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### Title

Proposal to Encode the Tirhuta Script in ISO/IEC 10646

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

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## 1 Introduction

This is a proposal to encode the Tirhuta script in the Universal Character Set (UCS). The recommendations made here are based upon the following documents:

- L2/06-226 “Request to Allocate the Maithili Script in the Unicode Roadmap”
- N3765 L2/09-329 “Towards an Encoding for the Maithili Script in ISO/IEC 10646”

Tirhuta was called the ‘Maithili’ script in previous documents. A discussion of the names used for the script and the rationale for the change of name is offered in Section 3.1.

## 2 Background

Tirhuta is the traditional writing system for the Maithili language (ISO 639: mai), which is spoken in the state of Bihar in India and in the Narayani and Janakpur zones of Nepal by more than 35 million people. Maithili is a scheduled language of India and the second most spoken language in Nepal. Tirhuta is a Brahmi-based script derived from Gauḍī, or ‘Proto-Bengali’, which evolved from the Kuṭīla branch of Brahmi by the 10th century CE. It is related to the Bengali, Newari, and Oriya scripts, which are also descended from Gauḍī, and became differentiated from them by the 14th century.<sup>1</sup> Tirhuta remained the primary writing system for Maithili until the 20th century, at which time it was replaced by Devanagari.

The Tirhuta script forms the basis of scholarly and religious scribal traditions associated with the Maithili and Sanskrit languages since the 14th century CE. The earliest records in Tirhuta are inscriptional records found on temples in Bihar and Nepal that are dated to the 13th century. The Maithil Brahmin and Kayasth communities have used the script for maintaining *pañjīr* (genealogical records) from at least the 14th century to the present. Tirhuta continues to be used for writing manuscripts of religious and literary texts, as well as for personal correspondence. Printing in Tirhuta began in the 1920s with the production of metal fonts in Calcutta. Since the 1950s, various literary societies, such as the Maithili Akademi and Chetna Samiti, have been publishing literary, educational, and linguistic materials in Tirhuta (see figures 2 and 3). The script is

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<sup>1</sup> Salomon 1998: 41.

also used for other purposes, such as in signage in Darbhanga and other districts of north Bihar and as an optional script for writing the civil services examination in Bihar.

In the past two decades, Maithili speakers have adapted Tirhuta for use with digital technologies. Beginning in the 1990s, users developed basic support for Tirhuta on computers by creating the first digitized fonts for the script. Today, several books and periodicals are produced in Tirhuta using desktop publishing software. These documents are available in printed and electronic formats. One such periodical is *Videha*, which is published bi-weekly in Tirhuta in Portable Document Format (PDF) (see Figure 11). However, there is an obstacle to complete support for Tirhuta in digital media: the absence of a character-encoding standard for the script. Maithili speakers have managed to overcome this barrier by developing Tirhuta fonts that are based upon legacy encodings or that are mapped to Unicode blocks such as Devanagari. But, these solutions do not allow for the representation of Tirhuta in plain text. The lack of a Unicode standard for Tirhuta impedes its use for basic activities, such as writing e-mails, creating websites, and publishing blogs; in digital typesetting; and in larger projects, such as establishing a Maithili Wikipedia.

The Government of India recognized Maithili as a scheduled language in 2004, a status that provides official support for the development of the language. The granting of scheduled status to Maithili has resulted in increased interest in Tirhuta and has revived its usage. In a presentation to the Unicode Technical Committee in 2005, Dr. Om Vikas of the Department of Information Technology, Government of India noted the historical importance of Tirhuta and expressed the Department's interest in including the script in the Unicode standard (see L2/05-063). More recently, an article in the *Times of India* (2010) featured the present author's efforts to develop a Unicode standard for Tirhuta. Such reports are evidence of the growing interest in and usage of the script. An encoding for Tirhuta in the UCS will permit its representation in plain text, will provide a standard for supporting and expanding current usage of the script, and will facilitate the development of new resources in the Maithili language.

### 3 Proposal Details

#### 3.1 Script Name

The name of the script is 'Tirhuta'. It is also known as 'Mithilakshar' and 'Maithili'. The names 'Tirhuta' and 'Mithilakshar' are attested in historical sources, while 'Maithili' is a more modern designation. 'Tirhuta' is the traditional and most commonly used name for the script and is recognized as such by speakers of Maithili. It is derived from 'Tirhut' or 'Tirabhukti', which means the "land of river banks". The name Tirhut refers to the region of Bihar north of the Ganges river that is congruous with the Maithili-speaking area. Tirhuta is known in Bengal as *tirute*, meaning the script "of the Tirhut region."<sup>2</sup> An older name for Tirhut is 'Mithila', which is the basis for the name 'Mithilakshar' (*mithilā* + *akṣara* 'letter') or the 'script of Mithila'. The name 'Maithili' appears in several modern sources and its usage is based upon the practice of linking writing systems to languages. However, as the Maithili language has historically been written in Tirhuta, Kaithi, Newari, and Devanagari, each of these might be considered 'Maithili' scripts. Of these names, 'Tirhuta' is uniquely associated with the proposed script and is recognized by Maithili speakers.

#### 3.2 Character Repertoire

The 82 characters in this proposal comprise the core set of Tirhuta letters and signs. The script is currently allocated in the Supplementary Multilingual Plane at the range U+11480..U+114DF. The proposed code chart and names list is provided in Figure 1.

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<sup>2</sup> Chatterji 1926: 225.

### 3.3 Encoding Considerations

Although Tirhuta is an independent script, several of its characters bear resemblance to those of Bengali (see discussion in N3765 L2/09-329). These include the shapes of some consonants, vowels, and vowel signs (see tables 3–7 and Section 4.21). These similarities, however, are superficial. The actual differences are visible in the behaviors of characters in certain environments, such as consonant-vowel combinations and in consonant conjuncts, that are common in standard Tirhuta orthography. Despite the similarities between the two scripts, Tirhuta cannot be unified with Bengali. In fact, some orthographic features of Tirhuta prevent mutual intelligibility with Bengali. Proper representation of Tirhuta in plain-text requires the preservation of its distinct rendering behaviors. This can only be accomplished at the character level, through character content that is independent of font changes, alterations to text styles, or other formatting.

## 4 Writing System

### 4.1 Structure

The general structure (phonetic order, *mātrā* reordering, use of *virāma*, etc.) of Tirhuta is similar to that of other Indic scripts based upon the Brahmi model. The script is written from left-to-right.

### 4.2 Virāma

The Tirhuta ◌ VIRAMA is identical in function to the corresponding character in other Indic scripts.

### 4.3 Vowels

There are 14 vowel letters:

अ	A	उ	U	वृ	VOCALIC L	ओ	O
आ	AA	ऊ	UU	वृ	VOCALIC LL	औ	AU
इ	I	ऋ	VOCALIC R	ए	E		
ई	II	ॠ	VOCALIC RR	ऐ	AI		

### 4.4 Vowel Signs

There are 15 combining vowel signs:

ा	SIGN AA	ू	SIGN UU	ृ	SIGN VOCALIC LL	ो	SIGN O
ि	SIGN I	ृ	SIGN VOCALIC R	े	SIGN E	ौ	SIGN O
ी	SIGN II	ॄ	SIGN VOCALIC RR	ै	SIGN SHORT E	ौ	SIGN AU
ु	SIGN U	ॠ	SIGN VOCALIC L	ै	SIGN AI		

There are 3 two-part vowel signs: ै SIGN AI, ो SIGN O, ौ SIGN AU. Note the method of writing ै SIGN AI: The first element is written before the consonant and the other attaches above the letter (compare Bengali ৈ SIGN AI).

The signs ै SHORT E and ौ SHORT O do not have independent forms because the sounds they represents do not occur word initially.

Certain vowel signs have special rendering behaviors when they occur in consonant-vowel combinations with certain consonants (see Section 4.7).

