

Request to Allocate the Sharada Script in the Unicode Roadmap

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I Introduction

This is a request to allocate the Sharada script in the Unicode Roadmap. The Sharada script is a major historical Brahmi-based script of South Asia and it was the principal script of Kashmir until the 20th century. Sharada was used extensively between the 10th and 17th centuries CE for the production of Vedic and classical Sanskrit manuscripts. Metal types for Sharada were introduced in the 19th century CE for printing educational primers and pamphlets. It continued as a medium for instruction well into the 20th century CE; however in the 1950s, an extended Perso-Arabic script was established as the official script for Kashmiri, which contributed to the decline of Sharada. Presently, Sharada is used by the Kashmiri Pandit community for traditional scholarship, manuscript production, and religious and ceremonial purposes.

It is recommended that the Sharada script be included in the Supplementary Multilingual Plane (Plane 1). Based on the history and use of the script, Sharada could be classified as a “Category C” (major extinct) script. However, its employment by the Kashmiri Pandit community represents a specialized use of the script, which would qualify it as “Category B.1” (specialized) script. Once Sharada is allocated to the Supplementary Multilingual Plane, a final determination will be made through additional research and clarified in a formal proposal to encode the script in Unicode.

2 Letters of the Sharada Script

A glyph chart for Sharada is presented in table 1. The letters in this chart are from a digital Sharada font drawn by the author of this request. A list of character names is given in table 2. Figure 1 contains a table of the Sharada script, and figures 2 and 3 show specimens of hand-written Sharada.

Based on an initial estimate, the Sharada script will require a minimum of 82 code-points, consisting of

- Vowels: 14 letters
- Vowel signs: 13 signs
- Consonants: 34 letters
- Signs: 4 (*anusvāra*, *candrabindu*, *visarga*, *avagraha*)
- Special signs: 3 (Sharada *virāma*, *jihvamulīya*, *upadhmanīya*)
- Punctuation: 2 (*daṇḍā* and double *daṇḍā*)
- Special symbols: 2 (Sharada *om* and *ekam*)
- Digits: 10

Further research may uncover other signs, symbols, and punctuation used in Sharada manuscripts. In order to accommodate characters not accounted for in the above tabulation, Sharada should be allocated 96 code-points (6 rows) in the Roadmap.

2.1 Relationship to Other Scripts

The Sharada script shares structural affinity to major scripts like Devanagari and Gurmukhi, as well as to minor regional scripts like Takari. However, the overall appearance of Sharada letters is quite different from those of Devanagari and Gurmukhi. The most distinctive features of Sharada are *virāma* and the digits. While functionally the same as in Devanagari, in Sharada, *virāma* follows the consonant immediately to the right, attaching to the top-line, instead of below the consonant. Sharada digits are modeled after the decimal system, however, the notation system is most unique in the use of a dot for zero and a circle for one.

3 Bibliography

- Grierson, George A. 1919 [1968]. *Linguistic Survey of India*. Volume VIII. Part. II. Indo-Aryan Family, North-Western Group, Dardic or Piśācha Languages (Including Kāshmirī). Reprint. Delhi: Motilal Banarsidass.
- Śākyavaṃśa, Hemarāja. 1974 [saṃvat 2030]. *Nepāla lipi-prakāśa*. Kaṭhamaṇḍau.

	xx0	xx1	xx2	xx3	xx4	xx5
0	ँ	ळ	उ	ख	ी	॰
1	ं	क	घ	म	ऽ	०
2	ः	प	ऽ	द	१	३
3	म्र	ग	ण	ा	ी	उ
4	ळ	ध	न	ि	।	२
5	ऽ	ए	प	ी	॥	५
6	ं	म	ळ	ृ	डि	४
7	उ	ळ	र	ृ	गाळ	१
8	ऊ	ण	रु	ृ		५
9	ट	ण	म	ृ		७
A	ट	ळ	य	ृ		
B	ह	ट	ग	ृ		
C	ह्र	०	ल	े		
D	पे	रु	रु	ै		
E	पै	रु	व	े		
F	ळ	ल	म	े		

