup>たたら</sup> (生の画)。母音符 (a) を除いた子音字 (半体文) を作る時に体文の下部につける。
②		文頭に書く。i 字の省略。
③		句末。読点にあたる。ma 字の省略。
④		文末。句点にあたる。da 字の省略。
⑤		疊句 <sup>じょうく</sup> (同じ言葉をくり返すときに用いる)。ca 字の省略。
⑥		滅滅点 (書き損じたときに、文字の上あるいは下にこの記号を符す)。na 字の省略。
⑦		文章の終りに符す。am 字の省略。
⑧		文章の終りに符す。ah 字の省略。

Figure 35: Punctuation and ornaments used in Siddham (from Kodama 1991: 222). Column (1) forms of VIRAMA; (2) the SIDDHAM sign; (3) the ‘informal’ DANDA; (4) the ‘informal’ DOUBLE DANDA; (5) the three repetition marks; (6) deletion marks; (7) ornaments used at the end of a text section; (8) a sign used at the end of text.

唵拏<sup>16</sup> 滿怛囉 麼鞞唵多 逸史夜弭<sup>17</sup> 薩嚩 遏唵他 娑馱劍<sup>18</sup> 薩嚩 尾觀曩  
 𑖀 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔  
 r̥ṇa mantra māvarṭta iṣyāmi sarva artha sādhaḥkaṃ, sarva vighna  
 〕〔真言〕 〔誓願〕〔一切〕〔事〕〔完成〕〔一切〕〔魔障〕

佉多劍<sup>19</sup> 薩嚩 尾灑 曩捨難<sup>20</sup>  
 𑖀 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔 𑖔  
 ghātaḥkaṃ, sarva viṣa nāśanām.  
 〔能破〕 〔一切〕〔毒〕〔消滅〕

唵<sup>21</sup> 𑖀 𑖀 𑖀 𑖀<sup>22</sup> 多嚩囉<sup>23</sup> 尾嚩囉<sup>24</sup> 薩嚩 尾觀曩 伽多迦<sup>25</sup> 入嚩  
 𑖀  
 om, hūṃ hūṃ hūṃ hūṃ, tarula virula, sarva vighna ghātaka, jva-  
 〔一切〕〔魔障〕〔能破〕 〔火

理多 尾娑普陵誡 吒賀娑<sup>26</sup> 計娑囉 捺吒 娑跢跛<sup>27</sup> 嚩日囉齶囉 捏伽多曩<sup>28</sup>  
 𑖀  
 lita visphulīṅgā ṭṭahāsa kesarā chaṭa saṭopa vajrahura nirghātana,  
 焰〕〔火花〕 〔哄笑〕〔鬣毛〕〔群集〕〔剛毛〕 〔金剛蹄〕 〔除去〕

左里多 嚩素馱多囉<sup>29</sup> 顛濕嚩娑 麼嚩妬 得乞插多<sup>30</sup> 馱囉拏 馱囉<sup>31</sup> 鼻灑拏  
 𑖀  
 calita vasudhātala niḥśvasa māruto tksipta, dharāṇi dhāra bhīṣaṇā  
 〔震動〕〔地表〕 〔鼻嘆息〕〔空氣〕 〔吐出〕 〔咒〕 〔持〕〔可怖畏〕

吒賀娑<sup>32</sup> 阿跛哩弭多麼囉<sup>33</sup> 跛囉屹囉麼<sup>34</sup> 鼻多部多藥拏<sup>35</sup> 沒地也 沒地也  
 𑖀  
 ṭṭahāsa aparimita bala parākrama bhītabhūtagaṇā, buddhya buddhya  
 〔哄笑〕〔無量〕 〔力〕 〔強鎮〕 〔驚怖步多鬼眾〕

<sup>36</sup> 賀也屹里嚩<sup>37</sup> 佉娜 佉娜<sup>38</sup> 跛囉滿怛囉<sup>39</sup> 略乞叉 略乞叉<sup>40</sup> 遏荅麼 滿怛囉  
 𑖀  
 hayagrīva, khāda khāda paramantra rakṣa rakṣa ātma mantram  
 〔馬頭明王〕 〔噉食〕 〔他真言〕 〔保護〕〔〃〕 〔自己〕〔真言〕

Figure 36: Chinese Siddham showing usage of 𑖀 REPETITION MARK-I (source unknown). Note the serialized use of 𑖀 after the syllable *hūṃ*, which indicates that the word is to be read thrice.



Figure 37: Excerpt from the *Uṣṇīṣa Vijaya Dhāraṇī Sūtra* in figure 5 showing usage of 𑖀 REPETITION MARK-2 in vertical text (from Kodama 2005: 123)).

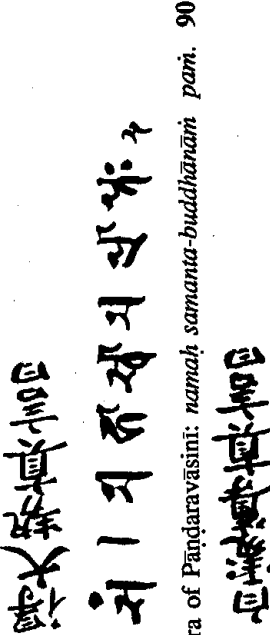


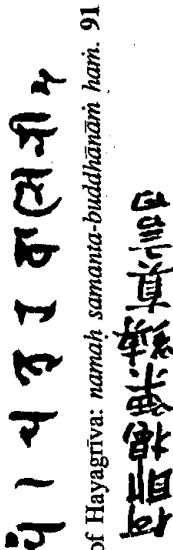
ॐ ह्रीं श्रुं ॐ न म न वी ॐ नं ॐ ॐ ॐ ॐ ॐ  
 सं । म न श्रु म प्रः ॐ सं । म व र व (सि री)  
 ह्रीं । न य शी वः ॐ ह्रीं । स आ ॐ ॐ ॐ  
 सं । र व म प्रः ॐ ॐ । रु त्रि मी प्र र ॐ  
 नः । म न श्रु म प्रः ॐ ह्रीं ह्रीं सं ॐ । ह्रीं ॐ । उ श्री म व  
ॐ


Figure 40: Text showing use of ॐ DANDA, ॐ DOUBLE DANDA, and । SEPARATOR-2 (from Lokesh Chandra 1972: 15). Note the writing of DANDA and DOUBLE DANDA beneath SEPARATOR-2.

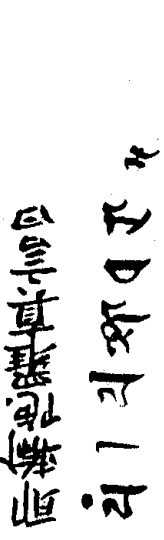
म व ग न । न मः म म न व व नं ॐ ॐ ॐ ॐ ॐ  
 ह्रीं ॐ म व ग न । न मः म म न व व नं ॐ ॐ ॐ ॐ ॐ  
 श्री उ प्र ह्रीं ॐ म य श्रु न ॐ म व न व न । न  
 मः म म न व व नं ॐ ॐ न व न प्र ह्रीं ॐ ॐ ॐ ॐ ॐ  
 न मः म म न व व नं ॐ ॐ र व म वि प न य श्रु न ॐ

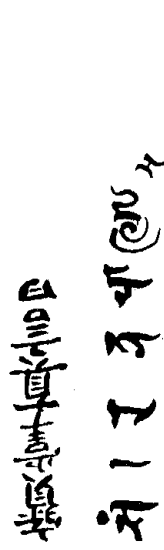
Figure 41: Text showing use of । SEPARATOR-2, ॐ DANDA, and ॐ DOUBLE DANDA (from Lokesh Chandra 1972: 33). Here SEPARATOR-2 is written independently.

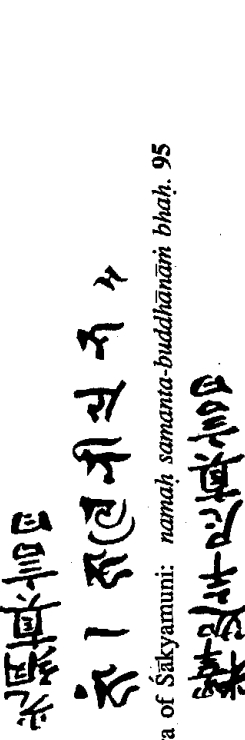

  
 The mantra of Paṇḍaravāsini: *namaḥ samanta-buddhānāṃ paṇ.* 90

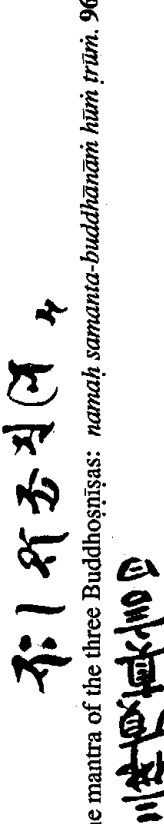

  
 The mantra of Hayagrīva: *namaḥ samanta-buddhānāṃ haṇ.* 91

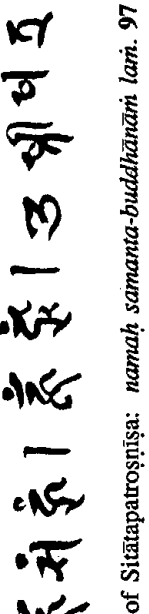

  
 The mantra of Yaśodharā: *namaḥ samanta-buddhānāṃ yaṇ.* 92

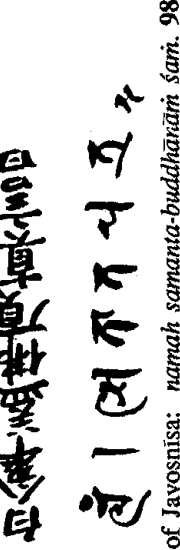

  
 The mantra of Ratnapāṇi: *namaḥ samanta-buddhānāṃ raṇ.* 93


  
 The mantra of Jalīnīrabha: *namaḥ samanta-buddhānāṃ jaṇ.* 94


  
 The mantra of Śākyamuni: *namaḥ samanta-buddhānāṃ bhah.* 95


  
 The mantra of the three Buddhaśiṣas: *namaḥ samanta-buddhānāṃ hūṃ trūṃ.* 96


  
 The mantra of Sitāpatroṣṇiṣa: *namaḥ samanta-buddhānāṃ laṃ.* 97


  
 The mantra of Jayoṣṇiṣa: *namaḥ samanta-buddhānāṃ śaṃ.* 98

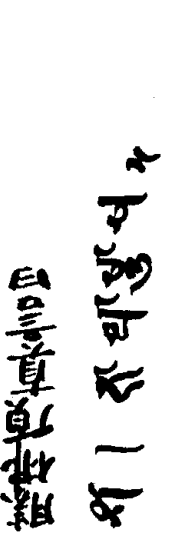

  
 The mantra of Vijayoṣṇiṣa: *namaḥ samanta-buddhānāṃ śī.* 99

Figure 42: Text showing use of | SEPARATOR-2 and ʌ DOUBLE DANDA (from Yamamoto 1990: 61, 62).