#### 4.5 Representation of Vowel Letters and Signs

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

RECOMMENDED	NOT RECOMMENDED
आ AA	अ A + आ SIGN AA
ऋ VOCALIC RR	र VOCALIC R + ृ SIGN VOCALIC R
ऌ VOCALIC L	ल LA + ृ SIGN VOCALIC R
ॠ VOCALIC LL	ल LA + ृ SIGN VOCALIC RR
ए AI	अ E + े SIGN SHORT E
उ AU	अ O + े SIGN SHORT E
े SIGN AI	े SIGN E + े SIGN SHORT E
ो SIGN O	े SIGN E + ो SIGN AA
ौ SIGN SHORT O	ो SIGN AA + े SIGN SHORT E
ौ SIGN AU	े SIGN E + ौ SIGN SHORT O

#### 4.6 Consonants

There are 33 consonant letters:

क KA	ण NYA	ध DHA	न LA
ख KHA	ठ TTA	न NA	र VA
ग GA	ठ TTHA	प PA	श SHA
घ GHA	ड DDA	फ PHA	ष SSA
ङ NGA	ड DDHA	ब BA	स SA
च CA	ण NNA	भ BHA	ह HA
छ CHA	त TA	म MA	
ज JA	थ THA	य YA	
झ JHA	द DA	व RA	

Each consonant letter bears an inherent vowel, represented by /a/. This inherent vowel is silenced using the ् VIRAMA. Certain consonants have special rendering behaviors when they occur in conjuncts (see Section 4.8) or in word-final position (see Section 4.9).

## 4.7 Consonant-Vowel Combinations

Combinations of consonants and vowels are written using combining vowel signs. Certain CV combinations have special rendering behaviors. These are described below:

- **Contextual form of VOWEL SIGN U** The vowel sign  $\text{◌} \text{◌} \text{U}$  has the contextual form  $\text{◌} \text{◌} \text{◌}$ , which is used with certain consonants and is written with these letters as a ligature.

	<i>gu</i>	<i>ju</i>	<i>ṅu</i>	<i>du</i>	<i>ṇu</i>	<i>pu</i>	<i>mu</i>	<i>lu</i>	<i>śu</i>	<i>su</i>
Tirhuta	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ
Bengali	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ

In Bengali, the element  $\text{◌} \text{◌} \text{◌}$  represents *ba-phala*, or the subjoined form of ব BA and is used in the creation of conjuncts. For example,  $\text{ꣳ}$  represents Tirhuta *su*, but Bengali *sva*; in Tirhuta, *sva* is written as  $\text{ꣳ}$ .

- **Ligatures formed with VOWEL SIGN U** Combinations of certain consonants and the vowel sign  $\text{◌} \text{◌} \text{U}$  are written as special ligatures:

	<i>ku</i>	<i>tu</i>	<i>dhu</i>	<i>bhu</i>	<i>ṅu</i>	<i>ṇu</i>	<i>ru</i>	<i>śu</i>	<i>hu</i>
Tirhuta	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ
Bengali	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ

- **Ligatures formed with VOWEL SIGN UU** Combinations of certain consonants and the vowel sign  $\text{◌} \text{◌} \text{UU}$  are written as special ligatures:

	<i>kū</i>	<i>dhū</i>	<i>rū</i>	<i>hū</i>
Tirhuta	ꣳ	ꣳ	ꣳ	ꣳ
Bengali	ꣳ	ꣳ	ꣳ	ꣳ

- **Ligatures formed with VOWEL SIGN VOCALIC R** Combinations of certain consonants and the vowel sign  $\text{◌} \text{◌} \text{VOCALIC R}$  are written as special ligatures:

	<i>kṛ</i>	<i>tṛ</i>	<i>bṛ</i>	<i>bhṛ</i>	<i>hṛ</i>
Tirhuta	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ
Bengali	ꣳ	ꣳ	ꣳ	ꣳ	ꣳ

## 4.8 Consonant Conjuncts

Consonant clusters are generally represented as complex ligatures (see Table 7). Certain consonants have other special rendering behaviors when they occur in clusters. These are described below:

1. **Letter TA** The representation of ত TA as  $C_1$  is determined by  $C_2$ . If  $C_2$  is ত TA, য YA, ব RA, or র VA, the conjunct is written as a ligature or with subjoined forms of  $C_2$ . With all other consonants, TA takes the two-part form  $\text{◌} \text{◌}$ . For example, *tka* is written as  $\text{ꣳ}$ , eg. *সবকৌল saratkāla*. This behavior of TA resembles Bengali ঙ KHANDA TA, eg. *সরৎকাল saratkāla*. However, unlike KHANDA TA, it is

unnecessary to encode ে as an independent character because the context for its use are predictable. A variant form of ে attested in recent printed materials is ে, eg. সবত্ৰকাল *saratkāla*.

2. **Letter NA** When ন NA is C<sub>2</sub> in conjuncts with certain consonants, it takes the subjoined form ্ন. This form is used when the following consonants are C<sub>1</sub>: KHA (খু *khna*); PHA (ফু *phna*); SA (সু *sna*).
3. **Letter BA** The letter বঁ BA has the following contextual forms when it appears in the following environments:
  - (a) *Consonant-vowel combinations* The letter BA take the conjunct contextual form when it is written with ৃ SIGN VOCALIC R. This combination is written not as \*বঁ, but as বঁ.
  - (b) *Conjunct onset* When BA is C<sub>1</sub> in certain clusters it takes the shape বঁ, eg. বঁ *bda*.
  - (c) *Conjunct final* When BA is C<sub>2</sub> it has the form বঁ, eg. বঁ *mba*; compare বঁ *mu* and বঁ *mva*.
4. **Letter YA** When য YA is C<sub>2</sub>, its representation in a conjunct is dependent upon C<sub>1</sub>:
  - (a) *Atomic ligature* If C<sub>1</sub> is TA, it combines with YA to form a ligature: ত্যা *tya* (Bengali ত্য).
  - (b) *Post-base form* In conjuncts with other letters, YA takes the form য় and is written sequentially after C<sub>1</sub>: ত্য *tya*. With some consonants, the post-base form joins with the base consonant to form a distinct ligature:
 

	<i>dya</i>	<i>nya</i>	<i>bhya</i>	<i>śya</i>	<i>sya</i>	<i>hya</i>
Tirhuta	द्य	न्य	भ्य	श्र्य	स्य	ह्य
Bengali	দ্য	ন্য	ভ্য	শ্য	স্য	হ্য
5. **Letter RA** The shape of RA as C<sub>1</sub> is dependent upon C<sub>2</sub>:
  - (a) *Repha* With the majority of consonants, RA as C<sub>1</sub> is written as ৰ *repha*, eg. ৰ *rpa*.
  - (b) *Ligature* In some cases, RA forms a ligature with C<sub>2</sub>. This is the common representation when GA is C<sub>2</sub>: ৰ্গ *rga* (Bengali র্গ).
6. **Letter LA** When LA is C<sub>2</sub>, it takes the subjoined form ্ল: ক্ল *kla* (Bengali ক্ল), ফ্ল *phla* (Bengali ফ্ল), শ্ল *śla* (Bengali শ্ল).
7. **Letter VA** When VA is C<sub>2</sub>, it takes the subjoined form ্ব, eg. স্ব *sva*.

#### 4.9 Contextual Forms of Consonants

Certain consonants have special forms when they appear in word-final positions:

1. **Letter TA** The sequence <TA, VIRAMA> is written as ত্ (not ত) at word-final position.
2. **Letter MA** the sequence <MA, VIRAMA> is written as ম্ (not ম) at word-final position.

#### 4.10 Nasalization

Nasalization is indicated by ॠ CANDRABINDU and ॡ ANUSVARA. These signs are written centered above the base. If written with an above-base sign or a letter with a graphical element that extends past the headstroke, they placed to the right of such these signs and elements.

#### 4.11 Characters for Representing Sanskrit

The following characters are attested in Vedic and classical Sanskrit manuscripts written in Tirhuta:

1. ॠ VISARGA This sign represents an allophone of र RA or स SA at word-final position in Sanskrit orthography.
2. ॡ GVANG This sign represents nasalization. It belongs to the same class of characters as ॢ U+1CE9 VEDIC SIGN ANUSVARA ANTARGOMUKHA, ॣ U+1CEA VEDIC SIGN ANUSVARA BAHIRGOMUKHA, etc.
3. । *ardhavisarga* Represents /x/ *jihvāmūlīya* and /ϕ/ *upadhmānīya*. This character is not proposed for independent encoding and should be unified with ॥ U+1CF2 VEDIC SIGN ARDHAVISARGA.