Table 1: Preliminary glyph chart for Sharada

xx00;SHARADA SIGN CANDRABINDU	xx2A;SHARADA LETTER YA
xx01;SHARADA SIGN ANUSVARA	xx2B;SHARADA LETTER RA
xx02;SHARADA SIGN VISARGA	xx2C;SHARADA LETTER LA
xx03;SHARADA LETTER A	xx2D;SHARADA LETTER LLA
xx04;SHARADA LETTER AA	xx2E;SHARADA LETTER VA
xx05;SHARADA LETTER I	xx2F;SHARADA LETTER SHA
xx06;SHARADA LETTER II	xx30;SHARADA LETTER SSA
xx07;SHARADA LETTER U	xx31;SHARADA LETTER SA
xx08;SHARADA LETTER UU	xx32;SHARADA LETTER HA
xx09;SHARADA LETTER VOCALIC R	xx33;SHARADA VOWEL SIGN AA
xx0A;SHARADA LETTER VOCALIC RR	xx34;SHARADA VOWEL SIGN I
xx0B;SHARADA LETTER VOCALIC L	xx35;SHARADA VOWEL SIGN II
xx0C;SHARADA LETTER VOCALIC LL	xx36;SHARADA VOWEL SIGN U
xx0D;SHARADA LETTER E	xx37;SHARADA VOWEL SIGN UU
xx0E;SHARADA LETTER AI	xx38;SHARADA VOWEL SIGN VOCALIC R
xx0F;SHARADA LETTER O	xx39;SHARADA VOWEL SIGN VOCALIC RR
xx10;SHARADA LETTER AU	xx3A;SHARADA VOWEL SIGN VOCALIC L
xx11;SHARADA LETTER KA	xx3B;SHARADA VOWEL SIGN VOCALIC LL
xx12;SHARADA LETTER KHA	xx3C;SHARADA VOWEL SIGN E
xx13;SHARADA LETTER GA	xx3D;SHARADA VOWEL SIGN AI
xx14;SHARADA LETTER GHA	xx3E;SHARADA VOWEL SIGN O
xx15;SHARADA LETTER NGA	xx3F;SHARADA VOWEL SIGN AU
xx16;SHARADA LETTER CA	xx40;SHARADA SIGN VIRAMA
xx17;SHARADA LETTER CHA	xx41;SHARADA SIGN AVAGRAHA
xx18;SHARADA LETTER JA	xx42;SHARADA SIGN JIHVAMULIYA
xx19;SHARADA LETTER JHA	xx43;SHARADA SIGN UPADHMANIYA
xx1A;SHARADA LETTER NYA	xx44;SHARADA DANDA
xx1B;SHARADA LETTER TTA	xx45;SHARADA DOUBLE DANDA
xx1C;SHARADA LETTER TTHA	xx46;SHARADA SYMBOL OM
xx1D;SHARADA LETTER DDA	xx47;SHARADA SYMBOL EKAM
xx1E;SHARADA LETTER DDHA	xx50;SHARADA DIGIT ZERO
xx1F;SHARADA LETTER NNA	xx51;SHARADA DIGIT ONE
xx20;SHARADA LETTER TA	xx52;SHARADA DIGIT TWO
xx21;SHARADA LETTER THA	xx53;SHARADA DIGIT THREE
xx22;SHARADA LETTER DA	xx54;SHARADA DIGIT FOUR
xx23;SHARADA LETTER DHA	xx55;SHARADA DIGIT FIVE
xx24;SHARADA LETTER NA	xx56;SHARADA DIGIT SIX
xx25;SHARADA LETTER PA	xx57;SHARADA DIGIT SEVEN
xx26;SHARADA LETTER PHA	xx58;SHARADA DIGIT EIGHT
xx27;SHARADA LETTER BA	xx59;SHARADA DIGIT NINE
xx28;SHARADA LETTER BHA	
xx29;SHARADA LETTER MA	