梵字-子音表 (一部)			アルファベット			発音記号			日本語表記					
日本語表記で使用														
ba	bā	バ	bla	blā	ブラ	bra	brā	ブラ	bya	bjā	ビヤ	bha	bhā	バ'ア
𑖃			𑖄			𑖅			𑖆			𑖇		
c'a	č'a	チア	c'ha	č'ha	チ'ア	da	dā	ダ	d'a	dā	ザ	d.a	dā	ダ
𑖈			𑖉			𑖊			𑖋			𑖌		
dha	dḥā	ダ'ア	d,ha	d,ḥā	ダ'ア	fa	fā	ファ	ga	gā	ガ	gha	ghā	ガ'ア
𑖍			𑖎			𑖏			𑖐			𑖑		
ha	hā	ハ	ja	ḥā	ジャ	jha	ḥhā	ジ'ア	ka	kā	カ	kha	khā	カ'ア
𑖒			𑖓			𑖔			𑖕			𑖖		
ks,a	kṣā	クシヤ	la	lā	ラ	ma	mā	マ	na	nā	ナ	n.a	ṇā	ンガ
𑖗			𑖘			𑖙			𑖚			𑖛		
n'ā	ṇā	ニヤ	n'a	ṇā	ナ	pa	pā	パ	pha	phā	パ'ア	qwa	kwā	クワ
𑖜			𑖝			𑖞			𑖟			𑖠		
ra	rā	ラ	sa	sā	サ	s'a	śā	シヤ	s,a	śā	シヤ	ta	tā	タ
𑖡			𑖢			𑖣			𑖤			𑖥		
tsa	tsā	ツア	t,a	tā	タ	tha	thā	タ'ア	t,ha	t,hā	タ'ア	th'a	ṭhā	サ
𑖦			𑖧			𑖨			𑖩			𑖪		
va	vā	ヴァ	wa	wā	ワ	xa	ksā	クサ	ya	jā	ヤ	za	zā	ザ
𑖫			𑖬			𑖭			𑖮			𑖯		

梵字文字 発音 法則

Figure 43: Chart showing the use of ◌ NUKTA for writing sounds not natively represented by traditional Siddham letters (Source: <http://www.mandalar.com/DisplayJ/Bonji/index2.html>).

GENDAI SHITTAN



現代悉曇

MODERN SIDDHAM

Japanese 日本語	刺青
English	Tattoo
Bonji Formation	ve+dha
梵字-梵語 Bonji-Sanskrit वे-दा ष ve:dha	
Bonji Formation	ta+tu:
梵字-英/印語 Bonji-Eng/Hindi タトゥー tatu:	
Bonji Formation	i+re+zu+mi
梵字-日/印語 Bonji-Jpn/Hindi ire:zumi	
刺青_目次	Tattoo_INDEX
目次	INDEX

BONJI WRITING SYSTEM



北華阿飛世界

WWW.MANDALAR.COM

Figure 44: Text showing the use of ◌ NUKTA with 𑀧 JA in order to represent /z/ in the Siddham for the Japanese word 刺青 *irezumi* “tattoo” (Source: [http://www.mandalar.com/BonjiDigitalDictionarySAMPLE/member/\\_Tattoo/00Tattoo.html](http://www.mandalar.com/BonjiDigitalDictionarySAMPLE/member/_Tattoo/00Tattoo.html)).