#### 4.12 Nukta

The ॥ NUKTA is used for writing sounds that are not represented by a unique character, such as allophonic variants and sounds that occur in local dialects or in loanwords. The following combinations of consonant letter + NUKTA are attested in Tirhuta:

/ɽ/	॥	DDA + NUKTA
/ɽh/	॥	DDHA + NUKTA
/l/	॥	LA + NUKTA
/j/	॥	YA + NUKTA

The NUKTA may be written with any vowel or consonant letter. If other combining marks, such as a vowel sign or ANUSVARA, also appear with the base character, then the NUKTA is written first, eg. ॥ <LLA, NUKTA, SIGN AA>.

The graphical structures of ॥ BA and ॥ VA possess a dot; however this dot is semantically not equivalent to NUKTA. These letters do not decompose to NUKTA and are treated as atomic characters.

#### 4.13 Punctuation

Tirhuta uses | DANDA and || DOUBLE DANDA. These should be unified with the Devanagari characters | U+0964 DEVANAGARI DANDA and || U+0965 DEVANAGARI DOUBLE DANDA.

#### 4.14 Abbreviation

The ॥ ABBREVIATION SIGN is used for marking abbreviations.



## 4.15 Digits

Tirhuta has a full set of decimal digits: ୦ ZERO, ୧ ONE, ୨ TWO, ୩ THREE, ୪ FOUR, ୫ FIVE, ୬ SIX, ୭ SEVEN, ୮ EIGHT, ୯ NINE.

## 4.16 Number Forms and Unit Marks

Number forms and unit marks are found in Tirhuta documents (see Figure 9). The most common characters are signs for writing fractions: eg. ॥ U+A831 NORTH INDIC FRACTION ONE HALF, ॥ U+A832 NORTH INDIC FRACTION THREE QUARTERS, etc.; and currency marks: eg. ୨ U+A838 NORTH INDIC RUPEE MARK. These characters may be represented using those encoded in the ‘Common Indic Number Forms’ block (U+A830..U+A83F), which are described in N3367 L2/07-354. Also used are Bengali ‘currency numerators’, eg. ୯ U+09F4 BENGALI CURRENCY NUMERATOR ONE.

## 4.17 Special Signs

There are two script-specific special signs in Tirhuta:

- ୧ ANJI This symbol is an important and uniquely Tirhuta character that is used in the invocations of letters, manuscripts, books, and charts of the script. The sign *āñjī* is said to represent the tusk of the deity Gaṇeśa, patron of learning.
- ଓ OM This symbol is a unique character in Tirhuta. In Bengali, the sign is represented as ଓ, which is a simple combination of o and CANDRABINDU.

### 4.17.1 Variant Characters

Tirhuta has variant forms for several letters, character elements, and conjuncts:

- The letter ବ RA has two variant forms: (a) ର and (b) ବ. These variants produce consonant-vowel ligatures: (a) ରୁ *ru* and ରୁ *rū*; and (b) ବୁ *ru* and ବୁ *rū*.
- The character ଶ୍ଵ VOCALIC R has the variant form ଷ୍ଵ
- The character ଶ୍ଵ VOCALIC RR has the variant form ଷ୍ଠ,
- The conjunct-onset form of ତ TA is represented as both ଡ and ଢ.

All variant forms should be managed at the font level.

## 4.18 Collation

The basic collating order for Tirhuta is as follows:

୧ ANJI < ଅ A < ଆ AA < ଇ I < ଈ II < ଊ U < ଓ UU < ଶ୍ଵ VOCALIC R <  
 ଶ୍ଵ VOCALIC RR < ଋ VOCALIC L < ୠ VOCALIC LL < ଏ E < ଐ AI < ଓ O < ଔ AU <  
 କ KA < ଖ KHA < ଗ GA < ଘ GHA < ଙ NGA < ଚ CA < ଛ CHA < ଜ JA < ଝ JHA <  
 ଞ NYA < ଟ TTA < ଠ TTHA < ଡ DDA < ଢ DDHA < ଣ NNA < ତ TA < ଥ THA <  
 ଦ DA < ଧ DHA < ନ NA < ପ PA < ଫ PHA < ବା BA < ଭ BHA < ଘ MA < ଯ YA <  
 ବ RA < ଲ LA < ଋ VA < ଶି SHA < ଷ SSA < ସ SA < ହ HA < ା SIGN AA <

ि SIGN I < ी SIGN II < ू SIGN U < ू SIGN UU < ृ SIGN VOCALIC R <  
 ृ SIGN VOCALIC RR < ृ SIGN VOCALIC L < ृ SIGN VOCALIC LL < ो SIGN SHORT E <  
 ो SIGN E < ो SIGN AI < ो SIGN SHORT O < ो SIGN O < ो SIGN AU <  
 ो CANDRABINDU < ो ANUSVARA < ो VISARGA < ् VIRAMA

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

The symbol ् GVANG has the same collation weight as ो ANUSVARA.

## 4.19 Linebreaking

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

## 4.20 Character Properties

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11480;TIRHUTA ANJI;Lo;0;L;;;;;N;;;;;
11481;TIRHUTA LETTER A;Lo;0;L;;;;;N;;;;;
11482;TIRHUTA LETTER AA;Lo;0;L;;;;;N;;;;;
11483;TIRHUTA LETTER I;Lo;0;L;;;;;N;;;;;
11484;TIRHUTA LETTER II;Lo;0;L;;;;;N;;;;;
11485;TIRHUTA LETTER U;Lo;0;L;;;;;N;;;;;
11486;TIRHUTA LETTER UU;Lo;0;L;;;;;N;;;;;
11487;TIRHUTA LETTER VOCALIC R;Lo;0;L;;;;;N;;;;;
11488;TIRHUTA LETTER VOCALIC RR;Lo;0;L;;;;;N;;;;;
11489;TIRHUTA LETTER VOCALIC L;Lo;0;L;;;;;N;;;;;
1148A;TIRHUTA LETTER VOCALIC LL;Lo;0;L;;;;;N;;;;;
1148B;TIRHUTA LETTER E;Lo;0;L;;;;;N;;;;;
1148C;TIRHUTA LETTER AI;Lo;0;L;;;;;N;;;;;
1148D;TIRHUTA LETTER O;Lo;0;L;;;;;N;;;;;
1148E;TIRHUTA LETTER AU;Lo;0;L;;;;;N;;;;;
1148F;TIRHUTA LETTER KA;Lo;0;L;;;;;N;;;;;
11490;TIRHUTA LETTER KHA;Lo;0;L;;;;;N;;;;;
11491;TIRHUTA LETTER GA;Lo;0;L;;;;;N;;;;;
11492;TIRHUTA LETTER GHA;Lo;0;L;;;;;N;;;;;
11493;TIRHUTA LETTER NGA;Lo;0;L;;;;;N;;;;;
11494;TIRHUTA LETTER CA;Lo;0;L;;;;;N;;;;;
11495;TIRHUTA LETTER CHA;Lo;0;L;;;;;N;;;;;
11496;TIRHUTA LETTER JA;Lo;0;L;;;;;N;;;;;
11497;TIRHUTA LETTER JHA;Lo;0;L;;;;;N;;;;;
11498;TIRHUTA LETTER NYA;Lo;0;L;;;;;N;;;;;
11499;TIRHUTA LETTER TTA;Lo;0;L;;;;;N;;;;;
1149A;TIRHUTA LETTER TTHA;Lo;0;L;;;;;N;;;;;
1149B;TIRHUTA LETTER DDA;Lo;0;L;;;;;N;;;;;
1149C;TIRHUTA LETTER DDHA;Lo;0;L;;;;;N;;;;;
1149D;TIRHUTA LETTER NNA;Lo;0;L;;;;;N;;;;;
1149E;TIRHUTA LETTER TA;Lo;0;L;;;;;N;;;;;
1149F;TIRHUTA LETTER THA;Lo;0;L;;;;;N;;;;;
114A0;TIRHUTA LETTER DA;Lo;0;L;;;;;N;;;;;
114A1;TIRHUTA LETTER DHA;Lo;0;L;;;;;N;;;;;
114A2;TIRHUTA LETTER NA;Lo;0;L;;;;;N;;;;;
114A3;TIRHUTA LETTER PA;Lo;0;L;;;;;N;;;;;
114A4;TIRHUTA LETTER PHA;Lo;0;L;;;;;N;;;;;
114A5;TIRHUTA LETTER BA;Lo;0;L;;;;;N;;;;;
114A6;TIRHUTA LETTER BHA;Lo;0;L;;;;;N;;;;;
114A7;TIRHUTA LETTER MA;Lo;0;L;;;;;N;;;;;
114A8;TIRHUTA LETTER YA;Lo;0;L;;;;;N;;;;;
114A9;TIRHUTA LETTER RA;Lo;0;L;;;;;N;;;;;
  
