

Title: Preliminary Proposal to Encode the Sindhi Script in ISO/IEC 10646
Source: Script Encoding Initiative (SEI)
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1 Introduction

This is a proposal to encode the Brahmi-based scripts of Sindh as a unified block in the Universal Character Set (UCS). The Sindhi scripts form a sub-class of the Landa family of scripts, which is discussed in the document “A Roadmap for Scripts of the Landa Family” (N3766 L2/10-011). A unified block provides an effective means for managing the array of scripts that comprise the Sindhi group. It is recommended that the Standard Sindhi script developed in the late 19th century be encoded as the representative of this group of scripts.

2 Background

The scripts of Sindh are Brahmi-based writing systems that belong to the Landa family of scripts, which is related to Sharada. These scripts were used throughout Sindh for writing Sindhi and other Indo-Aryan languages found in adjacent regions, such as Gujarati, and also for languages such as Persian. The writing systems are known colloquially as ‘*Baniyā*’ or ‘*Wānikō*’;¹ names that refer to the association of the scripts with mercantile communities, which are further differentiated by administrative districts and other localities. In *Grammar of the Sindhi Language* (1849), George Stack identified twelve regional script used in Sindh (Figure 3, Figure 4, and Figure 5). Several other local forms are presented in William Leitner’s “A Collection of Specimens of Commercial and Other Alphabets” (1882). Of these regional scripts, the Khudawadi and Khojki forms were the most prominent.

The Khudawadi, or Khudabadi, script served as the basis for a standardized Sindhi script devised in 1868 by an official committee of the Government of Bombay.² This official script was known as ‘Hindi Sindhi’ or ‘Hindu Sindhi’; the modifiers ‘Hindi’ and ‘Hindu’ refer to derivation of the script from a Brahmi model in order to distinguish it from an Arabic-based script for Sindhi that was also being developed by the government. The purpose of reintroducing a reformed Sindhi script was to standardize education and to develop a uniform medium for court records.³ The Standard Sindhi script was taught in schools and used for printing books, but ultimately, the local forms of Sindhi were preferred to the standard. A specimen of printed Standard Sindhi is shown in Figure 10.

The Khojki, or Khwaja, script is used by the Nizari Ismaili community of South Asia for recording religious literature.⁴ Khojki is based upon Lohanaki, a local Sindhi script associated with the Lohana merchant community. Tradition holds that Khojki was developed by the Ismaili missionary Pir Sadruddin, who worked in

¹ Grierson 1919: 14. ² Grierson 1919: 18. ³ Government of the Bombay Presidency 1869: 213. ⁴ Asani 1987: 439.

the Lohana community. It was in use by the 16th century as attested by manuscript evidence. Khojki was developed for printing in 1903, when Laljibhai Devraj produced metal types for the script in Germany for use at his Khoja Sindhi Printing Press in Bombay.⁵ A comparison of Khojki and Standard Sindhi is shown in Table 3 and Table 4. Khojki has been proposed for independent encoding in the UCS.⁶

The creation of a standard Sindhi script by the Government of Bombay was driven by the need to establish a medium for education that would be familiar to users of local Sindhi scripts. The decision to model the standard upon Khudawadi suggests that the script committee of the government was aware of the differences between the scripts of Sindh and Punjab, despite their origins from a common Landa prototype. The major differences between the two regional sub-classes of Landa are character repertoire, glyph shape, and collation. The scripts of the Sindhi group possess characters for representing the implosive consonants GGA, JJA, DDDA, and BBA, which are native to Sindhi and not found in Punjabi. In terms of collation, Sindhi follows the Devanagari order, with a minor modification, while Punjabi forms of Landa follow the Gurmukhi order. These details are discussed at more length in document N3766.

3 Basis for Proposed Characters

The Sindhi script proposed here is based upon the Standard Sindhi script. A preliminary code chart and names list are provided in Table 1 and Table 2. Although the implementation of Standard Sindhi was short-lived, it was used for producing both written and printed materials. At least two metal fonts for Standard Sindhi were produced, one of which serves as the basis for the glyph shapes proposed here. As a standardized script it possesses all letters and signs required to represent the Sindhi language. It also has the largest character repertoire of all Sindhi scripts and is, therefore, the most suitable representative of this group of scrips. The standardization of Sindhi by the Government of Bombay was an attempt to unify the local forms of Landa used in Sindh. The proposal to encode Sindhi in the UCS by using Standard Sindhi as the basis for Sindhi characters follows the same principle.

4 Implementation

4.1 Encoding Model

Sindhi should be implemented according to the *virāma* model.

4.2 Allocation

Sindhi is not currently allocated to any Unicode roadmap, but should be encoded in the Supplementary Multilingual Plane (SMP). Sindhi will require five columns at minimum. It may be encoded in the SMP at U+11A50..11A9F, which is adjacent to Landa.

4.3 Representation of Vowel Letters

Some atomic vowel letters may be represented using a sequence of a base vowel letter and a vowel sign. This practice is not recommended. The atomic character should always be used. The characters in question are specified below:

⁵ Tajddin 2003.

⁶ Pandey 2009.

RECOMMENDED	NOT RECOMMENDED
𑂔 VOWEL LETTER AA	𑂔 VOWEL LETTER A + 𑂔 VOWEL SIGN AA
𑂕 VOWEL LETTER E	𑂔 VOWEL LETTER A + 𑂕 VOWEL SIGN E
𑂖 VOWEL LETTER AI	𑂔 VOWEL LETTER A + 𑂖 VOWEL SIGN AI
𑂗 VOWEL LETTER O	𑂔 VOWEL LETTER A + 𑂗 VOWEL SIGN O
𑂘 VOWEL LETTER AU	𑂔 VOWEL LETTER A + 𑂘 VOWEL SIGN AU

4.4 Nasalization

Sindhi uses only the ANUSVARA to indicate nasalization.

4.5 Consonant Conjuncts

Consonant conjuncts are not written as ligatures in Sindhi. The practice is to use an explicit VIRAMA for representing consonant sequences.

4.6 Creation of New Characters

The NUKTA is used to represent sounds not native to Sindhi, such as those analogous to Devanagari KHHA, GHHA, FA, QA, and ZA (see bottom of last column of Figure 6).

4.7 Appearance

Head-strokes are not used in Sindhi.

4.8 Punctuation

Sindhi uses *danḍās* and Latin marks for punctuation. Sindhi *danḍās* may be unified with those of Devanagari.

4.9 Collation

The collating order for Sindhi is as follows:

A AA I II U UU E AI O AU KA KHA GA GGA GHA NGA CA CHA JA JJA JHA NYA TTA TTHA DDA RRA
 DDDA DDHA NNA TA THA DA DHA NA PA PHA BA BHA MA YA RA LA VA SHA SA HA SIGN AA SIGN I
 SIGN II SIGN U SIGN UU SIGN E SIGN AI SIGN O SIGN AU ANUSVARA VIRAMA

Combinations of consonant letter + NUKTA are sorted with the base letter.

4.10 Linebreaking

Letters, vowel signs, and digits behave as in Devanagari.