Grid 1	𑖀𑖁𑖂𑖃𑖄𑖅𑖆𑖇𑖈𑖉𑖊𑖋𑖌𑖍𑖎𑖏𑖐𑖑𑖒𑖓𑖔𑖕𑖖𑖗𑖘𑖙𑖚𑖛𑖜𑖝𑖞𑖟𑖠𑖡𑖢𑖣𑖤𑖥𑖦𑖧𑖨𑖩𑖪𑖫𑖬𑖭𑖮𑖯𑖰𑖱𑖲𑖳𑖴𑖵𑖶𑖷𑖸𑖹𑖺𑖻𑖼𑖽𑖾𑗀𑖿𑗁𑗂𑗃𑗄𑗅𑗆𑗇𑗈𑗉𑗊𑗋𑗌𑗍𑗎𑗏𑗐𑗑𑗒𑗓𑗔𑗕𑗖𑗗𑗘𑗙𑗚𑗛𑗜𑗝𑗞𑗟𑗠𑗡𑗢𑗣𑗤𑗥𑗦𑗧𑗨𑗩𑗪𑗫𑗬𑗭𑗮𑗯𑗰𑗱𑗲𑗳𑗴𑗵𑗶𑗷𑗸𑗹𑗺𑗻𑗼𑗽𑗾𑗿𑘀𑘁𑘂𑘃𑘄𑘅𑘆𑘇𑘈𑘉𑘊𑘋𑘌𑘍𑘎𑘏𑘐𑘑𑘒𑘓𑘔𑘕𑘖𑘗𑘘𑘙𑘚𑘛𑘜𑘝𑘞𑘟𑘠𑘡𑘢𑘣𑘤𑘥𑘦𑘧𑘨𑘩𑘪𑘫𑘬𑘭𑘮𑘯𑘰𑘱𑘲𑘳𑘴𑘵𑘶𑘷𑘸𑘹𑘺𑘻𑘼𑘽𑘾𑘿𑙀𑙁𑙂𑙃𑙄𑙅𑙆𑙇𑙈𑙉𑙊𑙋𑙌𑙍𑙎𑙏𑙐𑙑𑙒𑙓𑙔𑙕𑙖𑙗𑙘𑙙𑙚𑙛𑙜𑙝𑙞𑙟𑙠𑙡𑙢𑙣𑙤𑙥𑙦𑙧𑙨𑙩𑙪𑙫𑙬𑙭𑙮𑙯𑙰𑙱𑙲𑙳𑙴𑙵𑙶𑙷𑙸𑙹𑙺𑙻𑙼𑙽𑙾𑙿𑚀𑚁𑚂𑚃𑚄𑚅𑚆𑚇𑚈𑚉𑚊𑚋𑚌𑚍𑚎𑚏𑚐𑚑𑚒𑚓𑚔𑚕𑚖𑚗𑚘𑚙𑚚𑚛𑚜𑚝𑚞𑚟𑚠𑚡𑚢𑚣𑚤𑚥𑚦𑚧𑚨𑚩𑚪𑚫𑚬𑚭𑚮𑚯𑚰𑚱𑚲𑚳𑚴𑚵𑚷𑚶𑚸𑚹𑚺𑚻𑚼𑚽𑚾𑚿𑛀𑛁𑛂𑛃𑛄𑛅𑛆𑛇𑛈𑛉𑛊𑛋𑛌𑛍𑛎𑛏𑛐𑛑𑛒𑛓𑛔𑛕𑛖𑛗𑛘𑛙𑛚𑛛𑛜𑛝𑛞𑛟𑛠𑛡𑛢𑛣𑛤𑛥𑛦𑛧𑛨𑛩𑛪𑛫𑛬𑛭𑛮𑛯𑛰𑛱𑛲𑛳𑛴𑛵𑛶𑛷𑛸𑛹𑛺𑛻𑛼𑛽𑛾𑛿𑜀𑜁𑜂𑜃𑜄𑜅𑜆𑜇𑜈𑜉𑜊𑜋𑜌𑜍𑜎𑜏𑜐𑜑𑜒𑜓𑜔𑜕𑜖𑜗𑜘𑜙𑜚𑜛𑜜𑜝𑜞𑜟𑜠𑜡𑜢𑜣𑜤𑜥𑜦𑜧𑜨𑜩𑜪𑜫𑜬𑜭𑜮𑜯𑜰𑜱𑜲𑜳𑜴𑜵𑜶𑜷𑜸𑜹𑜺𑜻𑜼𑜽𑜾𑜿𑝀𑝁𑝂𑝃𑝄𑝅𑝆𑝇𑝈𑝉𑝊𑝋𑝌𑝍𑝎𑝏𑝐𑝑𑝒𑝓𑝔𑝕𑝖𑝗𑝘𑝙𑝚𑝛𑝜𑝝𑝞𑝟𑝠𑝡𑝢𑝣𑝤𑝥𑝦𑝧𑝨𑝩𑝪𑝫𑝬𑝭𑝮𑝯𑝰𑝱𑝲𑝳𑝴𑝵𑝶𑝷𑝸𑝹𑝺𑝻𑝼𑝽𑝾𑝿𑞀𑞁𑞂𑞃𑞄𑞅𑞆𑞇𑞈𑞉𑞊𑞋𑞌𑞍𑞎𑞏𑞐𑞑𑞒𑞓𑞔𑞕𑞖𑞗𑞘𑞙𑞚𑞛𑞜𑞝𑞞𑞟𑞠𑞡𑞢𑞣𑞤𑞥𑞦𑞧𑞨𑞩𑞪𑞫𑞬𑞭𑞮𑞯𑞰𑞱𑞲𑞳𑞴𑞵𑞶𑞷𑞸𑞹𑞺𑞻𑞼𑞽𑞾𑞿𑟀𑟁𑟂𑟃𑟄𑟅𑟆𑟇𑟈𑟉𑟊𑟋𑟌𑟍𑟎𑟏𑟐𑟑𑟒𑟓𑟔𑟕𑟖𑟗𑟘𑟙𑟚𑟛𑟜𑟝𑟞𑟟𑟠𑟡𑟢𑟣𑟤𑟥𑟦𑟧𑟨𑟩𑟪𑟫𑟬𑟭𑟮𑟯𑟰𑟱𑟲𑟳𑟴𑟵𑟶𑟷𑟸𑟹𑟺𑟻𑟼𑟽𑟾𑟿𑠀𑠁𑠂𑠃𑠄𑠅𑠆𑠇𑠈𑠉𑠊𑠋𑠌𑠍𑠎𑠏𑠐𑠑𑠒𑠓𑠔𑠕𑠖𑠗𑠘𑠙𑠚𑠛𑠜𑠝𑠞𑠟𑠠𑠡𑠢𑠣𑠤𑠥𑠦𑠧𑠨𑠩𑠪𑠫𑠬𑠭𑠮𑠯𑠰𑠱𑠲𑠳𑠴𑠵𑠶𑠷𑠸𑠺𑠹𑠻𑠼𑠽𑠾𑠿𑡀𑡁𑡂𑡃𑡄𑡅𑡆𑡇𑡈𑡉𑡊𑡋𑡌𑡍𑡎𑡏𑡐𑡑𑡒𑡓𑡔𑡕𑡖𑡗𑡘𑡙𑡚𑡛𑡜𑡝𑡞𑡟𑡠𑡡𑡢𑡣𑡤𑡥𑡦𑡧𑡨𑡩𑡪𑡫𑡬𑡭𑡮𑡯𑡰𑡱𑡲𑡳𑡴𑡵𑡶𑡷𑡸𑡹𑡺𑡻𑡼𑡽𑡾𑡿𑢀𑢁𑢂𑢃𑢄𑢅𑢆𑢇𑢈𑢉𑢊𑢋𑢌𑢍𑢎𑢏𑢐𑢑𑢒𑢓𑢔𑢕𑢖𑢗𑢘𑢙𑢚𑢛𑢜𑢝𑢞𑢟𑢠𑢡𑢢𑢣𑢤𑢥𑢦𑢧𑢨𑢩𑢪𑢫𑢬𑢭𑢮𑢯𑢰𑢱𑢲𑢳𑢴𑢵𑢶𑢷𑢸𑢹𑢺𑢻𑢼𑢽𑢾𑢿𑣀𑣁𑣂𑣃𑣄𑣅𑣆𑣇𑣈𑣉𑣊𑣋𑣌𑣍𑣎𑣏𑣐𑣑𑣒𑣓𑣔𑣕𑣖𑣗𑣘𑣙𑣚𑣛𑣜𑣝𑣞𑣟𑣠𑣡𑣢𑣣𑣤𑣥𑣦𑣧𑣨𑣩𑣪𑣫𑣬𑣭𑣮𑣯𑣰𑣱𑣲𑣳𑣴𑣵𑣶𑣷𑣸𑣹𑣺𑣻𑣼𑣽𑣾𑣿𑤀𑤁𑤂𑤃𑤄𑤅𑤆𑤇𑤈𑤉𑤊𑤋𑤌𑤍𑤎𑤏𑤐𑤑𑤒𑤓𑤔𑤕𑤖𑤗𑤘𑤙𑤚𑤛𑤜𑤝𑤞𑤟𑤠𑤡𑤢𑤣𑤤𑤥𑤦𑤧𑤨𑤩𑤪𑤫𑤬𑤭𑤮𑤯𑤰𑤱𑤲𑤳𑤴𑤵𑤶𑤷𑤸𑤹𑤺𑤻𑤼𑤽𑤾𑤿𑥀𑥁𑥂𑥃𑥄𑥅𑥆𑥇𑥈𑥉𑥊𑥋𑥌𑥍𑥎𑥏𑥐𑥑𑥒𑥓𑥔𑥕𑥖𑥗𑥘𑥙𑥚𑥛𑥜𑥝𑥞𑥟𑥠𑥡𑥢𑥣𑥤𑥥𑥦𑥧𑥨𑥩𑥪𑥫𑥬𑥭𑥮𑥯𑥰𑥱𑥲𑥳𑥴𑥵𑥶𑥷𑥸𑥹𑥺𑥻𑥼𑥽𑥾𑥿𑦀𑦁𑦂𑦃𑦄𑦅𑦆𑦇𑦈𑦉𑦊𑦋𑦌𑦍𑦎𑦏𑦐𑦑𑦒𑦓𑦔𑦕𑦖𑦗𑦘𑦙𑦚𑦛𑦜𑦝𑦞𑦟𑦠𑦡𑦢𑦣𑦤𑦥𑦦𑦧𑦨𑦩𑦪𑦫𑦬𑦭𑦮𑦯𑦰𑦱𑦲𑦳𑦴𑦵𑦶𑦷𑦸𑦹𑦺𑦻𑦼𑦽𑦾𑦿𑧀𑧁𑧂𑧃𑧄𑧅𑧆𑧇𑧈𑧉𑧊𑧋𑧌𑧍𑧎𑧏𑧐𑧑𑧒𑧓𑧔𑧕𑧖𑧗𑧘𑧙𑧚𑧛𑧜𑧝𑧞𑧟𑧠𑧡𑧢𑧣𑧤𑧥𑧦𑧧𑧨𑧩𑧪𑧫𑧬𑧭𑧮𑧯𑧰𑧱𑧲𑧳𑧴𑧵𑧶𑧷𑧸𑧹𑧺𑧻𑧼𑧽𑧾𑧿𑨀𑨁𑨂𑨃𑨄𑨅𑨆𑨇𑨈𑨉𑨊𑨋𑨌𑨍𑨎𑨏𑨐𑨑𑨒𑨓𑨔𑨕𑨖𑨗𑨘𑨙𑨚𑨛𑨜𑨝𑨞𑨟𑨠𑨡𑨢𑨣𑨤𑨥𑨦𑨧𑨨𑨩𑨪𑨫𑨬𑨭𑨮𑨯𑨰𑨱𑨲𑨳𑨴𑨵𑨶𑨷𑨸𑨹𑨺𑨻𑨼𑨽𑨾𑨿𑩀𑩁𑩂𑩃𑩄𑩅𑩆𑩇𑩈𑩉𑩊𑩋𑩌𑩍𑩎𑩏𑩐𑩑𑩒𑩓𑩔𑩕𑩖𑩗𑩘𑩙𑩚𑩛𑩜𑩝𑩞𑩟𑩠𑩡𑩢𑩣𑩤𑩥𑩦𑩧𑩨𑩩𑩪𑩫𑩬𑩭𑩮𑩯𑩰𑩱𑩲𑩳𑩴𑩵𑩶𑩷𑩸𑩹𑩺𑩻𑩼𑩽𑩾𑩿𑪀𑪁𑪂𑪃𑪄𑪅𑪆𑪇𑪈𑪉𑪊𑪋𑪌𑪍𑪎𑪏𑪐𑪑𑪒𑪓𑪔𑪕𑪖𑪗𑪘𑪙𑪚𑪛𑪜𑪝𑪞𑪟𑪠𑪡𑪢𑪣𑪤𑪥𑪦𑪧𑪨𑪩𑪪𑪫𑪬𑪭𑪮𑪯𑪰𑪱𑪲𑪳𑪴𑪵𑪶𑪷𑪸𑪹𑪺𑪻𑪼𑪽𑪾𑪿𑫀𑫁𑫂𑫃𑫄𑫅𑫆𑫇𑫈𑫉𑫊𑫋𑫌𑫍𑫎𑫏𑫐𑫑𑫒𑫓𑫔𑫕𑫖𑫗𑫘𑫙𑫚𑫛𑫜𑫝𑫞𑫟𑫠𑫡𑫢𑫣𑫤𑫥𑫦𑫧𑫨𑫩𑫪𑫫𑫬𑫭𑫮𑫯𑫰𑫱𑫲𑫳𑫴𑫵𑫶𑫷𑫸𑫹𑫺𑫻𑫼𑫽𑫾𑫿𑬀𑬁𑬂𑬃𑬄𑬅𑬆𑬇𑬈𑬉𑬊𑬋𑬌𑬍𑬎𑬏𑬐𑬑𑬒𑬓𑬔𑬕𑬖𑬗𑬘𑬙𑬚𑬛𑬜𑬝𑬞𑬟𑬠𑬡𑬢𑬣𑬤𑬥𑬦𑬧𑬨𑬩𑬪𑬫𑬬𑬭𑬮𑬯𑬰𑬱𑬲𑬳𑬴𑬵𑬶𑬷𑬸𑬹𑬺𑬻𑬼𑬽𑬾𑬿𑭀𑭁𑭂𑭃𑭄𑭅𑭆𑭇𑭈𑭉𑭊𑭋𑭌𑭍𑭎𑭏𑭐𑭑𑭒𑭓𑭔𑭕𑭖𑭗𑭘𑭙𑭚𑭛𑭜𑭝𑭞𑭟𑭠𑭡𑭢𑭣𑭤𑭥𑭦𑭧𑭨𑭩𑭪𑭫𑭬𑭭𑭮𑭯𑭰𑭱𑭲𑭳𑭴𑭵𑭶𑭷𑭸𑭹𑭺𑭻𑭼𑭽𑭾