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114AA;TIRHUTA LETTER LA;Lo;0;L;;;;N;;;;;
114AB;TIRHUTA LETTER VA;Lo;0;L;;;;N;;;;;
114AC;TIRHUTA LETTER SHA;Lo;0;L;;;;N;;;;;
114AD;TIRHUTA LETTER SSA;Lo;0;L;;;;N;;;;;
114AE;TIRHUTA LETTER SA;Lo;0;L;;;;N;;;;;
114AF;TIRHUTA LETTER HA;Lo;0;L;;;;N;;;;;
114B0;TIRHUTA VOWEL SIGN AA;Mc;0;L;;;;N;;;;;
114B1;TIRHUTA VOWEL SIGN I;Mc;0;L;;;;N;;;;;
114B2;TIRHUTA VOWEL SIGN II;Mc;0;L;;;;N;;;;;
114B3;TIRHUTA VOWEL SIGN U;Mn;0;NSM;;;;N;;;;;
114B4;TIRHUTA VOWEL SIGN UU;Mn;0;NSM;;;;N;;;;;
114B5;TIRHUTA VOWEL SIGN VOCALIC R;Mn;0;NSM;;;;N;;;;;
114B6;TIRHUTA VOWEL SIGN VOCALIC RR;Mn;0;NSM;;;;N;;;;;
114B7;TIRHUTA VOWEL SIGN VOCALIC L;Mn;0;NSM;;;;N;;;;;
114B8;TIRHUTA VOWEL SIGN VOCALIC LL;Mn;0;NSM;;;;N;;;;;
114B9;TIRHUTA VOWEL SIGN E;Mc;0;L;;;;N;;;;;
114BA;TIRHUTA VOWEL SIGN SHORT E;Mn;0;NSM;;;;N;;;;;
114BB;TIRHUTA VOWEL SIGN AI;Mc;0;L;114B9 114BA;;;;N;;;;;
114BC;TIRHUTA VOWEL SIGN O;Mc;0;L;114B9 114B0;;;;N;;;;;
114BD;TIRHUTA VOWEL SIGN SHORT O;Mc;0;L;;;;N;;;;;
114BE;TIRHUTA VOWEL SIGN AU;Mc;0;L;114B9 114BD;;;;N;;;;;
114BF;TIRHUTA SIGN CANDRABINDU;Mn;0;NSM;;;;N;;;;;
114C0;TIRHUTA SIGN ANUSVARA;Mn;0;NSM;;;;N;;;;;
114C1;TIRHUTA SIGN VISARGA;Mc;0;L;;;;N;;;;;
114C2;TIRHUTA SIGN VIRAMA;Mn;9;NSM;;;;N;;;;;
114C3;TIRHUTA SIGN NUKTA;Mn;0;NSM;;;;N;;;;;
114C4;TIRHUTA SIGN AVAGRAHA;Lo;0;L;;;;N;;;;;
114C5;TIRHUTA GVANG;Mc;0;L;;;;N;;;;;
114C6;TIRHUTA ABBREVIATION SIGN;Po;0;L;;;;N;;;;;
114C7;TIRHUTA OM;Lo;0;L;;;;N;;;;;
114D0;TIRHUTA DIGIT ZERO;Nd;0;L;0;0;0;N;;;;;
114D1;TIRHUTA DIGIT ONE;Nd;0;L;1;1;1;N;;;;;
114D2;TIRHUTA DIGIT TWO;Nd;0;L;2;2;2;N;;;;;
114D3;TIRHUTA DIGIT THREE;Nd;0;L;3;3;3;N;;;;;
114D4;TIRHUTA DIGIT FOUR;Nd;0;L;4;4;4;N;;;;;
114D5;TIRHUTA DIGIT FIVE;Nd;0;L;5;5;5;N;;;;;
114D6;TIRHUTA DIGIT SIX;Nd;0;L;6;6;6;N;;;;;
114D7;TIRHUTA DIGIT SEVEN;Nd;0;L;7;7;7;N;;;;;
114D8;TIRHUTA DIGIT EIGHT;Nd;0;L;8;8;8;N;;;;;
114D9;TIRHUTA DIGIT NINE;Nd;0;L;9;9;9;N;;;;;

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#### 4.21 ‘Confusable’ Characters

Several Tirhuta characters resemble those of Bengali. Some of these are ‘confusable’ homoglyphs:

- The glyph ঝ represents va in Tirhuta, but ঝ RA in Bengali.
- The glyph ঞ represents RA in Tirhuta, but ঞ BA in Bengali.
- The glyph ল represents LA in Tirhuta, but ল NNA in Bengali.
- The glyph ণ represents NNA in Tirhuta, but ল LA in Bengali.

Below is a list of Tirhuta characters that may be ‘confusable’ with those encoded in other blocks of the UCS:

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1148B TIRHUTA LETTER E ; 098F BENGALI LETTER E
1148C TIRHUTA LETTER AI ; 0990 BENGALI LETTER AI
1148D TIRHUTA LETTER O ; 0993 BENGALI LETTER O
1148E TIRHUTA LETTER AU ; 0994 BENGALI LETTER AU
1148F TIRHUTA LETTER KA ; 0995 BENGALI LETTER KA
11490 TIRHUTA LETTER KHA ; 0996 BENGALI LETTER KHA
11491 TIRHUTA LETTER GA ; 0997 BENGALI LETTER GA

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11492	TIRHUTA LETTER GHA	; 0998	BENGALI LETTER GHA
11494	TIRHUTA LETTER CA	; 099A	BENGALI LETTER CA
11496	TIRHUTA LETTER JA	; 099C	BENGALI LETTER JA
11498	TIRHUTA LETTER NYA	; 099E	BENGALI LETTER NYA
11499	TIRHUTA LETTER TTA	; 099F	BENGALI LETTER TTA
1149B	TIRHUTA LETTER DDA	; 09A1	BENGALI LETTER DDA
1149D	TIRHUTA LETTER NNA	; 09B2	BENGALI LETTER LA
1149E	TIRHUTA LETTER TA	; 09A4	BENGALI LETTER TA
1149F	TIRHUTA LETTER THA	; 09A5	BENGALI LETTER THA
114A0	TIRHUTA LETTER DA	; 09A6	BENGALI LETTER DA
114A1	TIRHUTA LETTER DHA	; 09A7	BENGALI LETTER DHA
114A2	TIRHUTA LETTER NA	; 09A8	BENGALI LETTER NA
114A3	TIRHUTA LETTER PA	; 09AA	BENGALI LETTER PA
114A7	TIRHUTA LETTER MA	; 09AE	BENGALI LETTER MA
114A8	TIRHUTA LETTER YA	; 09AF	BENGALI LETTER YA
114A9	TIRHUTA LETTER RA	; 09AC	BENGALI LETTER BA
114AA	TIRHUTA LETTER LA	; 09A3	BENGALI LETTER NNA
114AB	TIRHUTA LETTER VA	; 09B0	BENGALI LETTER RA
114AD	TIRHUTA LETTER SSA	; 09B7	BENGALI LETTER SSA
114AE	TIRHUTA LETTER SA	; 09B8	BENGALI LETTER SA
114B0	TIRHUTA VOWEL SIGN AA	; 09BE	BENGALI VOWEL SIGN AA
114B1	TIRHUTA VOWEL SIGN I	; 09BF	BENGALI VOWEL SIGN I
114B9	TIRHUTA VOWEL SIGN E	; 09C7	BENGALI VOWEL SIGN E
114BC	TIRHUTA VOWEL SIGN O	; 09CB	BENGALI VOWEL SIGN O
114BD	TIRHUTA VOWEL SIGN SHORT O	; 09D7	BENGALI VOWEL SIGN LENGTH MARK
114BE	TIRHUTA VOWEL SIGN AU	; 09CC	BENGALI VOWEL SIGN AU
114BF	TIRHUTA SIGN CANDRABINDU	; 0981	BENGALI SIGN CANDRABINDU
114C1	TIRHUTA SIGN VISARGA	; 0983	BENGALI SIGN VISARGA
114C2	TIRHUTA SIGN VIRAMA	; 09CD	BENGALI SIGN VIRAMA
114C3	TIRHUTA SIGN NUKTA	; 09BC	BENGALI SIGN NUKTA
114C4	TIRHUTA SIGN AVAGRAHA	; 09BD	BENGALI SIGN AVAGRAHA
114C5	TIRHUTA GVANG	; 0057	LATIN CAPITAL LETTER W
114D0	TIRHUTA DIGIT ZERO	; 09E6	BENGALI DIGIT ZERO
114D1	TIRHUTA DIGIT ONE	; 09E7	BENGALI DIGIT ONE
114D2	TIRHUTA DIGIT TWO	; 09E8	BENGALI DIGIT TWO
114D6	TIRHUTA DIGIT SIX	; 09EC	BENGALI DIGIT SIX