4.11 Character Properties

The properties for Sindhi characters in the Unicode Character Database format are:

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11A50;SINDHI LETTER A;Lo;0;L;;;;N;;;;;
11A51;SINDHI LETTER AA;Lo;0;L;;;;N;;;;;
11A52;SINDHI LETTER I;Lo;0;L;;;;N;;;;;
11A53;SINDHI LETTER II;Lo;0;L;;;;N;;;;;
11A54;SINDHI LETTER U;Lo;0;L;;;;N;;;;;
11A55;SINDHI LETTER UU;Lo;0;L;;;;N;;;;;
11A56;SINDHI LETTER E;Lo;0;L;;;;N;;;;;
11A57;SINDHI LETTER AI;Lo;0;L;;;;N;;;;;
11A58;SINDHI LETTER O;Lo;0;L;;;;N;;;;;
11A59;SINDHI LETTER AU;Lo;0;L;;;;N;;;;;
11A5A;SINDHI LETTER KA;Lo;0;L;;;;N;;;;;
11A5B;SINDHI LETTER KHA;Lo;0;L;;;;N;;;;;
11A5C;SINDHI LETTER GA;Lo;0;L;;;;N;;;;;
11A5D;SINDHI LETTER GGA;Lo;0;L;;;;N;;;;;
11A5E;SINDHI LETTER GHA;Lo;0;L;;;;N;;;;;
11A5F;SINDHI LETTER NGA;Lo;0;L;;;;N;;;;;
11A60;SINDHI LETTER CA;Lo;0;L;;;;N;;;;;
11A61;SINDHI LETTER CHA;Lo;0;L;;;;N;;;;;
11A62;SINDHI LETTER JA;Lo;0;L;;;;N;;;;;
11A63;SINDHI LETTER JJA;Lo;0;L;;;;N;;;;;
11A64;SINDHI LETTER JHA;Lo;0;L;;;;N;;;;;
11A65;SINDHI LETTER NYA;Lo;0;L;;;;N;;;;;
11A66;SINDHI LETTER TTA;Lo;0;L;;;;N;;;;;
11A67;SINDHI LETTER THA;Lo;0;L;;;;N;;;;;
11A68;SINDHI LETTER DDA;Lo;0;L;;;;N;;;;;
11A69;SINDHI LETTER RRA;Lo;0;L;;;;N;;;;;
11A6A;SINDHI LETTER DDDA;Lo;0;L;;;;N;;;;;
11A6B;SINDHI LETTER DDHA;Lo;0;L;;;;N;;;;;
11A6C;SINDHI LETTER NNA;Lo;0;L;;;;N;;;;;
11A6D;SINDHI LETTER TA;Lo;0;L;;;;N;;;;;
11A6E;SINDHI LETTER THA;Lo;0;L;;;;N;;;;;
11A6F;SINDHI LETTER DA;Lo;0;L;;;;N;;;;;
11A70;SINDHI LETTER DHA;Lo;0;L;;;;N;;;;;
11A71;SINDHI LETTER NA;Lo;0;L;;;;N;;;;;
11A72;SINDHI LETTER PA;Lo;0;L;;;;N;;;;;
11A73;SINDHI LETTER PHA;Lo;0;L;;;;N;;;;;
11A74;SINDHI LETTER BA;Lo;0;L;;;;N;;;;;
11A75;SINDHI LETTER BBA;Lo;0;L;;;;N;;;;;
11A76;SINDHI LETTER BHA;Lo;0;L;;;;N;;;;;
11A77;SINDHI LETTER MA;Lo;0;L;;;;N;;;;;
11A78;SINDHI LETTER YA;Lo;0;L;;;;N;;;;;
11A79;SINDHI LETTER RA;Lo;0;L;;;;N;;;;;
11A7A;SINDHI LETTER LA;Lo;0;L;;;;N;;;;;
11A7B;SINDHI LETTER VA;Lo;0;L;;;;N;;;;;
11A7C;SINDHI LETTER SHA;Lo;0;L;;;;N;;;;;
11A7D;SINDHI LETTER SA;Lo;0;L;;;;N;;;;;
11A7E;SINDHI LETTER HA;Lo;0;L;;;;N;;;;;
11A7F;SINDHI SIGN ANUSVARA;Mn;0;NSM;;;;N;;;;;
11A80;SINDHI VOWEL SIGN AA;Mc;0;L;;;;N;;;;;
11A81;SINDHI VOWEL SIGN I;Mc;0;L;;;;N;;;;;
11A82;SINDHI VOWEL SIGN II;Mc;0;L;;;;N;;;;;
11A83;SINDHI VOWEL SIGN U;Mn;0;NSM;;;;N;;;;;
11A84;SINDHI VOWEL SIGN UU;Mn;0;NSM;;;;N;;;;;
11A85;SINDHI VOWEL SIGN E;Mn;0;NSM;;;;N;;;;;
11A86;SINDHI VOWEL SIGN AI;Mn;0;NSM;;;;N;;;;;
11A87;SINDHI VOWEL SIGN O;Mn;0;NSM;;;;N;;;;;
11A88;SINDHI VOWEL SIGN AU;Mn;0;NSM;;;;N;;;;;

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11A89;SINDHI SIGN NUKTA;Mn;7;NSM;;;N;;;;;
 11A8A;SINDHI SIGN VIRAMA;Mn;9;NSM;;;N;;;;;
 11A90;SINDHI DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
 11A91;SINDHI DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
 11A92;SINDHI DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
 11A93;SINDHI DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
 11A94;SINDHI DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
 11A95;SINDHI DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
 11A96;SINDHI DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
 11A97;SINDHI DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
 11A98;SINDHI DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
 11A99;SINDHI DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;

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	11A5	11A6	11A7	11A8	11A9
0	𑌵 11A50	𑌶 11A60	𑌷 11A70	𑌸 11A80	𑌹 11A90
1	𑌺 11A51	𑌻 11A61	𑌼 11A71	𑌽 11A81	𑌾 11A91
2	𑌿 11A52	𑍀 11A62	𑍁 11A72	𑍂 11A82	𑍃 11A92
3	𑍄 11A53	𑍅 11A63	𑍆 11A73	𑍇 11A83	𑍈 11A93
4	𑍉 11A54	𑍊 11A64	𑍋 11A74	𑍌 11A84	𑍍 11A94
5	𑍎 11A55	𑍏 11A65	𑍐 11A75	𑍑 11A85	𑍒 11A95
6	𑍓 11A56	𑍔 11A66	𑍕 11A76	𑍖 11A86	𑍗 11A96
7	𑍘 11A57	𑍙 11A67	𑍚 11A77	𑍛 11A87	𑍜 11A97
8	𑍝 11A58	𑍞 11A68	𑍟 11A78	𑍠 11A88	𑍡 11A98
9	𑍢 11A59	𑍣 11A69	𑍤 11A79	𑍥 11A89	𑍦 11A99
A	𑍧 11A5A	𑍨 11A6A	𑍩 11A7A	𑍪 11A8A	
B	𑍫 11A5B	𑍬 11A6B	𑍭 11A7B		
C	𑍮 11A5C	𑍯 11A6C	𑍰 11A7C		
D	𑍱 11A5D	𑍲 11A6D	𑍳 11A7D		
E	𑍴 11A5E	𑍵 11A6E	𑍶 11A7E		
F	𑍷 11A5F	𑍸 11A6F	𑍹 11A7F		