𑭿𑮀𑮁𑮂𑮃𑮄𑮅𑮆𑮇𑮈𑮉𑮊𑮋𑮌𑮍𑮎𑮏𑮐𑮑𑮒𑮓𑮔𑮕𑮖𑮗𑮘𑮙𑮚𑮛𑮜𑮝𑮞𑮟𑮠𑮡𑮢𑮣𑮤𑮥𑮦𑮧𑮨𑮩𑮪𑮫𑮬𑮭𑮮𑮯𑮰𑮱𑮲𑮳𑮴𑮵𑮶𑮷𑮸𑮹𑮺𑮻𑮼𑮽𑮾𑮿𑯀𑯁𑯂𑯃𑯄𑯅𑯆𑯇𑯈𑯉𑯊𑯋𑯌𑯍𑯎𑯏𑯐𑯑𑯒𑯓𑯔𑯕𑯖𑯗𑯘𑯙𑯚𑯛𑯜𑯝𑯞𑯟𑯠𑯡𑯢𑯣𑯤𑯥𑯦𑯧𑯨𑯩𑯪𑯫𑯬𑯭𑯮𑯯𑯰𑯱𑯲𑯳𑯴𑯵𑯶𑯷𑯸𑯹𑯺𑯻𑯼𑯽𑯾𑯿𑰀𑰁𑰂𑰃𑰄𑰅𑰆𑰇𑰈𑰉𑰊𑰋𑰌𑰍𑰎𑰏𑰐𑰑𑰒𑰓𑰔𑰕𑰖𑰗𑰘𑰙𑰚𑰛𑰜𑰝𑰞𑰟𑰠𑰡𑰢𑰣𑰤𑰥𑰦𑰧𑰨𑰩𑰪𑰫𑰬𑰭𑰮𑰯𑰰𑰱𑰲𑰳𑰴𑰵𑰶𑰷𑰸𑰹𑰺𑰻𑰼𑰽𑰾𑰿𑱀𑱁𑱂𑱃𑱄𑱅𑱆𑱇𑱈𑱉𑱊𑱋𑱌𑱍𑱎𑱏𑱐𑱑𑱒𑱓𑱔𑱕𑱖𑱗𑱘𑱙𑱚𑱛𑱜𑱝𑱞𑱟𑱠𑱡𑱢𑱣𑱤𑱥𑱦𑱧𑱨𑱩𑱪𑱫𑱬𑱭𑱮𑱯𑱰𑱱𑱲𑱳𑱴𑱵𑱶𑱷𑱸𑱹𑱺𑱻𑱼𑱽𑱾𑱿𑲀𑲁𑲂𑲃𑲄𑲅𑲆𑲇𑲈𑲉𑲊𑲋𑲌𑲍𑲎𑲏𑲐𑲑𑲒𑲓𑲔𑲕𑲖𑲗𑲘𑲙𑲚𑲛𑲜𑲝𑲞𑲟𑲠𑲡𑲢𑲣𑲤𑲥𑲦𑲧𑲨𑲩𑲪𑲫𑲬𑲭𑲮𑲯𑲰𑲱𑲲𑲳𑲴𑲵𑲶𑲷𑲸𑲹𑲺𑲻𑲼𑲽𑲾𑲿𑳀𑳁𑳂𑳃𑳄𑳅𑳆𑳇𑳈𑳉𑳊𑳋𑳌𑳍𑳎𑳏𑳐𑳑𑳒𑳓𑳔𑳕𑳖𑳗𑳘𑳙𑳚𑳛𑳜𑳝𑳞𑳟𑳠𑳡𑳢𑳣𑳤𑳥𑳦𑳧𑳨𑳩𑳪𑳫𑳬𑳭𑳮𑳯𑳰𑳱𑳲𑳳𑳴𑳵𑳶𑳷𑳸𑳹𑳺𑳻𑳼𑳽𑳾𑳿𑴀𑴁𑴂𑴃𑴄𑴅𑴆𑴇𑴈𑴉𑴊𑴋𑴌𑴍𑴎𑴏𑴐𑴑𑴒𑴓𑴔𑴕𑴖𑴗𑴘𑴙𑴚𑴛𑴜𑴝𑴞𑴟𑴠𑴡𑴢𑴣𑴤𑴥𑴦𑴧𑴨𑴩𑴪𑴫𑴬𑴭𑴮𑴯𑴰𑴱𑴲𑴳𑴴𑴵𑴶𑴷𑴸𑴹𑴺𑴻𑴼𑴽𑴾𑴿𑵀𑵁𑵂𑵃𑵄𑵅𑵆𑵇𑵈𑵉𑵊𑵋𑵌𑵍𑵎𑵏𑵐𑵑𑵒𑵓𑵔𑵕𑵖𑵗𑵘𑵙𑵚𑵛𑵜𑵝𑵞𑵟𑵠𑵡𑵢𑵣𑵤𑵥𑵦𑵧𑵨𑵩𑵪𑵫𑵬𑵭𑵮𑵯𑵰𑵱𑵲𑵳𑵴𑵵𑵶𑵷𑵸𑵹𑵺𑵻𑵼𑵽𑵾𑵿𑶀𑶁𑶂𑶃𑶄𑶅𑶆𑶇𑶈𑶉𑶊𑶋𑶌𑶍𑶎𑶏𑶐𑶑𑶒𑶓𑶔𑶕𑶖𑶗𑶘𑶙𑶚𑶛𑶜𑶝𑶞𑶟𑶠𑶡𑶢𑶣𑶤𑶥𑶦𑶧𑶨𑶩𑶪𑶫𑶬𑶭𑶮𑶯𑶰𑶱𑶲𑶳𑶴𑶵𑶶𑶷𑶸𑶹𑶺𑶻𑶼𑶽𑶾𑶿𑷀𑷁𑷂𑷃𑷄𑷅𑷆𑷇𑷈𑷉𑷊𑷋𑷌𑷍𑷎𑷏𑷐𑷑𑷒𑷓𑷔𑷕𑷖𑷗𑷘𑷙𑷚𑷛𑷜𑷝𑷞𑷟𑷠𑷡𑷢𑷣𑷤𑷥𑷦𑷧𑷨𑷩𑷪𑷫𑷬𑷭𑷮𑷯𑷰𑷱𑷲𑷳𑷴𑷵𑷶𑷷𑷸𑷹𑷺𑷻𑷼𑷽𑷾𑷿𑸀𑸁𑸂𑸃𑸄𑸅𑸆𑸇𑸈𑸉𑸊𑸋𑸌𑸍𑸎𑸏𑸐𑸑𑸒𑸓𑸔𑸕𑸖𑸗𑸘𑸙𑸚𑸛𑸜𑸝𑸞𑸟𑸠𑸡𑸢𑸣𑸤𑸥𑸦𑸧𑸨𑸩𑸪𑸫𑸬𑸭𑸮𑸯𑸰𑸱𑸲𑸳𑸴𑸵𑸶𑸷𑸸𑸹𑸺𑸻𑸼𑸽𑸾𑸿𑹀𑹁𑹂𑹃𑹄𑹅𑹆𑹇𑹈𑹉𑹊𑹋𑹌𑹍𑹎𑹏𑹐𑹑𑹒𑹓𑹔𑹕𑹖𑹗𑹘𑹙𑹚𑹛𑹜𑹝𑹞𑹟𑹠𑹡𑹢𑹣𑹤𑹥𑹦𑹧𑹨𑹩𑹪𑹫𑹬𑹭𑹮𑹯𑹰𑹱𑹲𑹳𑹴𑹵𑹶𑹷𑹸𑹹𑹺𑹻𑹼𑹽𑹾𑹿𑺀𑺁𑺂𑺃𑺄𑺅𑺆𑺇𑺈𑺉𑺊𑺋𑺌𑺍𑺎𑺏𑺐𑺑𑺒𑺓𑺔𑺕𑺖𑺗𑺘𑺙𑺚𑺛𑺜𑺝𑺞𑺟𑺠𑺡𑺢𑺣𑺤𑺥𑺦𑺧𑺨𑺩𑺪𑺫𑺬𑺭𑺮𑺯𑺰𑺱𑺲𑺳𑺴𑺵𑺶𑺷𑺸𑺹𑺺𑺻𑺼𑺽𑺾𑺿𑻀𑻁𑻂𑻃𑻄𑻅𑻆𑻇𑻈𑻉𑻊𑻋𑻌𑻍𑻎𑻏𑻐𑻑𑻒𑻓𑻔𑻕𑻖𑻗𑻘𑻙𑻚𑻛𑻜𑻝𑻞𑻟𑻠𑻡𑻢𑻣𑻤𑻥𑻦𑻧𑻨𑻩𑻪𑻫𑻬𑻭𑻮𑻯𑻰𑻱𑻲𑻳𑻴𑻵𑻶𑻷𑻸𑻹𑻺𑻻𑻼𑻽𑻾𑻿𑼀𑼁𑼂𑼃𑼄𑼅𑼆𑼇𑼈𑼉𑼊𑼋𑼌𑼍𑼎𑼏𑼐𑼑𑼒𑼓𑼔𑼕𑼖𑼗𑼘𑼙𑼚𑼛𑼜𑼝𑼞𑼟𑼠𑼡𑼢𑼣𑼤𑼥𑼦𑼧𑼨𑼩𑼪𑼫𑼬𑼭𑼮𑼯𑼰𑼱𑼲𑼳𑼴𑼵𑼶𑼷𑼸𑼹𑼺𑼻𑼼𑼽𑼾𑼿𑽀𑽁𑽂𑽃𑽄𑽅𑽆𑽇𑽈𑽉𑽊𑽋𑽌𑽍𑽎𑽏𑽐𑽑𑽒𑽓𑽔𑽕𑽖𑽗𑽘𑽙𑽚𑽛𑽜𑽝𑽞𑽟𑽠𑽡𑽢𑽣𑽤𑽥𑽦𑽧𑽨𑽩𑽪𑽫𑽬𑽭𑽮𑽯𑽰𑽱𑽲𑽳𑽴𑽵𑽶𑽷𑽸𑽹𑽺𑽻𑽼𑽽𑽾𑽿𑾀𑾁𑾂𑾃𑾄𑾅𑾆𑾇𑾈𑾉𑾊𑾋𑾌𑾍𑾎𑾏𑾐𑾑𑾒𑾓𑾔𑾕𑾖𑾗𑾘𑾙𑾚𑾛𑾜𑾝𑾞𑾟𑾠𑾡𑾢𑾣𑾤𑾥𑾦𑾧𑾨𑾩𑾪𑾫𑾬𑾭𑾮𑾯𑾰𑾱𑾲𑾳𑾴𑾵𑾶𑾷𑾸𑾹𑾺𑾻𑾼𑾽𑾾𑾿𑿀𑿁𑿂𑿃𑿄𑿅𑿆𑿇𑿈𑿉𑿊𑿋𑿌𑿍𑿎𑿏𑿐𑿑𑿒𑿓𑿔𑿕𑿖𑿗𑿘𑿙𑿚𑿛𑿜𑿝𑿞𑿟𑿠𑿡𑿢𑿣𑿤𑿥𑿦𑿧𑿨𑿩𑿪𑿫𑿬𑿭𑿮𑿯𑿰𑿱𑿲𑿳𑿴𑿵𑿶𑿷𑿸𑿹𑿺𑿻𑿼𑿽𑿾𑿿𑀀𑀁𑀂𑀃𑀄𑀅𑀆𑀇𑀈𑀉𑀊𑀋𑀌𑀍𑀎𑀏𑀐𑀑𑀒𑀓𑀔𑀕𑀖𑀗𑀘𑀙𑀚𑀛𑀜𑀝𑀞𑀟𑀠𑀡𑀢𑀣𑀤𑀥𑀦𑀧𑀨𑀩𑀪𑀫𑀬𑀭𑀮𑀯𑀰𑀱𑀲𑀳𑀴𑀵𑀶𑀷𑀸𑀹𑀺𑀻𑀼𑀽𑀾𑀿𑁀𑁁𑁂𑁃𑁄𑁅𑁆𑁇𑁈𑁉𑁊𑁋𑁌𑁍𑁎𑁏𑁐𑁑𑁒𑁓𑁔𑁕𑁖𑁗𑁘𑁙𑁚𑁛𑁜𑁝𑁞𑁟𑁠𑁡𑁢𑁣𑁤𑁥𑁦𑁧𑁨𑁩𑁪𑁫𑁬𑁭𑁮𑁯𑁰𑁱𑁲𑁳𑁴𑁵𑁶𑁷𑁸𑁹𑁺𑁻𑁼𑁽𑁾𑁿𑂀𑂁𑂂𑂃𑂄𑂅𑂆𑂇𑂈𑂉𑂊𑂋𑂌𑂍𑂎𑂏𑂐𑂑𑂒𑂓𑂔𑂕𑂖𑂗𑂘𑂙𑂚𑂛𑂜𑂝𑂞𑂟𑂠𑂡𑂢𑂣𑂤𑂥𑂦𑂧𑂨𑂩𑂪𑂫𑂬𑂭𑂮𑂯𑂰𑂱𑂲𑂳𑂴𑂵𑂶𑂷𑂸𑂺𑂹𑂻𑂼𑂽𑂾𑂿𑃀𑃁𑃂𑃃𑃄𑃅𑃆𑃇𑃈𑃉𑃊𑃋𑃌𑃍𑃎𑃏𑃐𑃑𑃒𑃓𑃔𑃕𑃖𑃗𑃘𑃙𑃚𑃛𑃜𑃝𑃞𑃟𑃠𑃡𑃢𑃣𑃤𑃥𑃦𑃧𑃨𑃩𑃪𑃫𑃬𑃭𑃮𑃯𑃰𑃱𑃲𑃳𑃴𑃵𑃶𑃷𑃸𑃹𑃺𑃻𑃼𑃽𑃾𑃿𑄀𑄁𑄂𑄃𑄄𑄅𑄆𑄇𑄈𑄉𑄊𑄋𑄌𑄍𑄎𑄏𑄐𑄑𑄒𑄓𑄔𑄕𑄖𑄗𑄘𑄙𑄚𑄛𑄜𑄝𑄞𑄟𑄠𑄡𑄢𑄣𑄤𑄥𑄦𑄧𑄨𑄩𑄪𑄫𑄬𑄭𑄮𑄯𑄰𑄱𑄲𑄳𑄴𑄵𑄶𑄷𑄸𑄹𑄺𑄻𑄼𑄽𑄾𑄿𑅀𑅁𑅂𑅃𑅄𑅅𑅆𑅇𑅈𑅉𑅊𑅋𑅌𑅍𑅎𑅏𑅐𑅑𑅒𑅓𑅔𑅕𑅖𑅗𑅘𑅙𑅚𑅛𑅜𑅝𑅞𑅟𑅠𑅡𑅢𑅣𑅤𑅥𑅦𑅧𑅨𑅩𑅪𑅫𑅬𑅭𑅮𑅯𑅰𑅱𑅲𑅳
--------	--