## 5 References

Chatterji, Suniti Kumar. 1926. *The Origin and Development of the Bengali Language*. Part I: Introduction, Phonology. Calcutta: Calcutta University Press.

eCube: Solutions & Research. “Tirhuta Lipi: The Native Script of Maithilee.” 2003. Electronic resource available at <http://www.tirhotalipi.4t.com/TirhutaLipiAlpha.pdf>.

Grierson, George A. 1882. *An introduction to the Maithili language of North Bihār, containing a grammar, chrestomathy and vocabulary*. Calcutta: J.N. Banerjee and Son.

———. 1903. *Linguistic Survey of India*. Volume V. Indo-Aryan Family, Eastern Group. Part II. Specimens of the Bihārī and Ōriyā languages. Calcutta: Office of the Superintendent of Government Printing, India.

Jhā, Govinda [ed]. 1999. कल्याणी-कोश [= *Kalyāṇī-kośa* (Maithilī-Ṁṅgrejī Śabda Kośa)]. Kāmeśvara Siṃha Bihāra Heriṭeja Sirīja 4. 1st ed. Darbhāṅgā: Mahārājādhirāja Kāmeśvara Siṃha Kalyāṇī Phāundeśana.

Jhā, Subhadra. 1958. *The Formation of the Maithilī Language*. London: Luzac.

- Mishra, Jayakanta. 1973. *बृहत् मैथिली शब्दकोश* [*Br̥hat Maithilī Śabdakośa* = The Great Maithili Dictionary]. Fascicule 1. 1st ed. Simla: Indian Institute of Advanced Study.
- Naik, Bapurao S. 1971. *Typography of Devanagari*. 1st rev. ed. Vols. 1, 2, and 3. Bombay: Directorate of Languages, Government of Maharashtra.
- 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. 2006. “Request to Allocate the Maithili Script in the Unicode Roadmap” (L2/06-226). <http://www.umich.edu/~pandey/06226-maithiliroadmap.pdf>.
- . 2007. “Proposal to Encode North Indic Number Forms in ISO/IEC 10646” (N3367 L2/07-354), October 7, 2007. <http://std.dkuug.dk/jtc1/sc2/wg2/docs/n3367.pdf>
- . 2009. “Towards an Encoding for the Maithili Script in ISO/IEC 10646” (N3765 L2/09-329), September 30, 2009. <http://std.dkuug.dk/JTC1/SC2/WG2/docs/n3765.pdf>
- Rāya, Jīvanātha. 2003. *मैथिली प्रथम पुस्तक*. [*Maithilī Prathama Pustaka* = Maithili Primer]. Reprint of edition published by Pustaka Bhaṅḍāra, Laheriyāsārāya, Bihāra, (1970?). *Mithilākṣara Puraskāra Kośa*: Ekarahiya, Mahottarī, Nepal.
- Salomon, Richard. *Indian Epigraphy: A Guide to the Study of Inscriptions in Sanskrit, Prakrit, and the Other Indo-Aryan Languages*. Oxford University Press: New York, 1998.
- Śākyavaṃśa, Hemarāja. 1974 [saṃvat 2030]. *Nepāla lipi-prakāśa*. Kāthamaṅḍau.
- Script Encoding Initiative. “Unicode Scripts Research.” April 12, 2006. <http://www.linguistics.berkeley.edu/sei/USR.html#n101>.
- Thāpā, Ramesh Jung, Janaklāl Sharmā, and Hemarāj Shākya. “Table of Evolution of Scripts.” Prepared by His Majesty’s Government of Nepal, Ministry of Education, Department of Archaeology, Simhadarbār, Kāthmāṅḍu, Nepal.
- Times of India*. 2010. “Michigan varsity teacher move on Tirhuta script” (January 21, 2010). Patna edition. <http://articles.timesofindia.indiatimes.com/2010-01-21/patna/28149231>
- Videha: A fortnightly Maithili e-journal*. Issue 80 (April 15, 2011), Gajendra Thakur [ed]. <http://www.videha.co.in/>.
- Vikas, Om. 2005. “Issues in Representation of Indic Scripts in Unicode” (L2/05-063). <http://www.unicode.org/L2/L2005/05063-vikas.pdf>.
- Wikimedia. 2008. “Requests for new languages/Wikipedia Maithili.” [http://meta.wikimedia.org/wiki/Requests\\_for\\_new\\_languages/Wikipedia\\_Maithili](http://meta.wikimedia.org/wiki/Requests_for_new_languages/Wikipedia_Maithili).

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	1148	1149	114A	114B	114C	114D
0	ଠ 11480	ଥ 11490	ଦ 114A0	ା 114B0	ଠ 114C0	ଠ 114D0
1	ଠ 11481	ଠ 11491	ଠ 114A1	ଠ 114B1	ଠ 114C1	ଠ 114D1
2	ଠ 11482	ଠ 11492	ଠ 114A2	ଠ 114B2	ଠ 114C2	ଠ 114D2
3	ଠ 11483	ଠ 11493	ଠ 114A3	ଠ 114B3	ଠ 114C3	ଠ 114D3
4	ଠ 11484	ଠ 11494	ଠ 114A4	ଠ 114B4	ଠ 114C4	ଠ 114D4
5	ଠ 11485	ଠ 11495	ଠ 114A5	ଠ 114B5	ଠ 114C5	ଠ 114D5
6	ଠ 11486	ଠ 11496	ଠ 114A6	ଠ 114B6	ଠ 114C6	ଠ 114D6
7	ଠ 11487	ଠ 11497	ଠ 114A7	ଠ 114B7	ଠ 114C7	ଠ 114D7
8	ଠ 11488	ଠ 11498	ଠ 114A8	ଠ 114B8		ଠ 114D8
9	ଠ 11489	ଠ 11499	ଠ 114A9	ଠ 114B9		ଠ 114D9
A	ଠ 1148A	ଠ 1149A	ଠ 114AA	ଠ 114BA		
B	ଠ 1148B	ଠ 1149B	ଠ 114AB	ଠ 114BB		
C	ଠ 1148C	ଠ 1149C	ଠ 114AC	ଠ 114BC		
D	ଠ 1148D	ଠ 1149D	ଠ 114AD	ଠ 114BD		
E	ଠ 1148E	ଠ 1149E	ଠ 114AE	ଠ 114BE		
F	ଠ 1148F	ଠ 1149F	ଠ 114AF	ଠ 114BF		

Table 1: Proposed code chart for Tirhuta.

The Tirhuta script is also known by the names  
'Mithilakshar' and 'Maithili'.