Table 1: Proposed code chart for Sindhi

Independent vowels

11A50	𑌀	SINDHI LETTER A
11A51	𑌁	SINDHI LETTER AA
11A52	𑌂	SINDHI LETTER I
11A53	𑌃	SINDHI LETTER II
11A54	𑌄	SINDHI LETTER U
11A55	𑌅	SINDHI LETTER UU
11A56	𑌆	SINDHI LETTER E
11A57	𑌇	SINDHI LETTER AI
11A58	𑌈	SINDHI LETTER O
11A59	𑌉	SINDHI LETTER AU

Digits

11A90	𑌐	SINDHI DIGIT ZERO
11A91	𑌑	SINDHI DIGIT ONE
11A92	𑌒	SINDHI DIGIT TWO
11A93	𑌓	SINDHI DIGIT THREE
11A94	𑌔	SINDHI DIGIT FOUR
11A95	𑌕	SINDHI DIGIT FIVE
11A96	𑌖	SINDHI DIGIT SIX
11A97	𑌗	SINDHI DIGIT SEVEN
11A98	𑌘	SINDHI DIGIT EIGHT
11A99	𑌙	SINDHI DIGIT NINE

Consonants

11A5A	𑌚	SINDHI LETTER KA
11A5B	𑌛	SINDHI LETTER KHA
11A5C	𑌜	SINDHI LETTER GA
11A5D	𑌝	SINDHI LETTER GGA
11A5E	𑌞	SINDHI LETTER GHA
11A5F	𑌟	SINDHI LETTER NGA
11A60	𑌠	SINDHI LETTER CA
11A61	𑌡	SINDHI LETTER CHA
11A62	𑌢	SINDHI LETTER JA
11A63	𑌣	SINDHI LETTER JJA
11A64	𑌤	SINDHI LETTER JHA
11A65	𑌥	SINDHI LETTER NYA
11A66	𑌦	SINDHI LETTER TTA
11A67	𑌧	SINDHI LETTER TTHA
11A68	𑌨	SINDHI LETTER DDA
11A69	𑌩	SINDHI LETTER RRA
11A6A	𑌪	SINDHI LETTER DDDA
11A6B	𑌫	SINDHI LETTER DDHA
11A6C	𑌬	SINDHI LETTER NNA
11A6D	𑌭	SINDHI LETTER TA
11A6E	𑌮	SINDHI LETTER THA
11A6F	𑌯	SINDHI LETTER DA
11A70	𑌰	SINDHI LETTER DHA
11A71	𑌱	SINDHI LETTER NA
11A72	𑌲	SINDHI LETTER PA
11A73	𑌳	SINDHI LETTER PHA
11A74	𑌴	SINDHI LETTER BA
11A75	𑌵	SINDHI LETTER BBA
11A76	𑌶	SINDHI LETTER BHA
11A77	𑌷	SINDHI LETTER MA
11A78	𑌸	SINDHI LETTER YA
11A79	𑌹	SINDHI LETTER RA
11A7A	𑌺	SINDHI LETTER LA
11A7B	𑌻	SINDHI LETTER VA
11A7C	𑌼	SINDHI LETTER SHA
11A7D	𑌽	SINDHI LETTER SA
11A7E	𑌾	SINDHI LETTER HA

Various signs

11A7F	𑌿	SINDHI SIGN ANUSVARA
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Dependent vowel signs

11A80	𑌿𑌀	SINDHI VOWEL SIGN AA
11A81	𑌿𑌁	SINDHI VOWEL SIGN I
11A82	𑌿𑌂	SINDHI VOWEL SIGN II
11A83	𑌿𑌃	SINDHI VOWEL SIGN U
11A84	𑌿𑌄	SINDHI VOWEL SIGN UU
11A85	𑌿𑌅	SINDHI VOWEL SIGN E
11A86	𑌿𑌆	SINDHI VOWEL SIGN AI
11A87	𑌿𑌇	SINDHI VOWEL SIGN O
11A88	𑌿𑌈	SINDHI VOWEL SIGN AU

Various signs

11A89	𑌿𑌉	SINDHI SIGN NUKTA
11A8A	𑌿𑌊	SINDHI SIGN VIRAMA

Table 2: Proposed names list for Sindhi

SIHONG 869
(No specimen available.)

Spoken in the Sihong district of southern Borneo, Netherlands East Indies. First publication, Genesis, chapters 1–26:5, in 1858 at Bandermassin, Borneo, by the Rhenish Missionary Society; tr. by E. Denninger.

SINDHI: Kachchhi dialect 871
Devanagari characters

तूं पिंढ के बुदा के बिबो तीवो बुदा चाहे नम एं उन
बीच मंदगी कर ।
Mt. 4.10

Spoken by about 500,000 people in Bombay and Baroda, western India. First publication, St. Matthew's Gospel in 1834 at Bombay by the BFBS; tr. by James Gray, chaplain to the East India Company.

(For No. 872 see next page.)

SLAVE 873
Syllabic characters

15 एउ ढा न१ड०१५ १०००५
ड०, ड००० ड० ०१० ०१०. 16 ०० ०००००
००० ०० ०००००, ए ०० ००० ० ००००,
एउ ढा ०१००१५, १०००१. ० ड०, ड००० ड०
०१० ०१०. 17 ०० ००० ए ०० ०० ००, ००

Roman characters

15 Eyitta tene oyi yego ye keniethet nite
tsiedathe ka ile ; kulu ithlasi onda ga agonte.
16 Tta Niotsi otie nun gonieto eyitta te yazi
inthligi zon nakhe ganiti, tene oyi ye keniethet
nite tsiedethet ga ile, kulu ithlasi oonda ga
olili. 17 Tta Niotsi te Yazı nun tsun dea nun

1905

Spoken by Indians living along the Mackenzie River, northwestern Canada, North America. First publication, St. Mark's Gospel (syllabic characters) in 1868 by the BFBS; tr. by W. W. Kirkby of the CMS. St. John's Gospel, 1870; St. Matthew's and St. Mark's Gospels, 1886; tr. by W. C. Bompas, transliterated by William Day Reeve; St. Luke's and St. John's Gospels, 1890. New Testament, 1891. Editions in roman characters: St. Mark's Gospel, 1874; tr. by William Carpenter Bompas of the CMS. The Gospels, 1883; The Acts, 1890; Romans-Revelation, 1891. The Gospels, 1905; revised by W. Spendlove. CP: BFBS.

SINDHI 870

Devanagari characters

साँहें, जो तुंङ जो बुदा, तँहें के पूबिजे, चँहें हगो उनेँ
जो हँ वंदगी बिजं ।

Mt. 4.10; 1850

Arabic characters (for Moslems)

چالاء تہ خدا دنيا کي اهو پيار ڪيو آهي، جو پنهنجو هڪڙوئي
نُٺ ڏنو آٿس، تہ جيڪوڪ مٿس ويساھ آئي، سو چَٽ نہ ٿئي،
پر هميشه جو جياپو پائي ♦

1917

Arabic characters (for Hindus)

چوٽه ايتور حڪت کي اهو پيار ڪيو آهي، جو پنهنجو هڪڙوئي
پنو ڏنو آٿس تو جيڪوڪ مٿس وسراش ڪوي سوملن نہ ٿئجبا
پرنت جيون پائي ♦

1908

Gurmukhi characters

ह्वा धां उ एीमूर ज्जाउ धे एिउजे पिआरे रधने जे पंसे
गिबिजे एी ज्जलल पुट डिनाएँ उ जेरे बे उरिं उ देमाह
आले मे नामु ढ धिष्टे देउरि मरा जिमलु लउ ॥

1877

Banya characters

᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚
᳚᳚ ᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚
᳚ ᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚ ᳚᳚᳚
᳚᳚᳚.