Plate VIIa. Siddham ligatures

Figure 46: Siddham ligatures (from van Gulik 1980: Plate VIIa).

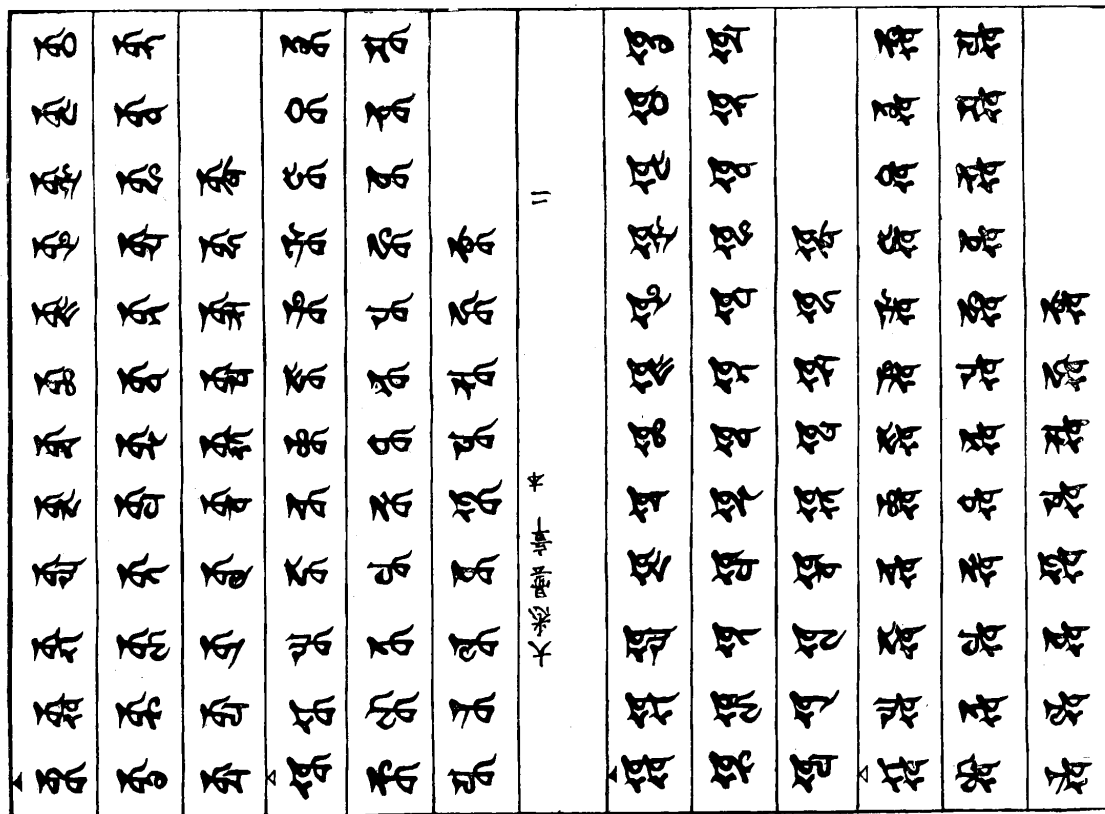


Plate VIIb. Siddham ligatures

Figure 47: Siddham ligatures (from van Gulik 1980: Plate VIIb).

ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ

Plate VIIc. Siddham ligatures

Figure 48: Siddham ligatures (from van Gulik 1980: Plate VIIc).

ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ

Plate VIId. Siddham ligatures

Figure 49: Siddham ligatures (from van Gulik 1980: Plate VIId).

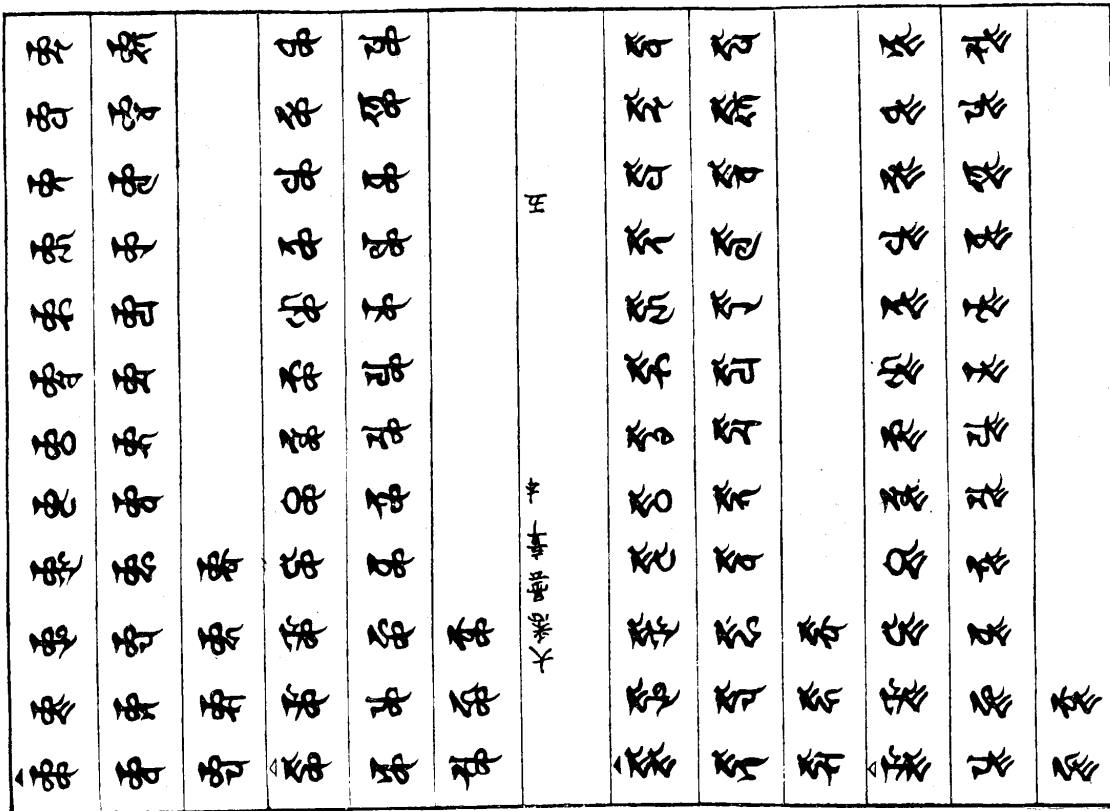


Plate VIIe. Siddham ligatures

Figure 50: Siddham ligatures (from van Gulik 1980: Plate VIIe).