## Sign

11480 ढ TIRHUTA ANJI

## Independent vowels

11481 अ TIRHUTA LETTER A  
11482 आ TIRHUTA LETTER AA  
11483 इ TIRHUTA LETTER I  
11484 ई TIRHUTA LETTER II  
11485 उ TIRHUTA LETTER U  
11486 ऊ TIRHUTA LETTER UU  
11487 ऋ TIRHUTA LETTER VOCALIC R  
11488 ॠ TIRHUTA LETTER VOCALIC RR  
11489 ऌ TIRHUTA LETTER VOCALIC L  
1148A ॡ TIRHUTA LETTER VOCALIC LL  
1148B ए TIRHUTA LETTER E  
1148C ऐ TIRHUTA LETTER AI  
1148D ओ TIRHUTA LETTER O  
1148E औ TIRHUTA LETTER AU

## Consonants

1148F क TIRHUTA LETTER KA  
11490 ख TIRHUTA LETTER KHA  
11491 ग TIRHUTA LETTER GA  
11492 घ TIRHUTA LETTER GHA  
11493 ङ TIRHUTA LETTER NGA  
11494 च TIRHUTA LETTER CA  
11495 छ TIRHUTA LETTER CHA  
11496 ज TIRHUTA LETTER JA  
11497 झ TIRHUTA LETTER JHA  
11498 ञ TIRHUTA LETTER NYA  
11499 ट TIRHUTA LETTER TTA  
1149A ठ TIRHUTA LETTER TTHA  
1149B ड TIRHUTA LETTER DDA  
1149C ढ TIRHUTA LETTER DDHA  
1149D ण TIRHUTA LETTER NNA  
1149E त TIRHUTA LETTER TA  
1149F थ TIRHUTA LETTER THA  
114A0 द TIRHUTA LETTER DA  
114A1 ध TIRHUTA LETTER DHA  
114A2 न TIRHUTA LETTER NA  
114A3 प TIRHUTA LETTER PA  
114A4 फ TIRHUTA LETTER PHA  
114A5 ब TIRHUTA LETTER BA  
114A6 भ TIRHUTA LETTER BHA  
114A7 म TIRHUTA LETTER MA  
114A8 य TIRHUTA LETTER YA  
114A9 र TIRHUTA LETTER RA  
114AA ल TIRHUTA LETTER LA  
114AB व TIRHUTA LETTER VA  
114AC श TIRHUTA LETTER SHA  
114AD ष TIRHUTA LETTER SSA  
114AE स TIRHUTA LETTER SA  
114AF ह TIRHUTA LETTER HA

## Dependent vowel signs

114B0 ी TIRHUTA VOWEL SIGN AA  
114B1 ि TIRHUTA VOWEL SIGN I  
114B2 ी TIRHUTA VOWEL SIGN II  
114B3 ु TIRHUTA VOWEL SIGN U  
114B4 ू TIRHUTA VOWEL SIGN UU  
114B5 ॠ TIRHUTA VOWEL SIGN VOCALIC R  
114B6 ॡ TIRHUTA VOWEL SIGN VOCALIC LL  
114B7 ॣ TIRHUTA VOWEL SIGN VOCALIC L  
114B8 । TIRHUTA VOWEL SIGN VOCALIC LL  
114B9 ॥ TIRHUTA VOWEL SIGN E  
114BA ० TIRHUTA VOWEL SIGN SHORT E

114BB ै TIRHUTA VOWEL SIGN AI  
114BC ौ TIRHUTA VOWEL SIGN O  
114BD ी TIRHUTA VOWEL SIGN SHORT O  
114BE ौ TIRHUTA VOWEL SIGN AU

## Various signs

114BF ० TIRHUTA SIGN CANDRABINDU  
114C0 ० TIRHUTA SIGN ANUSVARA  
114C1 ० TIRHUTA SIGN VISARGA  
114C2 ० TIRHUTA SIGN VIRAMA  
= halant  
114C3 ० TIRHUTA SIGN NUKTA  
114C4 ० TIRHUTA SIGN AVAGRAHA  
114C5 ० TIRHUTA SIGN GVANG  
= vedic anusvara  
114C6 ० TIRHUTA ABBREVIATION SIGN

## Sign

114C7 ० TIRHUTA OM

## Digits

114D0 ० TIRHUTA DIGIT ZERO  
114D1 १ TIRHUTA DIGIT ONE  
114D2 २ TIRHUTA DIGIT TWO  
114D3 ३ TIRHUTA DIGIT THREE  
114D4 ४ TIRHUTA DIGIT FOUR  
114D5 ५ TIRHUTA DIGIT FIVE  
114D6 ६ TIRHUTA DIGIT SIX  
114D7 ७ TIRHUTA DIGIT SEVEN  
114D8 ८ TIRHUTA DIGIT EIGHT  
114D9 ९ TIRHUTA DIGIT NINE

Table 2: Proposed names list for Tirhuta.





सरल अपन व्यवहार ) *akutīla*—*Adj.* Simple, honest, unblunted.

शुद्ध अकुरठ—वि० । जे कुण्टित नहि होअए, अप्रतिबन्ध, सर्वत्र प्रसरणशील, उदार । [अ<sup>३</sup> + सं० कुण्ट] लाल० रामा० ७३ *akunṭha*—*Adj.* Unobstructed, not blunted, vigorous, able to work.

शुद्ध अकुरठित—वि० । अस्कुचित, अलज्जित, अनुणय, अस्वरिडत, निर्विघ्न । [अ<sup>३</sup> + सं० कुण्टित ] तु० क० अकुरठ । *akunṭhita*—*Adj.* Unblunted, continuous.

शुद्ध अकुरना—मकुना—मकुना, छोट एवं स्त्री जाति केर ( बिना बहरापल दाँतक ) हाथी । [ १ सं० मकत् + नी ( स्त्री प्र० ) शब्दानुकरणेँ अकुरना ] तु० क० अदना-फदना ( दे० ) । मै० सा० इ० ३३४ ( अकुरना-मकुना के बतिआबए चौदह सए दन्तार ) *akunā makunā*—Tuskless (female or minor) elephant.

शुद्ध अकुरपित—वि० । क्रोधित नहि, शान्त । का० प्र० । [सं०] एका० २६ । *akupita*—*Adj.* Not angry, normal, P. F.

शुद्ध अकुरा—अँकुरा ( दे० ) केर विक० रू० । [ सं० अकुर ] अमर० ३२६ ( अकुरा नवीन पत्र ) *akurā*—*Alt.* of *ākura* (q. v.).

शुद्ध अकुल<sup>१</sup>—वि० । कुलरहित, अथलाह कुल । [अ<sup>३</sup> + कुल] (महादेव अकुल एवं अनादि ऋषि); (कुल, अकुल केर विनु विचार कए नहि सम्बन्ध स्थिर करब उचित नहि) *akula*<sup>१</sup>—*Adj.* not well known family, belonging to a low family.

शुद्ध अकुल<sup>२</sup>—वि० । आकुल (दे०)केर लु० का० रू० । वि० मजु० २१० (अकुल अलप वेआकुल लोचन) *akula*<sup>२</sup>—*Adj.* *Obs.* Poet. form of *ākula* (q. v.).

शुद्ध अकुला—पू० क्रि० । अकुलाए ( दे० ) केर संक्षिप्त रू० । [ आकुल + आ ] तु० क० अकुला ( डा० उ० ना० ति० २५१ ) *akulā*—*Part.* Short form of *akulāe* (q. v.).

शुद्ध अकुलाए—अकुलाए केर पू० क्रि० एवं क्रि० वि० क रू० । *akulāe*—*Part.* and *Adv.* form of *akulāeba*.

शुद्ध अकुलाथि—क्रि० । आकुल (दे०)केर मध्य० आद० भू० रू० । का० प्र० । [ आकुल + अथि ] रामा० १६४ ( बिरही जन मन-मन अकुलाथि ) *akulāthi*—*V.* Past. sec. pers. hon. of *ākula* (q. v.).

शुद्ध अकुलाबए—क्रि० । आकुल ( दे० ) केर प्रे० रू० । [ आकुल + अब ] मन० ८१ ( दलमलित धरनी अकुलाबए ) *akulābae*—*V.* Cau. of *ākula* (q. v.).