1926

Spoken by some 3,000,000 people in Sindh and neighboring districts, western India. First publication, St. Matthew's Gospel in 1825 at Serampore by the Mission Press; tr. by the Serampore missionaries (See No. 87). St. Matthew's Gospel (Devanagari characters), BFBS, Bombay, 1850; tr. by G. Stack. St. John's Gospel (Arabic characters), BFBS, Karachi, 1858; tr. by A. Burn of the CMS; reprinted in Gurmukhi characters, 1859. Genesis, 1860; St. Matthew's and St. Mark's Gospels, London, 1868; St. Luke's Gospel, 1869; the Acts, 1870. Mr. Burn's translations were issued both in Arabic and Gurmukhi characters.

New Testament, 1890; tr. by C. W. Isenberg and G. Shirt. The Psalter, BFBS, Ludhiana, 1879; tr. by Mr. Shirt: Proverbs, 1885; Isaiab, 1890. Revised Version: St. Mark's and St. John's Gospels, BFBS, Lahore, 1908; tr. by a committee of missionaries and Sindhi scholars headed by R. Redman, issued in editions prepared for Moslems and for Hindus. St. Matthew's and St. Luke's Gospels, 1911. St. Matthew's Gospel in Banya characters, 1913.

Figure 2: A specimen of the New Testament printed in the Sindhi script (from The American Bible Society 1938: 297.) The Sindhi script is labelled here as 'Banya characters'.

The Alphabet.

Roman characters.	Devanāgarī.	Khudawāḡī.*	Shikārpurī.	Sakkar.	THATTĀI.		Lāṭī.	Wangāl.	Rajjāl.	Khawājā.	MAIMONĀ.		Sewhājī Bhabhira.	Southern Landa.
					Luhāns.	Bhātīas.					Thattā.	Haidarābād.		
a	अ	ṁ	ṁ	ṁ	ʼʼ^	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
ā	आ	ṁ	ṁ	ṁ	ʼʼ~	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
i	इ	†ṁ	†ṁ	†ṁ	ṁ.ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
ī	ई	†ṁ	†ṁ	†ṁ	ṁ.ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
u	उ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
ū	ऊ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
e	ए	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
ai	ऐ	ṁ	ṁ	ṁ	ʼʼ~	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
o	ओ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ
au	औ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ	ṁ

* The Khudawāḡī is the character used at Haidarābād and by most of the respectable merchants throughout the country. That of the Shikārpur and Sakkar merchants differs but little from it.

† These are, however, never written in commencing a word. In lieu of them III is used.

Figure 3: Chart showing the different forms of Landa used in Sindh (from Grierson 1919: 15). Adapted by Grierson from Stack (1849: 3–8). Chart continued in Figure 4.

The Alphabet.

Roman characters.	Dēvaṅgarī.	Khudāwādī.	Shikārpurī.	Sakkar.	ṬṬṬṬṬ.		Larī.	Wangal.	Rajjā.	Khawājā.	Maimons.		Sewnāgī Bhabhīrā.	Southern Lahandā.
					Lahandā.	Bhūjīā.					Ṭṭṭ.	Haiderābad.		
ka	क	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ	ڪ
kha	ख	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ	ڪھ
ga	ग	گ	گ	گ	گ	گ	گ	گ	گ	گ	گ	گ	گ	گ
gga	ग़	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ
gha	घ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ	گھ
na	ङ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ	نگھ
cha	च	چ	چ	چ	چ	چ	چ	چ	چ	چ	چ	چ	چ	چ
chha	छ	چھ	چھ	چھ	چھ	چھ	چھ	چھ	چھ	چھ	چھ	چھ	چھ	چھ
ja	ज	جھ	جھ	جھ	جھ	جھ	جھ	جھ	جھ	جھ	جھ	جھ	جھ	جھ
jja	झ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ
jha	झ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ	جھھ
ña	ञ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ	ڄھ
ṭa	ट	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ	ٽ
ṭra	ट्र	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ	ٽرھ
ṭha	ठ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ	ٽھ
ra	र	رھ	رھ	رھ	رھ	رھ	رھ	رھ	رھ	رھ	رھ	رھ	رھ	رھ
ḍa	ड़	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ	ڙھ
ḍra	ड़्र	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ	ڙرھ
ḍha	ढ़	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ	ڙھھ
ṇa	ण	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ	ڻھ

Figure 4: Chart showing the different forms of Landa used in Sindh (from Grierson 1919: 16). Continued from Figure 3.

The Alphabet.

Roman characters.	Devanāgarī.	Khudawāfī.	Shikārpurī.	Sakkar.	THAṬṬĪ.		Lapī.	Wangāl.	Rājāl.	Khwājās.	MAIMONS.		Sewhānī Bhābhāras.	Southern Lahndā.
					Juhānās.	Bhāpās.					Thaṭṭā.	Haidarābād.		
ta	ت	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ	ٿ
tha	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ	ٿھ
da	د	د	د	د	د	د	د	د	د	د	د	د	د	د
dha	دھ	دھ	دھ	دھ	دھ	دھ	دھ	دھ	دھ	دھ	دھ	دھ	دھ	دھ
na	ن	ن	ن	ن	ن	ن	ن	ن	ن	ن	ن	ن	ن	ن
pa	پ	پ	پ	پ	پ	پ	پ	پ	پ	پ	پ	پ	پ	پ
pha	پھ	پھ	پھ	پھ	پھ	پھ	پھ	پھ	پھ	پھ	پھ	پھ	پھ	پھ
ba	ب	ب	ب	ب	ب	ب	ب	ب	ب	ب	ب	ب	ب	ب
bba	بب	بب	بب	بب	بب	بب	بب	بب	بب	بب	بب	بب	بب	بب
bha	بھ	بھ	بھ	بھ	بھ	بھ	بھ	بھ	بھ	بھ	بھ	بھ	بھ	بھ
ma	م	م	م	م	م	م	م	م	م	م	م	م	م	م
ya	ي	ي	ي	ي	ي	ي	ي	ي	ي	ي	ي	ي	ي	ي
ra	ر	ر	ر	ر	ر	ر	ر	ر	ر	ر	ر	ر	ر	ر
la	ل	ل	ل	ل	ل	ل	ل	ل	ل	ل	ل	ل	ل	ل
va	و	و	و	و	و	و	و	و	و	و	و	و	و	و
ṣa	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ	ڙ
sha	ش	ش	ش	ش	ش	ش	ش	ش	ش	ش	ش	ش	ش	ش
sa	س	س	س	س	س	س	س	س	س	س	س	س	س	س
ha	ھ	ھ	ھ	ھ	ھ	ھ	ھ	ھ	ھ	ھ	ھ	ھ	ھ	ھ
Numerals				٩	٢	٣	٣	٤	٥	٦	٧	٨	٩	١٠
				1	2	3		4	5	6	7	8	9	10

Figure 5: Chart showing the different forms of Landa used in Sindh (from Grierson 1919: 17). Continued from Figure 4.

CONSONANTS.