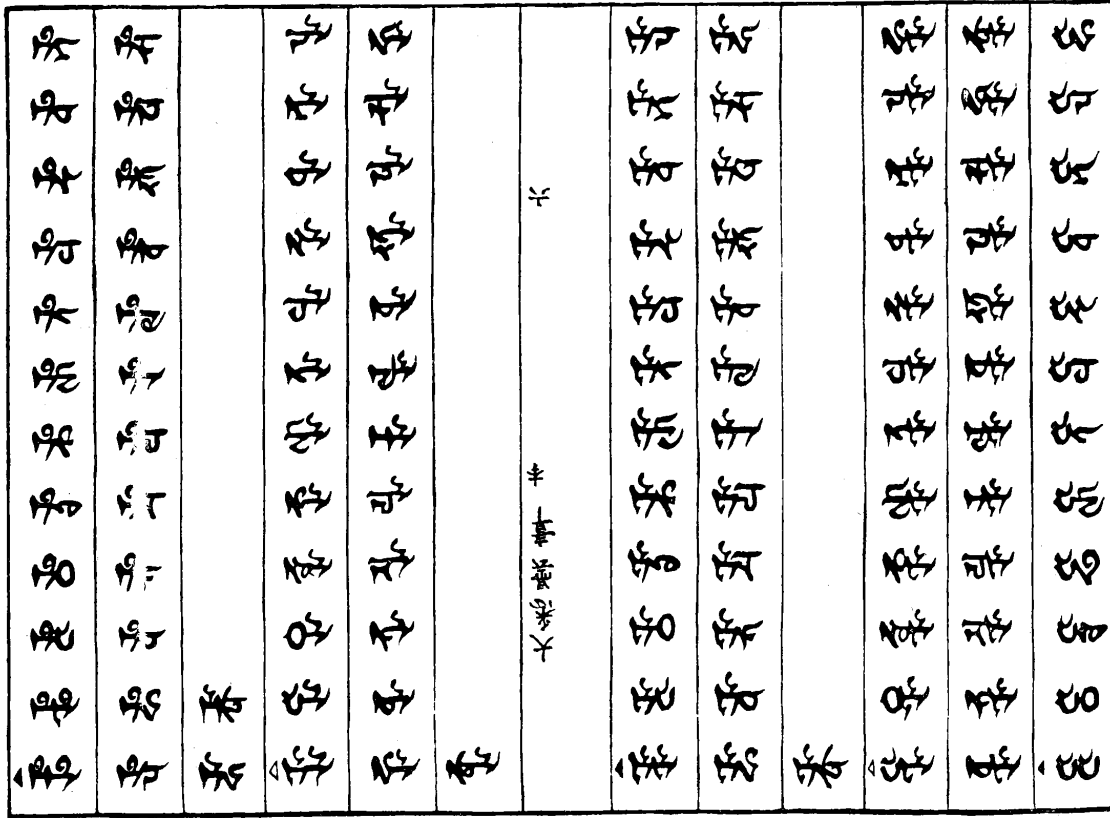


Plate VIIIf. Siddham ligatures

Figure 51: Siddham ligatures (from van Gulik 1980: Plate VIIIf).

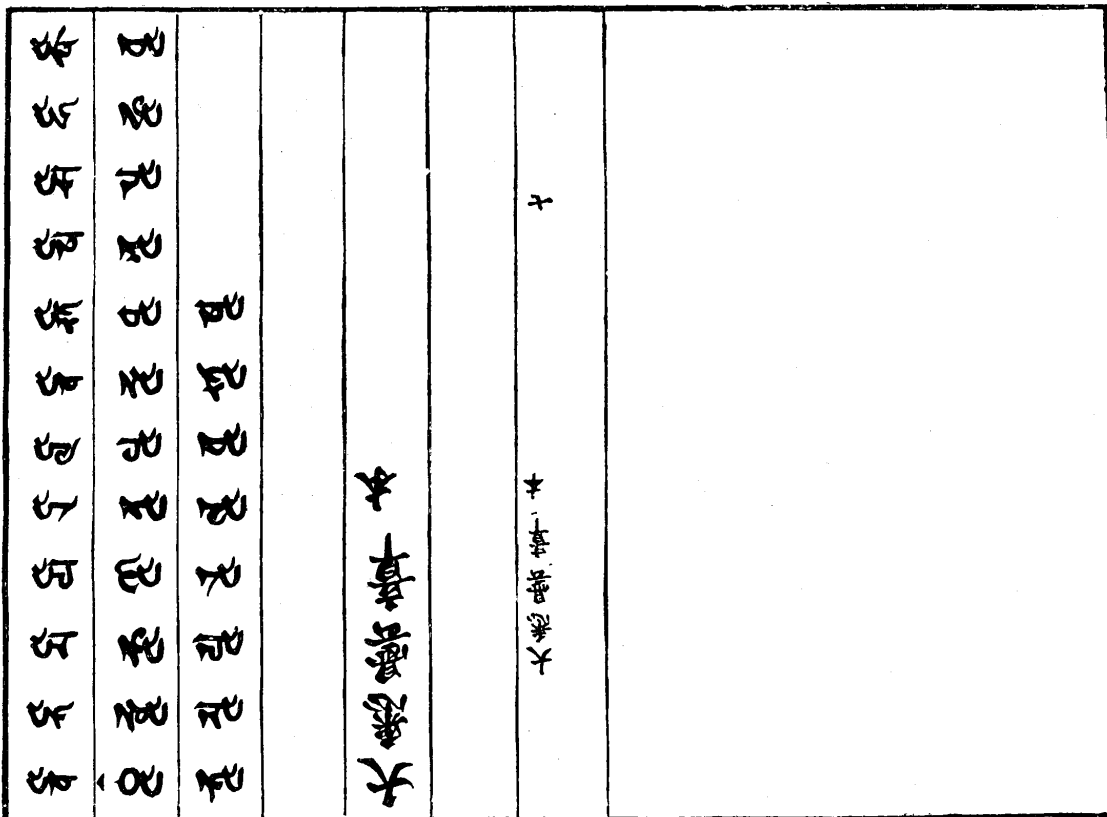


Plate VIIg. Siddham ligatures

Figure 52: Siddham ligatures (from van Gulik 1980: Plate VIIg).

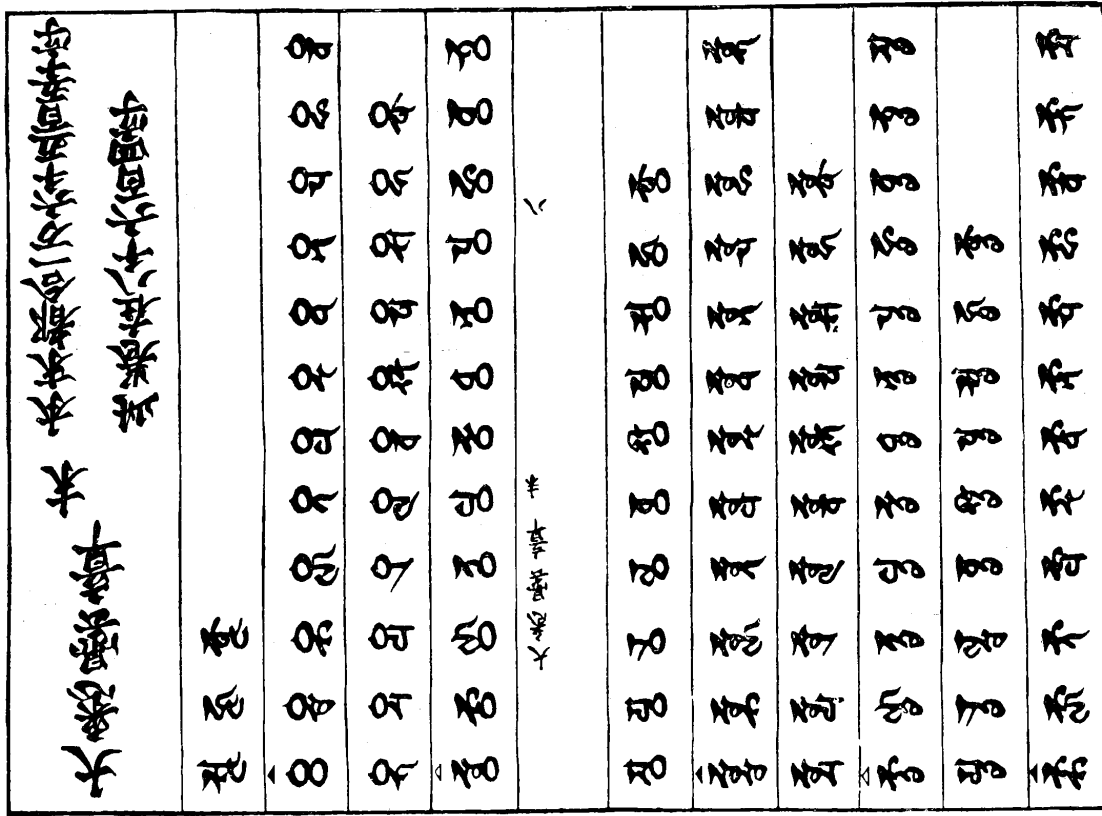


Plate VIIh. Siddham ligatures

Figure 53: Siddham ligatures (from van Gulik 1980: Plate VIIh).

ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ

Plate VIIi. Siddham ligatures

Figure 54: Siddham ligatures (from van Gulik 1980: Plate VIIi).

ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ

Plate VIIj. Siddham ligatures

Figure 55: Siddham ligatures (from van Gulik 1980: Plate VIIj).