शुद्ध अकुलाय—क्रि० वि०, पू० क्रि० । अकुलाए (दे०) केर विक० रू० । [आकुल + आय] रामा० २५७ (कपिदल सकल विकल अकुलाय); मोद १७१-१८ (लोचन समवेदना करथि अकुलाय); एका० (स्त्रा अकुलाय कुलायमे कनइत गेल समाय) *akulāya*—*Part.* *Adv.* *Alt.* of *akulāe* (q. v.).

शुद्ध अकुलिन—वि० । अकुलीन ( दे० ) केर प्रा० लु० का० रू० । वि० ने० १६८ ( अकुलिन सजो यदि कए सदभाव ); वि० मजु० ( ताल० ) १२५ ( अकुलिन बोल नहि ओढ़ धरि निरबह ); पु० प० ७२ ( अकुलिन पापोत्साह ); चन्द्र० ११४ ( अकुलिन लोकेँ धरनि परिपूत ) *akulina*—*Adj.* *Ots.* E. Poet. form of *akulīna* (q. v.).

शुद्ध अकुलिनि—वि० । अकुलीन (दे०)केर स्त्री० रू० । [अ<sup>३</sup> + कुल + इनि ] Grierson. अकुलिनि विआही कुलक उपहास = नीच कुलोत्पन्ना स्त्रीसँ विवाह कएलासँ अपनहु अभिजात्य वंशक उपहास होइत छैक । *akulini*—*Adj.* Fem. of *akulīna* (q. v.).

शुद्ध अकुलीन—वि० । नीच कुलक नहि, छोटहा, अथलाह वा नीच वंशक । [अ<sup>३</sup> + कुलीन ( दे० ) ] तु० क० १ वं०, ने० अकुलीन; २ अकुलिन ( दे० ) । पु० प० ३६ ( अकुलीनक संसर्गसँ... ); मि० ३७४ ( कोनो व्यक्ति अकुलीन मोसाहेब पदपर रहैत... ) *akulīna*—*Adj.* Low-born, of no high descent.

शुद्ध अकुलैलहुँ—क्रि० । आकुल (दे०)केर भूत०, उत्त० एवं मध्य० पु०, आद० रू० । [आकुल + अलहुँ (दे०)] तु० क० १ म० भुतावील होये; २ अकुलाए-य ( दे० ) । सक्तिमुभा ४३ । *akulailahū*—*V.* Past. first and second person hon. of *ākula* (q. v.).

शुद्ध अकुशल—वि० । कार्यकुशल नहि, अनिपुण । [सं०] तु० क० वं० हि० उ० ने० अकुशल । कीर्ति० ३७ ( अकुशल बेविहि एक्क पइ अवर तुम्ह परताप ) *akusala*—*Adj.* Not expert, not well-versed, not well.

शुद्ध अकुसी—अँकुसी (दे०)केर विक० रू० । वि० मजु० ५७१ ( जटा देल अकुसी लगाय ) *akusī*—*Alt.* form of *ākusī* (q. v.).

शुद्ध अकृतज्ञ—वि० । कृतज्ञ, नीच, अधम । [सं०] तु० क० वं० अकृतज्ञ । *akṛtajña*—*Adj.* Ungrateful.

शुद्ध अकृतज्ञता—कृतज्ञता, नीचता । [अ<sup>३</sup> + सं० कृत-ज्ञता] मोद ६७, २५ ( अकृतज्ञता मैथिल समुदाय केर प्रधान दोष ) ऐ० ६६, १५ ( अहाँकेँ अकृतज्ञता लिखव व्यर्थ ) *akṛtajñatā*—Ungratefulness, meanness.

शुद्ध अकृतार्थ—क्रि० वि० । कृतार्थ नहि, व्यर्थमनोरथ, असफल । [अ<sup>३</sup> + कृतार्थ ] तु० क० वं० अकृतार्थ । रा० शि० ४४ *akṛtārtha*—*Adj.* Unsatisfied.

शुद्ध अकृत्य<sup>१</sup>—वि० । नहि कएल । [अ<sup>३</sup> + कृत्य ( दे० ) ] कीर्तिलता ४५ ( साहस उत्साह अकृत्य बाधा बलि कर्य दधीचि करो स्पर्द्धा साथ ) *akṛtya*<sup>१</sup>—*Adj.* Not done.

शुद्ध अकृत्य<sup>२</sup>—वि० । नहि करवा योग्य (कार्य) । [सं०] तु० क० वं० अकृत्य । *akṛtya*—*Adj.* That which should not be done.

शुद्ध अकुरिम्—वि० । नैसर्गिक, स्वामाविक, कुरिम् नहि, निष्कपट, निश्चल, विना शृङ्गारकेँ । [अ<sup>३</sup> + कुरिम्] तु० क० हि० वं०

Figure 2: An excerpt from the *Bṛhat Maithilī Śabdakośa*, a Maithili-English dictionary (from Mishra 1973: 13).

## স্বামেনিবেদন

ঐতিহাসিক সিক্কানুপৰ নিৰ্মিত ঙ্গ শব্দকোশ মেথিলীভাষাক বৃহৎ কোশ শিক। ঙ্গ মেথিলী ও মেথিলীতৰ বিদ্বান্ দ্বহুক হেতু পুস্তকত কএন গেন স্বষ্টি। মেথিলীক বিদ্বান্ চাহেত চুনাহ জে স্কনকা একটা তেহন নীক শব্দকোশ হোঙনহি জাহিসঁ ও মেথিলীক প্ৰাচীন সাহিত্যকৈ বঁবি ও স্বাস্বাদন কএ স্কখি এৰঁ জাহিসঁ ও নগভগ ১০০০বৰ্ষক পৰম্পৰাদ্বাৰা স্থিৰ কএন শব্দক শূক্ৰ ৰূপ ও শৈলী নিৰ্ধাৰণ কএ স্কখি। স্বাওৰো, যদি ঙ্গ এখনস্কঁ স্বাবশ্যক বঁবন জায় তঁ, ঙ্গ সিক্ক ভএ জাএ জে ঙ্গ ভাষা প্ৰাচীনে কানসঁ গ্ৰন্থ-স্ম ভাষা বহন স্বষ্টি, স্বাজুক কোনো তেহন উপভাষা নহি শিক জে এখানে জাগৃত ভএ স্বপন স্বস্তিৰ বঁনাএ বখৰাঁক প্ৰয়াস কএ বহন স্বষ্টি। মেথিলীতৰ বিদ্বান্কে এহি শব্দকোশসঁ বঁকতো ভাৰতীয়-স্বাৰ্যভাষাক কতিয় ভাষাবৈজ্ঞানিক বিষয়ক জ্ঞান হোএতনহি জকৰ স্বৰূপ সৌভাগ্যসঁ স্বাঙও মেথিলীভাষা স্ৰ-ষ্টিত বখনে স্বষ্টি, বিশেষতঃ মেথিলীসঁ স্ৰব্ধিত ভাষাসমূহক হেতু, যথা, গুজৰাভী, হিন্দী, বঁগনা, স্বস-মিস্বা, উড়িষ্বা এৰঁ নেপালীক হেতু। এহীদ্বাৰেঁ যত-তত বিস্তৃত ভননামক এৰঁ বঁয়প্ৰতিময়ামক ঠিৎপনী দেন গেন স্বষ্টি তথা বোমন নিপিমে শব্দসভ এৰঁ স্বংগ্ৰীমে ওকৰ মখ্য স্বৰ্গসভ দেন গেন স্বষ্টি, জাহিসঁ মেথিলীসঁ স্বনভিচ্চ বিদ্বান্ নীক জকাঁ মেথিলী শব্দসভকেঁ বঁবি স্কখি, যচপি এহি কাৰণেঁ বঁক্কা শব্দ-কোশক সীমা স্বতিক্ৰমণ কএ বিশ্ৰকোশক সীমামে এহি গ্ৰন্থকেঁ চন জএৰাঁক স্বাৰ্শকা ভএ জাঙচ।