No.	Roman Character.	Original Khudawadi Character.	Improved Hindi Sindhi Character.	No.	Roman Character.	Original Khudawadi Character.	Improved Hindi Sindhi Character.	No.	Roman Character.	Original Khudawadi Character.	Improved Hindi Sindhi Character.
1	ka	ڪ	ڪ	15	ra	No. 32 used instead.	ڙ	29	bha	No. 28 used instead.	ڳ
2	kha	ڪھ	ڪھ	16	ḍḍa	ڙڙ	ڙڙ	30	ma	م	م
3	gga	گگ	گگ	17	ḍa	ڙ	ڙ	31	ya	No. 9 used instead.	ڙ
4	ga	گ	گ	18	ḍha	ڙھ	ڙھ	32	ra	ر	ر
5	gha	No. 4 used instead.	گھ	19	ṇa	ڙڙڙ	ڙڙڙ	33	la	ل	ل
6	ṇa	ڙڙ	ڙڙ	20	ta	ٽ	ٽ	34	va, wa	و	و
7	cha	ڇ	ڇ	21	tka	ٽڪ	ٽڪ	35	sa	س	س
8	chha	ڇھ	ڇھ	22	da	ڌ	ڌ	36	sha	No. 35 used instead.	ڇھ
9	ja	ج	ج	23	dha	No. 22 used instead.	ڌ	37	ha	ھ	ھ
10	jja	جج	جج	24	na	ڻ	ڻ	38	khē	No. 2 used instead.	ڪھ
11	jha	جھ	جھ	25	pa	پ	پ	39	zē	No. 9 used instead.	ڙھ
12	ṇa	ڙڙ	ڙڙ	26	pha	ڦ	ڦ	40	ghain	No. 4 used instead.	ڙڙھ
13	ta	ٽ	ٽ	27	bba	ڙڙ	ڙڙ	41	fē	No. 26 used instead.	ڙھ
14	tha	ٿ	ٿ	28	ba	ڙ	ڙ				

Figure 6: A comparison of consonant letters of Khudawadi and Standard Sindhi (from Grierson 1919: 20).

VOWELS.

In improved Hindī Sindhī character.

a	ā	i	ī	u	ū
𑂔	𑂔𑂗	𑂔	𑂔𑂗	𑂔	𑂔𑂗
e	ai	o	au	am̐	
𑂔	𑂔𑂗	𑂔	𑂔𑂗	𑂔	
ka	kā	ki	kī	ku	kū
𑂔	𑂔𑂗	𑂔	𑂔𑂗	𑂔	𑂔𑂗
kē	kai	kō	kau	kam̐	
𑂔	𑂔𑂗	𑂔	𑂔𑂗	𑂔	

The only vowel character in Khudāwāḍī is 𑂔

Figure 7: Vowel letters and consonant-vowel combinations in Standard Sindhi (from Grierson 1919: 19).

[No. 4.]

INDO-ARYAN FAMILY. NORTH-WESTERN GROUP.

SINDHI.

STANDARD DIALECT.

DISTRICT KARACHI.

SPECIMEN I.

Hekrē māphāñ-khē bba puñ huā.

Ā: tīn-mā nanḁhē pāñ-jē-pjñ-khē

chayō, 'ē babā māñ-māñ jekō bhānō

munñ-jō thīē, sō mñ-khē ḁḁk'

Ā: hun' pāñ-jō māñ vīrahāē (for vīrahē)

humāñ-khē ḁḁñō. Thōrtāñ. q 2

ḁḁhāñ-khē pō nanḁhō puñ

sabb' gaḁḁ' karē hekrē

ḁḁūrahāē-ḁḁḁha-ḁḁḁ haliyō

vīyō, ā' pāñ-jō māñ

be-hudī' (for be-hudī) hālat'-māc vīnāē

chhadḁiyāñ. Ā' jādḁhī sabb'

khapāē raliyō tāñ-khē pō

un'-ḁḁḁt'-mē ḁḁāḁhō ḁḁukār' achi

Figure 9: Specimen of hand-written Standard Sindhi (from Grierson 1919: 115-116).

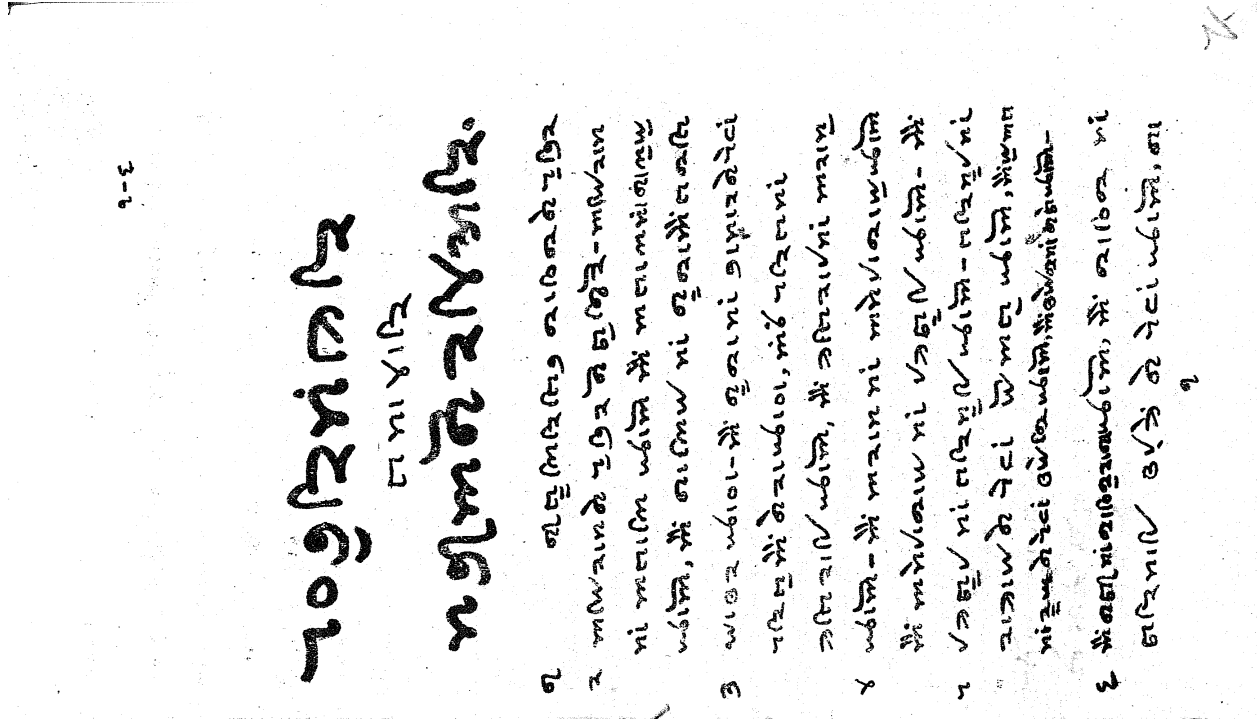
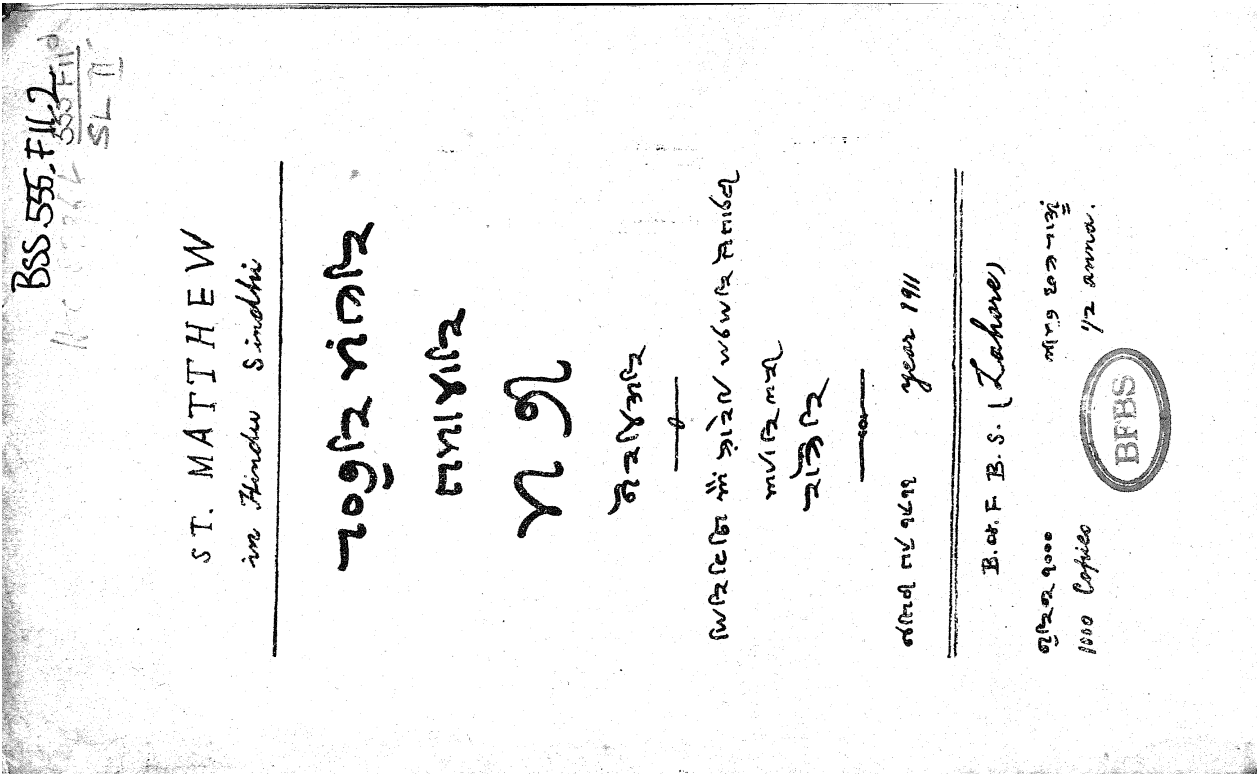