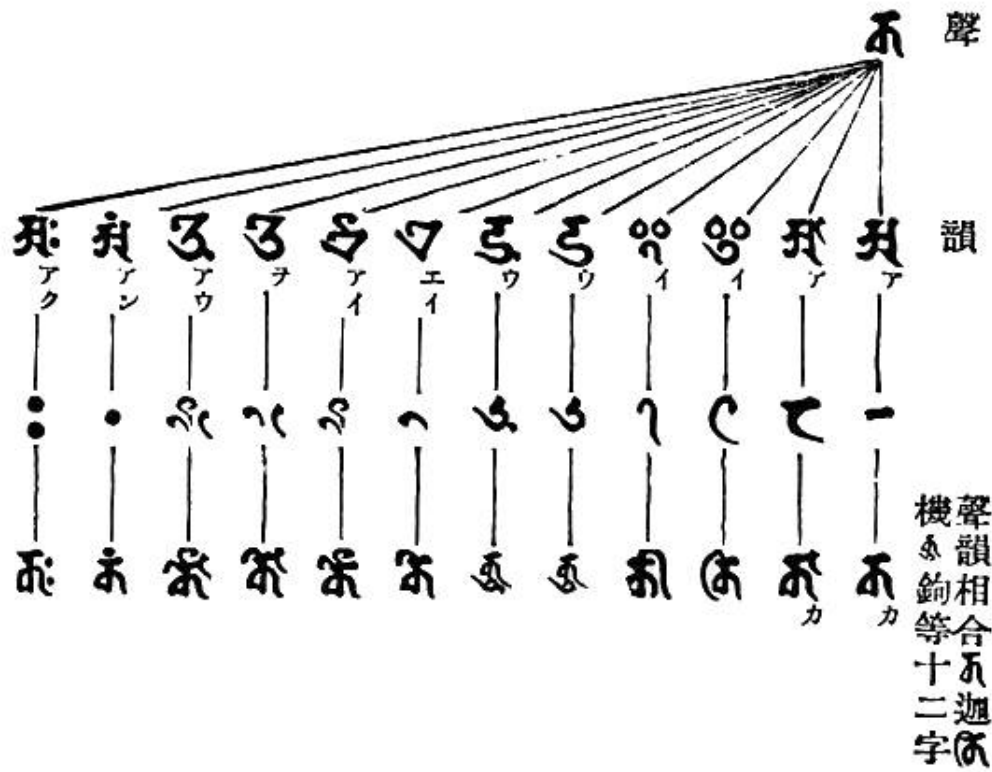


Figure 63: Chart showing Siddham dependent vowel signs and their combinations with 𑖀 KA (from Shinpan: 644). Note the presence of the vowel sign 𑖪 for 𑖪 A, which is derived from the top-stroke of the letter KA. See Section 4.7 for more details.

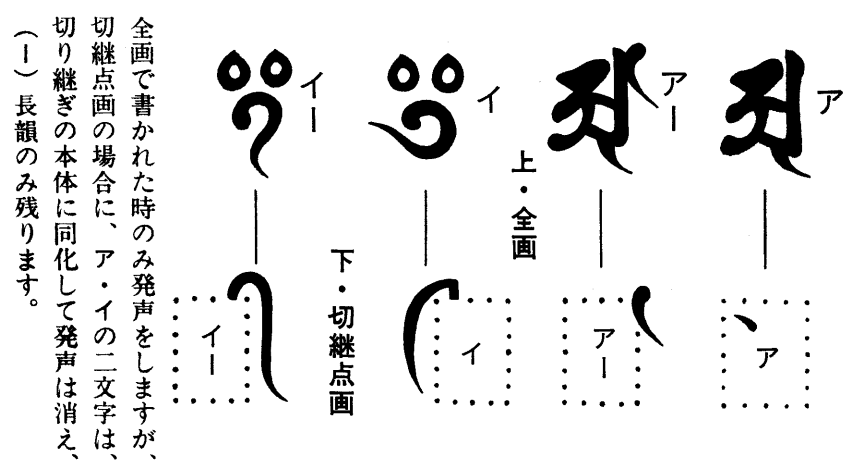


Figure 64: The `myō-ten shown as the dependent form of 𑖪 VOWEL LETTER A (from Tokuzan 1974: 226).

筆法基本




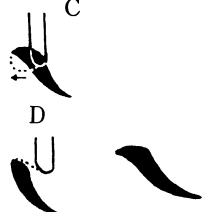





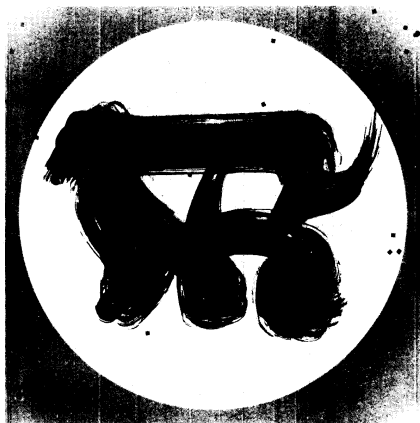
7	6	5	4	3	2	1
						
<p>半月形 弧線の半月形では腹がせまく、従って字が細長くなりすぎるので、初めの三分の一は斜直線、後の三分の二はゆったり丸みをつける。終りは上げない。(39 <b>𑖀</b> 字は終りを上げて豎画に続ける。)</p>	<p>円点 空点、涅槃点、また<b>○</b>字。宝珠形と伝えているが、それにとらわれると細長い形となる。(むしろ少し平たい方がよい。) おろした筆を左へ押し上げるくらいにして大きく剝り、右へまわす。第二筆は第一筆の始点に重ねて軽く筆をおろし、左側と同形になるように右へまわして終りを合せる。(早書の場合は、第一筆を長く右向きまで引いておき、第二筆は補う程度にする。) 黒点にするには第一筆を筆を倒して肉太に書き、第二筆で補えばよい。</p>	<p>雲形点 <b>𑖁</b>点。𑖁の下部も同じ要領) 豎画の筆を一たん止め、左斜下へ押し出し、引き返して同じ角度で右斜下へ引き、丸みをつけて左へまわし、斜上へはねる。このとき筆が切れたら、筆の終るところまで筆を運び軽くおとして引き返す。(早書ならば切れたままでもよい。) 斜上へはねずにダラリと下へさげるのはいけない。</p>	<p>驚点 <b>𑖂</b> 点の終画、<b>𑖃</b>点。筆を向うへ倒して(掌が上を向く)一ぱいにおろし、そのまま右斜下から横へ引きながら筆をおさめる。(手首をつかわず肘を開きながら引く。) 筆先が下側を通る逆筆である。豎画との連続は、下を向いて豎画を引いて来た掌が上に反って、豎画の終りに重ねて筆をおろす(上図C)。掌を下に向けたままでは下図Dのように豎画と点が離れ、点の形も舟のようになる。(早書の場合でも掌は横に向くくらいに反す。) なお驚点の名は刷毛書の場合、長く引いた形が鶯の谷渡りに似ているところから出たもので、毛筆書には当たらないが、昔からそのまま用いている。</p>	<p>豎画 筆をおろし(命点ではない)軽く左斜下に押し下げ、筆の終るところを見定めてから、まっすぐに引きおろす。A終りを止めるときは筆全体を内側に押しつけ、B引くときは右斜下へ引きながらゆっくり筆をおさめる。(早書の場合は、左斜下へ押し下げた筆を止めずに下へ引くので、左よりとなるのを引きながら右へもどす。A  B )</p>	<p>横画(第一画) 命点に続けて書く。命点をうち、筆先を離さず少し斜上にあげ、命点にかぶせるように筆をおろし、横に一の字を引く。(早書の場合は、命点から斜上にあげた筆をすぐにおろさず、右に引きながら下げる。 )</p>	<p>命点 梵字を書くときは先ず筆を落して一点をうつ。これを阿字命点(略して命点)という。すべての字は<b>𑖀</b>字の変現であることを表わす。また<b>𑖀</b>字の点画とも考えられる。命点をうたない梵字は「ただの梵字」で悉曇ではないといわれて来た。</p>

Figure 65: Elemental Siddham strokes (from Bonji Kichō Shiryō Kankōkai 1980: 114).

THE LETTER A WRITTEN WITH A BRUSH



SOFT BRUSH STROKE ORDER

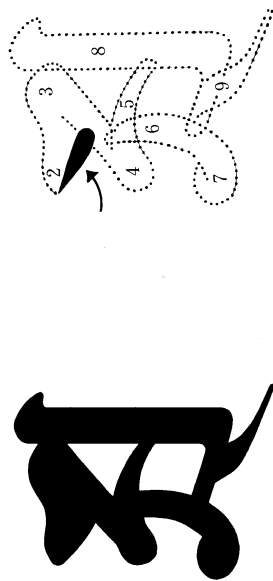


Figure 66: Stroke sequence for writing 𑖀 A using a soft brush (from Stevens 1981: 44). The initial stroke 𑖀 myō-ten is highlighted. See Section 4.7 for details on Siddham stroke characters.

ア点の位置

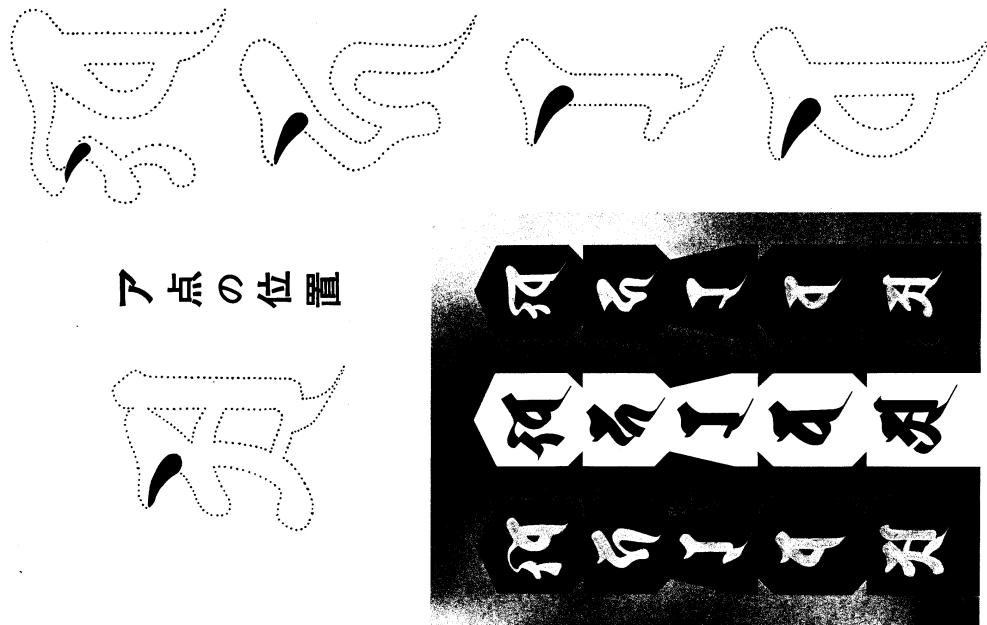


Figure 67: The position of 𑖀 myō-ten in the seed-syllables for the five elements 𑖀 A, 𑖁 VA, 𑖂 RA, 𑖃 KHA, 𑖄 HA (from Tokuzan 1974: 180).