Table 2: Preliminary character names for Sharada

शारदा लिपि

स्वर , व्यञ्जन VOWEL , CONSONANT

म्र म्रु डं उं ऊं ऌ एं वृ									
अ	आ	इ	ई	उ	ऊ	ऋ	ॠ	ऌ	
A	Ā	I	Ī	U	Ū	Ṛ	Ṝ	Ḍ	
ऐ ऐ ऒ णं म्रः									
ए	ऐ	ओ	औ	अं	अः				
E	AI	O	AU	AM̐	AH				
क प ग घ ङ च छ ज झ ञ									
क	ख	ग	घ	ङ	च	छ	ज	झ	ञ
KA	KHA	GA	GHA	ṅA	CHA	CHHA	JA	JHA	ṆA
ट ठ ड ढ ण त थ द ध न									
ट	ठ	ड	ढ	ण	त	थ	द	ध	न
Ṭ	ṬH	Ḍ	ḌH	Ṇ	T	TH	D	DH	N
प फ ब भ म य र ल व									
प	फ	ब	भ	म	य	र	ल	व	
PA	PHA	BA	BHA	MA	YA	RA	LA	VA	
म ष म द									
श	ष	स	ह						
SHA	ṢA	SA	HA						

Figure 1: Inventory of Sharada letters (Śākyavaṃśa 1974: 62).

मकिभा मळनिविभा सुंभि म्णका त्रुमिदि । उमवा
 मङ्ग मं५ ऊंभि दिदि मंलिभा, कि दे मलि भृ मिळा
 मनकु दिभु यभा भृ वाडि । उव पउ उंभि उिळन्नि
 णांउार मन रं'गारिवना । कें'रि सुळवा पउ मळा
 ऊंम् रैयु भेरुया रणिषा म्किभा मुग मीमभा माय-
 दावा । उडि उंभि नाकार वृमनभा पषा लगिषा पत्रु
 भेरुया मन णज्ञाना । यलि उंभि भेरुया मन णंभु
 उषा मीमभा वृषु कृना मूगा मळा-डि हृम्ना मुना
 मपमुना । उव पउ मूला गळिषा उभि मीमकिभा
 तमवनिभा निम तुम्, उंभि पननि गामळना णवना
 भेरा रळनि भेरुना । उडि उंभि भेरुना-ळन्नि

Figure 2: Specimen of Sharada written by Mahāmahopādhyāya Paṇḍit Mukund Rām Śāstrī in 1896 for the *Linguistic Survey of India* (Grierson 1919: 317). The specimen illustrates the use of special marks that resemble Devanagari *svarita* and *virāma*. These marks were used by Śāstrī to indicate changes in vowel quality in the Kashmiri language that is not typically represented in Sharada orthography. The marks bear no similarity to their function in Devanagari and are not formally part of the Sharada script. The Sharada *virāma* (code point xx40 in table 1) differs from Devanagari *virāma* and is represented, for instance, by the sign that follows the last letter, *sa*, in the first word, *akis*. The use of *svarita*-like and *virāma*-like marks in the third word, *asi*, are used to mark the pronunciation of the word as *ösⁱ*. The specimen is continued in figure 3.

षुगणं मण-कुमवा भुंडा घना वरंता उकना
 कैमि-डि कैला उमिमा मिम्वान । उमि पउ
 मीनिषा वानना कि भुनिमा भलिमा किना
 ऊडि नेकन सुष्टुवा भुडिना र्धुा मधरना ।
 बुला कभा बुकि भुडिना भगना । बुला बुला
 बुषिषा पननिमा भलिमा निम गक, उमिमा
 वन, कि दे भलिना भु कंरु परलेऊऊ उ
 मुेर् विरुहू पाला, बुला उवा वननभा येष्टा कभा
 न, कि मुेर् बुमि व् कभा बुला मांला भु पनटना
 नेकरना मल्ल सुषाणा गल्लागवाड । डिना वनि-
 वा भुला बुकावा उ पननिमा भलिमा निम गवावा ।
 भलि थाका भुला सुषिया यिवाना वकना लेल
 भुंडा सुषिषा नलभडि गडिषा उमिमा मीं० मिम्व
 ना । उव पउ वंत् बुषिषि उमा, कि दे भलिना

Figure 3: Specimen of hand-written Sharada, continued from figure 2 (Grierson 1919: 318).