Figure 10: Cover and first page of St. Matthew in Standard Sindhi (from British and Foreign Bible Society 1911).

SINDH- UND MULTANSCHRIFT.

Sindh		Multan		Sindh		Multan		Sindh		Multan	
Zeichen	Wert	Zeichen	Wert	Zeichen	Wert	Zeichen	Wert	Zeichen	Wert	Zeichen	Wert
ᳵ	a	ᳶ	a	᳷	ña, ña			᳸	pha	᳹	pha
ᳺ	i	᳻	i	᳼	ṭa			᳽	ba	᳾	ba
᳾	u	᳿	u	᳽	ṭha			᳾	bha		
᳼	ka	᳽	ka	᳾	ḍa	᳾	ḍa	᳿	ma	᳽	ma
᳽	kha	᳾	kha	᳾	ṇa	᳾	ṇa	᳽	ya	᳾	ya
᳾	ga	᳽	ga	᳾	ṭa	᳾	ṭa	᳽	ra	᳾	ra
᳾	gha			᳽	ṭha	᳾	ṭha	᳽	la	᳾	la
᳾	tṣa	᳽	tṣa	᳾	ḍa	᳾	ḍa	᳽	va	᳾	va
᳾	tṣha	᳽	tṣha	᳾	dha	᳾	dha	᳽	sa	᳾	sa
᳾	dṣa	᳽	dṣa	᳾	na	᳾	na	᳽	ha	᳾	ha
᳾	dṣha			᳽	pa	᳾	pa	᳽	tra	᳾	tra

Die vorstehenden Schriften sind in doppelter Art beachtenswert, erstens weil sie in gleicher Weise wie die semitischen Schriften die Vokale in der Mitte der Wörter nicht schreiben, z. B. Sindhisch ᳵ᳾᳾ *tuhūḍzo*, zweitens weil ihre Zeichen sich an die semitischen Schriften anlehnen, andererseits sich in der Devanagarschrift vorfinden, wenn diese von der Paliform abweicht; so hat ᳽ dieselbe Bedeutung auf Pehlewi-Münzen, ᳽ entspricht dem ᳽ im Aramäischen, ᳽ erinnert an die phönikische Form ᳽ , ᳽ an das phönikische ᳽ . Den von den Inschriftformen abweichenden Devanagarizeichen ᳽ *ka* entspricht Multan ᳽ , dem ᳽ *kha* (Inschrift ᳽) entspricht Sindh ᳽ *gha*, ᳽ kann ebensowohl von der Inschrift ᳽ , wie von Sindh ᳽ *ga* abstammen, dem ᳽ *tṣha* entspricht Sindh ᳽ *tṣha*, dagegen Inschrift ᳽ *tṣha* dem Devanagari ᳽ *ṭa*, Devanagari ᳽ hat seine Analogie nur in Sindh ᳽ (dagegen Inschrift ᳽ *ṇa*), ebenso ᳽ Sindh ᳽ (Inschrift ᳽), ᳽ *p*, Sindh ᳽ (Inschrift ᳽).

Die auffallenden Abweichungen der beiden Schriften von Sindh und Multan beweisen, dass von einer einfachen Entlehnung keine Rede sein kann, denn wir finden Sindh ᳽ *tṣa* als Multan ᳽ *ra*, Sindh ᳽ *tha* als Multan ᳽ *pha*, dagegen befindet sich Multan ᳽ *tṣha* in Übereinstimmung mit Sindh ᳽ *tṣa*.

Mit Rücksicht auf die Einwanderung der arischen Stämme von Norden liegt die Vermuthung nahe, dass die vorstehenden Schriften des nördlichen Indiens den Grundstock der vedischen Schrift abgaben. Durch die Herrschaft der magadhischen Schrift während der Zeit, wo in ganz Vorderindien der Buddhismus herrschte, wurde die heimische Schrift in den Schatten gestellt. Man zog die fremde Schrift wegen ihres Reichthums an Zeichen und wegen ihrer festen Schreibregeln vor. So kam es, dass die heimische Schrift, welche sich trotzdem im Volke erhielt, zu den gelehrten Werken nicht verwendet und diesfalls die Devanagarschrift vorgezogen wurde.

Figure 11: Comparison of standard Sindhi and Multani forms of Landa (from Faulmann 1880: 121).