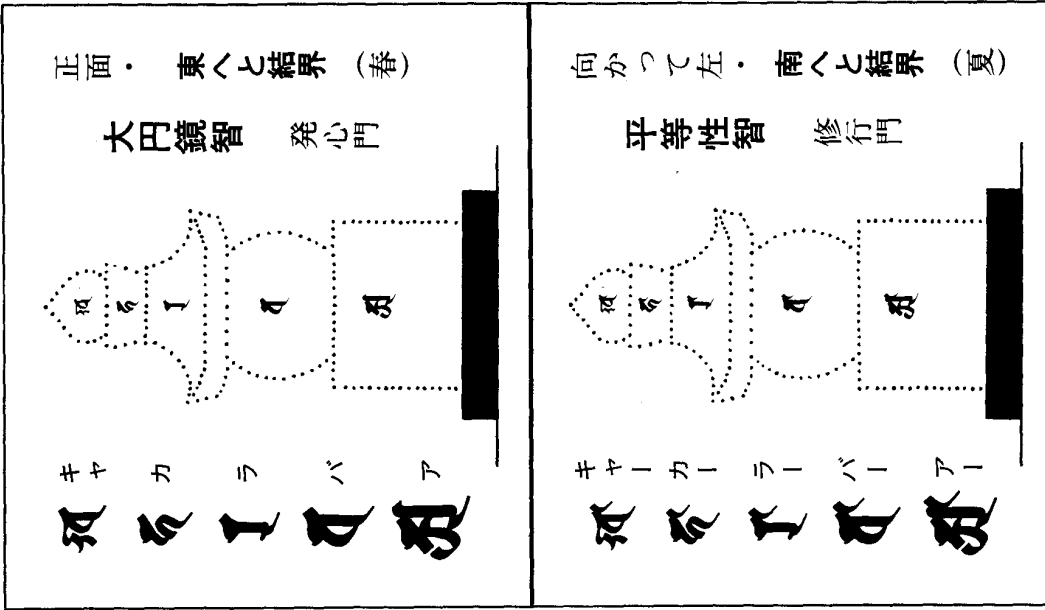


Figure 69: The seed-syllables for the five elements 𑖀 A, 𑖁 VA, 𑖂 RA, 𑖃 KHA, 𑖄 HA conceptualized as a *stūpa* (from Tokuzan 1976: 28).

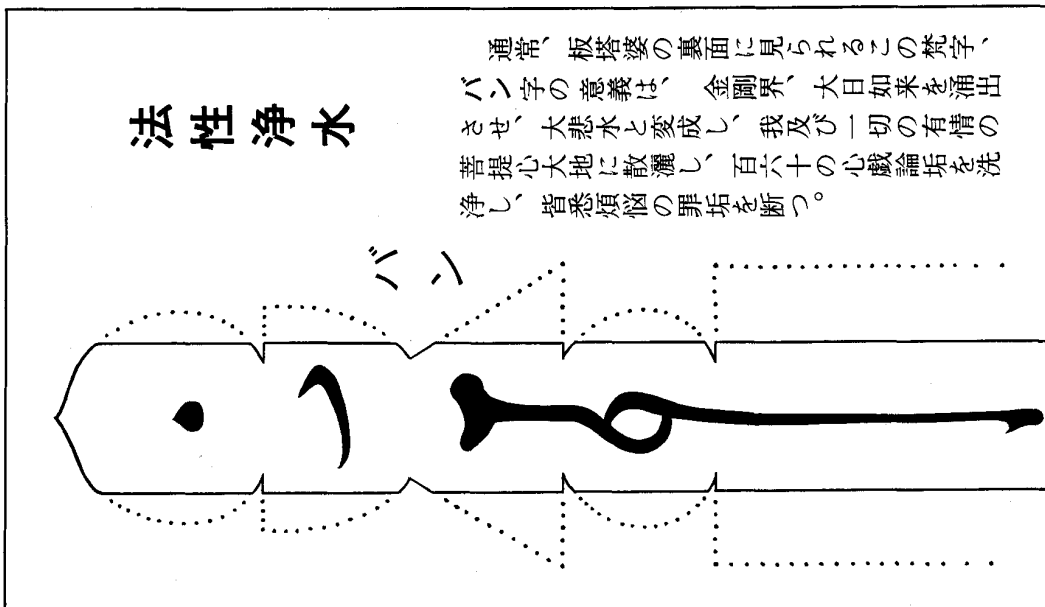


Figure 68: A conceptualization of the syllable 𑖅 *vam* as a *stūpa* (from Tokuzan 1976: 43). The elements from top are 𑖆 ANUSVARA, the 𑖇 *gyōgatsu-ten*, and 𑖈 VA.

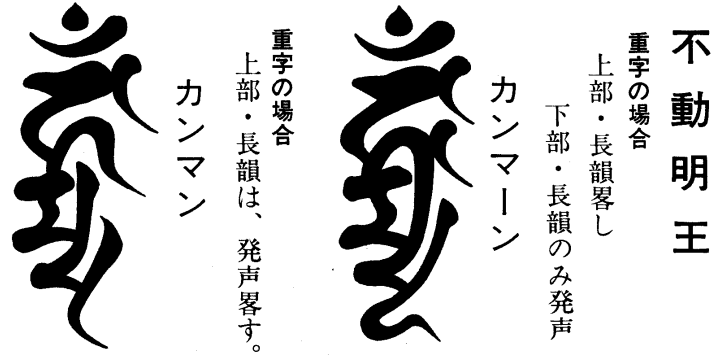


Figure 70: Different forms of *hāṃmām*, the *bīja* of Fudō Myōō (Acala) (from Tokuzan 1974: 227)



不動明王と矜羯羅童子 (向かって右)・制吒迦童子 (左) による「不動三尊」(作画・小峰和子)

Figure 71: The seed syllables of 不動明王 Fudō Myōō and his attendants, 制吒迦童子 Seitaka-dōji (Ceṭaka) and 矜羯羅童子 Kongara-dōji (Kiṃkara) (from Kodama 2005: 97).



Figure 73: Two variations of the seed syllable *dhīḥmā* (from Kodama 2005: 101).

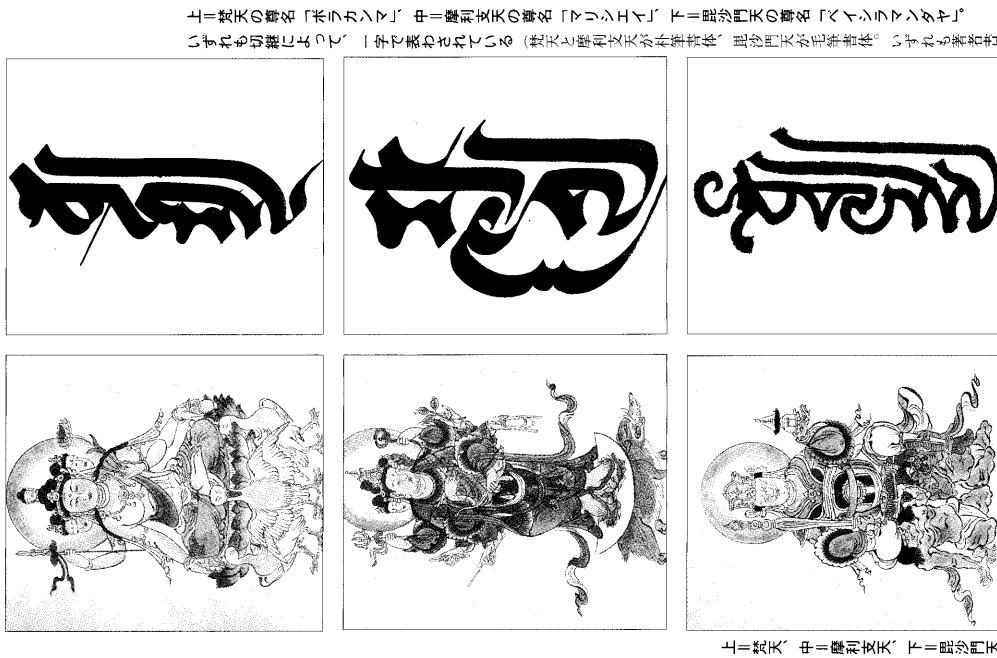


Figure 72: Seed syllables of 梵天 (Brahmā), 摩利支天 (Marishi-ten), and 毘沙門天 (Bishamon-ten) (Vajrapāṇa) (from Kodama 2005: 99).



**ISO/IEC JTC 1/SC 2/WG 2  
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS  
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646<sup>1</sup>**

**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.

**A. Administrative**

1. Title: **Proposal to Encode the Siddham Script in ISO/IEC 10646**

2. Requester's name: *Script Encoding Initiative (SEI) / Anshuman Pandey <pandey@umich.edu>*

3. Requester type (Member body/Liaison/Individual contribution): *Liaison contribution*

4. Submission date: *2012-08-01*

5. Requester's reference (if applicable):

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): Yes  
Proposed name of script: *Siddham*

b. The proposal is for addition of character(s) to an existing block:  
Name of the existing block:

2. Number of characters in proposal: 72

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"/>	<input type="checkbox"/>

4. 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 P&P document? Yes

b. Are the character shapes attached in a legible form suitable for review? Yes

5. Fonts related:

a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?  
*Anshuman Pandey and Lee Collins (Apple)*

b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):  
*Lee Collins (Apple)*

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 as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? Yes;  
*see text of proposal*

**8. Additional Information:**

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 <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database ( <http://www.unicode.org/reports/tr44/> ) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

<sup>1</sup> 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? If YES explain	No
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, with whom? If YES, available relevant documents:	Yes <i>Shingon Buddhist community, Indic script experts</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	Yes
4. The context of use for the proposed characters (type of use; common or rare) Reference:	Common
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	Yes
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:	N/A
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? If YES, is a rationale for its inclusion provided? If YES, reference:	No
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:	No
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? If YES, is a rationale for its inclusion provided? If YES, reference:	Yes Yes <i>Virama, etc.; see text of proposal</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: Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference:	Yes Yes <i>Dependent vowel signs, etc.; see text of proposal</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)	Yes <i>Virama, etc.; see text of proposal</i>
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:	No