Lautwert	Śāradā 804	Kasch- mīri	Tākri		Laṇḍā		Multanī	Gur- mukhi
			Jaun- sari	Cha- meāli	Khu- dāwādī	Sindhi- Schrift		
a	अ	अ	अ	अ	अ	अ	अ	ਅ
i	इ	इ	इ	इ	इ	इ	इ	ਇ
u	उ	उ	उ	उ	उ	उ	उ	ਉ
e	ए	ए	ए	ए	ए	ए	ए	ਏ
o	ओ	ओ	ओ	ओ	ओ	ओ	ओ	ਓ
ā	आ	आ	आ	आ	आ	आ	आ	ਆ
ka	क	क	क	क	क	क	क	ਕ
kha	ख	ख	ख	ख	ख	ख	ख	ਖ
ga	ग	ग	ग	ग	ग	ग	ग	ਗ
gha	घ	घ	घ	घ	घ	घ	घ	ਘ
na	न	न	न	न	न	न	न	ਨ
ēa	ए	ए	ए	ए	ए	ए	ए	ਏ
ēha	ह	ह	ह	ह	ह	ह	ह	ਹ
ḡa	ग	ग	ग	ग	ग	ग	ग	ਗ
ḡha	घ	घ	घ	घ	घ	घ	घ	ਘ
ṅa	ङ	ङ	ङ	ङ	ङ	ङ	ङ	ਙ
ṭa	ट	ट	ट	ट	ट	ट	ट	ਟ
ṭha	ठ	ठ	ठ	ठ	ठ	ठ	ठ	ਠ
ḍa	ड	ड	ड	ड	ड	ड	ड	ਡ
ḍha	ढ	ढ	ढ	ढ	ढ	ढ	ढ	ਢ
na	न	न	न	न	न	न	न	ਨ
ta	त	त	त	त	त	त	त	ਤ
tha	थ	थ	थ	थ	थ	थ	थ	ਥ
da	द	द	द	द	द	द	द	ਦ
dha	ध	ध	ध	ध	ध	ध	ध	ਧ
na	न	न	न	न	न	न	न	ਨ
pa	प	प	प	प	प	प	प	ਪ
pha	फ	फ	फ	फ	फ	फ	फ	ਫ
ba	ब	ब	ब	ब	ब	ब	ब	ਬ
bha	भ	भ	भ	भ	भ	भ	भ	ਭ
ma	म	म	म	म	म	म	म	ਮ
ya	य	य	य	य	य	य	य	ਯ
ra	र	र	र	र	र	र	र	ਰ
la	ल	ल	ल	ल	ल	ल	ल	ਲ
va	व	व	व	व	व	व	व	ਵ
śa	श	श	श	श	श	श	श	ਸ਼
ṣa	ष	ष	ष	ष	ष	ष	ष	ਸ਼
sa	स	स	स	स	स	स	स	ਸ
ha	ह	ह	ह	ह	ह	ह	ह	ਹ

Figure 12: A chart showing the scripts of the Sharada family (from Jensen 1969: 366). The ‘Khudawadi’ and ‘Sindhi-Schrift’ are shown as forms of ‘Landa’, while ‘Multani’ is classified separately. The term ‘Landa’ refers to scripts used in Sindh and ‘Multani’ refers to a form from Punjab.

Laṇḍā script A member of the northern Indian group of scripts, the Laṇḍā script is derived from the tenth-century Śāradā (also Sharada) script. It was first used by Hindu merchants in Punjab and Sind, where it was called Baniyā, and is said to be the predecessor of the sixteenth-century GURMUKHĪ SCRIPT. The earliest attested variety had only one independent V grapheme, that for *a*, which was used for all initial Vs (table 2). In 1868 the Laṇḍā script was adapted to serve as the medium of writing Sindhī. In this form it is equipped with a full set of V graphemes.

See also INDIAN WRITING SYSTEMS.

Vowel letters

	Laṇḍā	Sindhī
a	ṁ	ṁ
i		ᵇ
u		ᵇ
e		ṁ
o		ṁ
ā		ṁ

Consonant letters

Laṇḍā	Sindhī	Laṇḍā	Sindhī	Laṇḍā	Sindhī	Laṇḍā	Sindhī		
ka	ṁ	ṁ	ḡha	ᵇ	tha	ᵇ	ma	ṁ	ṁ
kha	ᵇ	ᵇ	ḡ	ᵇ	da	ᵇ	ya	ṁ	ᵇ
ga	ᵇ	ᵇ	ṭa	ᵇ	dha	ᵇ	ra	ᵇ	ᵇ
gha		ᵇ	ṭha	ᵇ	na	ᵇ	la	ᵇ	ᵇ
ṅa	ᵇ	ᵇ	ḍa	ᵇ	pa	ᵇ	va	ᵇ	ᵇ
ṣa	ᵇ	ᵇ	ḍha	ᵇ	pha	ᵇ	śa	ᵇ	ᵇ
ṣha	ᵇ	ᵇ	ṇa	ᵇ	ba	ᵇ	ṣa		ᵇ
ṣā	ᵇ	ᵇ	ta	ᵇ	bha	ᵇ	ha	ᵇ	ᵇ

Table 2 The Laṇḍā script in its old form and Sindhī adaptation

Figure 13: A comparison of the basic Landa script with the form used in Sindh (from Coulmas 1996: 282).

सिन्धु देशीय-हृ-वणिक-लिपि-भेदाः													प्राचीन लिपिभिः				
१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४	तुलना			
खुदाबादी	शिकरपुरी	साकिरू	तुहाणा	भादिया	लाडाई	वणगाई	राजाई	खुवाजाई	पत्ता (ठहा)	दनावादी	सेहनी भाभी	कजी (पजावी)	मैपालपुरी				
अ	m	m	m	ll	m	m	४	n	→	→	→	ll	ll	m	-	९११ खरो-१	१०-१ अवेस्ता
आ	.	.	.	.	.	.	.	.	→	.	.	.	.	.	.	१२११ मोन्द	१२२३ मोन्द-१ (११)
इ	6	6	6	o, o	o	→	श	ः	५	३	३	८	6	ll	6	१०० गुप्त	८०१ सोमनाथपुरी
ई	.	.	.	.	.	.	.	.	ji	.	.	.	.	.	.	९११ हर्ष	७ बनारस
उ	m	m	m	6	6	6	6	6	6	6	6	6	6	6	6		
ऊ	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
ए	.	.	.	→	o	५	6	६	५	५	ll	6	→	.	.	११० सोमदी (शक)	
ऐ	.	.	.	ll	ll	m	→	५	ll	→	→	.	m	.	.	८०१ पश्चिम क्षत्रप	
औ	.	.	.	6	6	6	6	6	6	6	ll	ll	.	.	.		
औ	.	.	.	.	.	.	.	→	५	→	→	m	.	.	.		
क	ll	ll	ll	५	ll	२	२	ll	३	२	१, ३	३	२	२	ll	१२६ सोमदी	२ खरो प्राग्-इति
ख	५	५	५	५	५	५	ll	ll	ll	ll	ll	ll	ll	ll	ll		
ग	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll		
ग	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll		
घ	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll		
ङ	२, ३	३	३	२	२	२	२	२	२	२	३	३	२	३	२		
च	४	४	३	५	५	५	ll	ll	ll	ll	ll	ll	ll	ll	ll	१२११ गुप्त-इति	११० मोन्द-इति
छ	६	६	५	६	६	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll		
ज	१, ३	१	३	ll	ll	२	ll	ll	ll	ll	ll	ll	३	१	.	१२११ प्राग्-इति	११० सोमदी
ज	६	ll	५	६	६	ll	ll	ll	ll	ll	ll	ll	ll	ll	ll		
झ	१, ३	१	३	ll	ll	२	ll	ll	ll	ll	ll	ll	ll	ll	ll		
ञ	२, ३	३	३	ll	ll	२	ll	ll	ll	ll	ll	ll	ll	ll	ll		
ट	८	८	८	८	८	८	८	८	८	८	८	८	८	८	८	९-१ खरो-१	
ठ	८	८	८	८	८	८	८	८	८	८	८	८	८	८	८		
ड	८	८	८	८	८	८	८	८	८	८	८	८	८	८	८		
ढ	८	८	८	८	८	८	८	८	८	८	८	८	८	८	८		

Figure 14: A comparison of the regional forms of Sindhi (from K. T. Jetley 1985: Chart 1).

	SINDHI	KHOJKI	GURMUKHI	DEVANAGARI		SINDHI	KHOJKI	GURMUKHI	DEVANAGARI
KA	ڪ	ڪ	ਕ	क	TA	ٽ	ٽ	ਤ	त
KHA	ڪھ	ڪھ	ਖ	ख	THA	ٺھ	ٺھ	ਥ	थ
GA	گ	گ	ਗ	ग	DA	ڊ	ڊ	ਦ	द
GGA	گھ	گھ	—	गु	DHA	ڊھ	ڊھ	ਧ	ध
GHA	گھ	گھ	ਘ	घ	NA	ڻ	ڻ	ਨ	न
NGA	نگھ	نگھ	ਙ	ङ	PA	پ	پ	ਪ	प
CA	چ	چ	ਚ	च	PHA	ڇ	ڇ	ਛ	फ
CHA	چھ	چھ	ਛ	छ	BA	بھ	بھ	ਬ	ब
JA	جھ	جھ	ਜ	ज	BBA	—	—	—	ब्र
JJA	جھھ	جھھ	—	ज्ञ	BHA	بھھ	بھھ	ਭ	भ
JHA	جھھ	جھھ	ਝ	झ	MA	مھ	مھ	ਮ	म
NYA	نھ	نھ	ਠ	ञ	YA	ڙھ	ڙھ	ਯ	य
TTA	ٽھ	ٽھ	ਟ	ट	RA	رھ	رھ	ਰ	र
TTHA	ٽھھ	ٽھھ	ਠ	ठ	LA	لھ	لھ	ਲ	ल
DDA	ڊھ	ڊھ	ਡ	ड	LLA	—	—	ਲ	ळ
RRA	رھ	—	ੜ	(ड़)	VA	وھ	وھ	ਵ	व
DDDA	ڊھھ	ڊھھ	—	ड़	SHA	شھ	—	ਸ	श
DDHA	ڊھھ	ڊھھ	ڙھ	ढ	SA	سھ	سھ	ਸ	स
NNA	نھھ	نھھ	ਨ	ण	HA	هھ	هھ	ਹ	ह

Table 3: A comparison of consonant letters of Sindhi, Khojki, Gurmukhi, and Devanagari.

INDEPENDENT VOWELS					DEPENDENT VOWEL SIGNS				
	SINDHI	KHOJKI	GURMUKHI	DEVANAGARI		SINDHI	KHOJKI	GURMUKHI	DEVANAGARI
A	ਅ	𑂀	ਅ	अ	-A	—	—	—	—
AA	ਆ	𑂁	ਆ	आ	-AA	◌ा	◌ा	◌ा	◌ा
I	इ	𑂂	ਇ	इ	-I	◌ि	◌ि	◌ि	◌ि
II	ਈ	𑂃	ਈ	ई	-II	◌ी	◌ी	◌ी	◌ी
U	उ	𑂄	ਉ	उ	-U	◌ु	◌ु	◌ु	◌ु
UU	ऊ	𑂅	ਊ	ऊ	-UU	◌ू	—	◌ू	◌ू
E	ਏ	𑂆	ਏ	ए	-E	◌े	◌े	◌े	◌े
AI	ਐ	𑂇	ਐ	ऐ	-AI	◌ै	◌ै	◌ै	◌ै
O	ਓ	𑂈	ਓ	ओ	-O	◌ो	◌ो	◌ो	◌ो
AU	ਔ	𑂉	ਔ	औ	-AU	◌ौ	◌ौ	◌ौ	◌ौ

Table 4: A comparison of vowel letters and signs of Sindhi, Khojki, Gurmukhi, and Devanagari.

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646⁷

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: **Preliminary Proposal to Encode the Sindhi Script in ISO/IEC 10646**
2. Requester's name: **Anshuman Pandey (pandey@umich.edu)**
3. Requester type (Member Body/Liaison/Individual contribution): **Liaison contribution**
4. Submission date: **2010-02-09**
5. Requester's reference (if applicable): **N/A**
6. Choose one of the following:
 - (a) This is a complete proposal: **No**
 - (b) or, More information will be provided later: **Yes**

B. Technical - General

1. Choose one of the following:
 - (a) This proposal is for a new script (set of characters): **Yes**
 - i. Proposed name of script: **Sindhi**
 - (b) The proposal is for addition of character(s) to an existing block: **No**
 - i. Name of the existing block: **N/A**
2. Number of characters in proposal: **69**
3. Proposed category: **C - Major extinct**
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. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?: **Anshuman Pandey; True Type format**
 - (a) If available now, identify source(s) for the font and indicate the tools used: **The characters of the digitized Sindhi font are based on normalized forms of printed Standard Sindhi characters. The font was designed by Anshuman Pandey using FontForge.**
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:
 - (a) 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 proposal for additional details.**
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 <http://www.unicode.org/Public/UNIDATA/UCD.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard. **Character properties and numeric information are included.**

⁷ Form number: N3102-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)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before?: **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.)? **No**
 - (a) If Yes, with whom?: **N/A**
 - i. If Yes, available relevant documents: **N/A**
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? **Yes**
 - (a) Reference: **See text of proposal**
4. The context of use for the proposed characters (type of use; common or rare): **Common**
 - (a) Reference: **See text of proposal**
5. Are the proposed characters in current use by the user community?: **Yes**
 - (a) If Yes, where? Reference: **In India and Pakistan**
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?: **No**
 - (a) If Yes, is a rationale provided?: **N/A**
 - i. 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? **No**
 - (a) If Yes, is a rationale for its inclusion provided?: **N/A**
 - i. If Yes, reference: **N/A**
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? **No**
 - (a) If Yes, is a rationale provided?: **N/A**
 - i. If Yes, reference: **N/A**
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? **Yes**
 - (a) If Yes, is a rationale for its inclusion provided? **Yes**
 - i. If Yes, reference: **See text of proposal**
11. Does the proposal include use of combining characters and/or use of composite sequences? **Yes**
 - (a) If Yes, is a rationale for such use provided? **Yes**
 - i. If Yes, reference: **See text of proposal**
 - (b) Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? **N/A**
 - i. If Yes, reference: **N/A**
12. Does the proposal contain characters with any special properties such as control function or similar semantics? **Yes**
 - (a) If Yes, describe in detail (include attachment if necessary): **Virama**
13. Does the proposal contain any Ideographic compatibility character(s)? **No**
 - (a) If Yes, is the equivalent corresponding unified ideographic character(s) identified? **N/A**
 - i. If Yes, reference: **N/A**