এহি শব্দকোশক বিন্যাস এহি প্ৰকাৰেঁ কএন গেন স্বষ্টি জে মেথিলীক যাবতো শব্দাবলীক এহি-মে সন্মাবেশ ভএ জাএ। যচপি এতএ মুখ্যতঃ মৃদিত (নিখিত) সাহিত্য মাত্ৰক ওপযোগ কএন গেন স্বষ্টি তথাপি কতেকো বাচ্য ও উপভাষাক শব্দসভস্ককেঁ সেহো স্থান দেৰাঁক চেষ্কা কএন স্বষ্টি। মেথিলীক শব্দক জতেক ৰূপ হোঙত চ্ৰেক, জতেক প্ৰকাৰক শব্দ হোঙচ, প্ৰত্যেক প্ৰত্যয় ও পদনুকৈ স্বৰূপ এহি শব্দ-কোশমে দেন গেন স্বষ্টি। তস্ম, তদ্বব—সভ শব্দকেঁ এতএ স্থান দেন গেন স্বষ্টি। হঁ, শব্দ বখৰাঁক ঙ্গ সিক্কানু স্বীকাৰ কএন গেন স্বষ্টি জে জে শব্দ মেথিলীমে ব্যবহৃত হো তকবহিটা শব্দকোশমে স্বী-কাৰ কএন জাএ। তথাপি বঁক্কা স্যাবধান ভেনো ওত্ৰ কোনো-কোনো শব্দ চুটিএ গেন স্বষ্টি। তাহি হেতু দ্বিতীয় সঁস্কৰণমে এৰঁ প্ৰথমস্ক সঁস্কৰণক সনুমে একটা খণ্ডমে চু টেন এৰঁ স্বপুৰ স্যামগ্ৰীকেঁ শূক্ৰ কএ সন্ম-বেশ কৰৰাঁক বিচাৰ স্বষ্টি। বস্তুতঃ হমৰানোকনিক সন্মস্ক দুগ মাস্ক চন—এক ঙ্গ, জে শব্দসঁগ্ৰহক প্ৰক্ৰিয়াকে প্ৰনঃ চনাওন জাএ এৰঁ সভটা সঁগ্ৰহীত শব্দকেঁ দোহৰাওন জাএ, কিন্তু তাহিমে কতস্ক বিপ্ৰাম নএ সন্মস্ক হোএৰাঁক সন্মভাবনা নহি চন। দোমৰ মাস্ক ঙ্গ, জে (জেনা কোশকাৰ ডাক্ৰেৰ সন্মস্কৰ জান-সন কহনে চুখি) জতৰাঁ শব্দসঁগ্ৰহ ভএ গেন স্বষ্টি তকৰা ওপযোগ কৰৰাঁক স্ববসৰ স্বনকা দিএক। স্বাৰ্থিক কাৰণস্কঁ জতবেঁ ভেন তকৰে সন্মপ্ৰতি ওপযোগ কএ নেবঁ সঁভব ভেন। কাৰণে সৰকাৰ ও স্বন্য দাতা স্বাৰ্থিক সহায়তা দেৰাঁক হেতু পুস্তকক কিছু স্বঁশ চুপাএ দেৰাঁক স্বাৰ্গহ কএন। এহো ধাৰণা হমৰাসভকেঁ ভএ গেন জে যদি কিছু স্বঁশ চুপত তঁ বিদ্বান্-নোকনিক (স্বাশা কবেত চুী 'স্বস্ম') সন্মানোচনা হোএত জাহিসঁ হমৰাসভক গ্ৰন্থক প্ৰণয়ন-ক্ৰিয়া উচিতৰূপেঁ ভএ বহন স্বষ্টি বা নহি তথা ওহিমে কী কিছু স্ৰ্ধাৰ কএন জা সকেঁ জাহিসঁ চুপেত-চুপেত সেহো কিছু শূক্ৰ কএন জা স্কএ এতাদি লাভ হোএত।

Figure 3: An excerpt from the preface to *Bṛhat Maithilī Śabdakośa* (from Mishra 1973: 25).

BIHARI.

MAITHILI DIALECT (MAITHILI CHARACTER, AS USED BY BRAHMAN'S).

(DARBHANGA DISTRICT.)

कोनाम नम्यकैरुगरेयैभैरै निं गिहिसिंइकावापेककनैकेरिंइसैशै  
 बरुं धुनमअठिंममजे एवहिंसाहोयामहमणदीयतअनठिंइकन्या  
 अणनमअठिंइशैदिनशीनिं थैकेदिनदिनातुअश्रैकोवयै  
 मचकिंइकेककरुंइदेडानेनअठैउठै हिंरुपनीं मेअणमअ  
 त्रिठेणदिनकअअनठमठ किंयुंमकिंयवुं वन तअन गहिंकेअ  
 मेमअश्रकानठेतैकअठैउठैकनेमहैथनगतैकअठैअठैके  
 गहिंकेअनिंशैमठमेमअठमठैकोठैयैहै नाणनजेउकरा  
 अणनमअठमठमेहं प्रववनेंवेणैनेकेअठैउठैउठैआठैकोउकन  
 जेमुंअठैउठैउठैउठैउठैउठैउठैउठैउठैउठैउठैउठैउठैउठै  
 विंकिंयुंकेअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 एमववपके वनिंहेमठकप्रायकमअधिकणैहैपकेठरुंइअठै

हमप्रमममवैहैहैमप्रममनावापकनगशैवअठैअठैकामकशैरिं  
 जैशैशैरुंमधमकिंविंइअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 नअठैहैमकेविंअपनेकवठैकहावैकयागानहिंविंइहमअठैअठै  
 वनिंहैरुंजैकावाअनअठैउठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 पवननपनुअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 नशीहिंअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 वैहैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 अठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 पवनुवाअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 केहिंअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 अठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 कोजिंअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 निंअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 एकअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै  
 अठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठैअठै

Figure 4: Specimen of Tirhuta from the Linguistic Survey of India (from Grierson 1903: 56–58).

मैथिली-प्रथम-पुस्तक ।

३०

छप्पनम पाठ ।

मिश्र वर्ण ।

विष्ठी ( १ ) ।

श्रीहृदिः । कोशनाथ ।

रै० र० १ सो० 'इग

नि स्मृति सकनमर्कनामय चिह्नजरी श्री-  
कण्ठिह रारुकेँ श्रीश्रीनाथक शुभाशिरदि ।  
एतय क्रमिन । अहाँक क्रमिन पत्र आगए  
प्राप्तु भेन अछि । पछि आनन्दित भेनमँ ।  
आगाँ समाचाह ये हमहा सुननामे आरन  
अछि ये दहभरुनामे मिथिनाकक डापा  
होमय नगनेक अछि । यदि से सह तँ अहाँ  
डा पत्र देवेत एक प्रति मिथिनाकक  
रुर्ण-पहिय कीनिमेर आगुह मिथिनाकक  
श्रीथिकय हमहा मर्क ओही अकहमे पत्र  
रयरहाह कर । अहाँ यदि से कर शिकर तँ

समर्पण ।



हे शिरमोकवासिनि जननि !

अहाँकेँ अहण हयत, आगसँ प्रायः  
इ० र० पर पर मैथिली निपिदाहा अकहाहनु  
भेना उतुह हमहा मिथिनाकह शिखाओन अहाँ  
अपनहि ये शिथि नेना पय हमहा देराकह,  
केथी तथा रुर्लना ककहमसँ शीथय नहि  
पडन । अतः मैथिली निपिमे प्रथम सीसका-  
कह-यद्रित धस्तक डा 'मैथिली-प्रथम-धस्तक'  
आग ओही श्रुतिक हकथि अहाँक कहकमन-  
मे रिनैष श्रीका-भजिपरक अर्पण कहेत छी  
आगुह आशि कहेत छी अहाँलोकनिक  
आशिरिदिसँ धनः मिथिनाकमातमणुनी अहाँ-  
नोकनियकाँ अपना सतानकेँ प्रथम  
मिथिनाकक शिक्का देत ।

प्रणत--

मातनरमी, १३३५. } श्रीरनाथ ।

Figure 5: The preface from *Maiithilī Prathama Pustaka*, printed in Tirhuta type (from Rāya 2003).

Figure 6: An excerpt from *Maiithilī Prathama Pustaka* (from Rāya 2003: 30). The passage begins with the symbol *añji*.

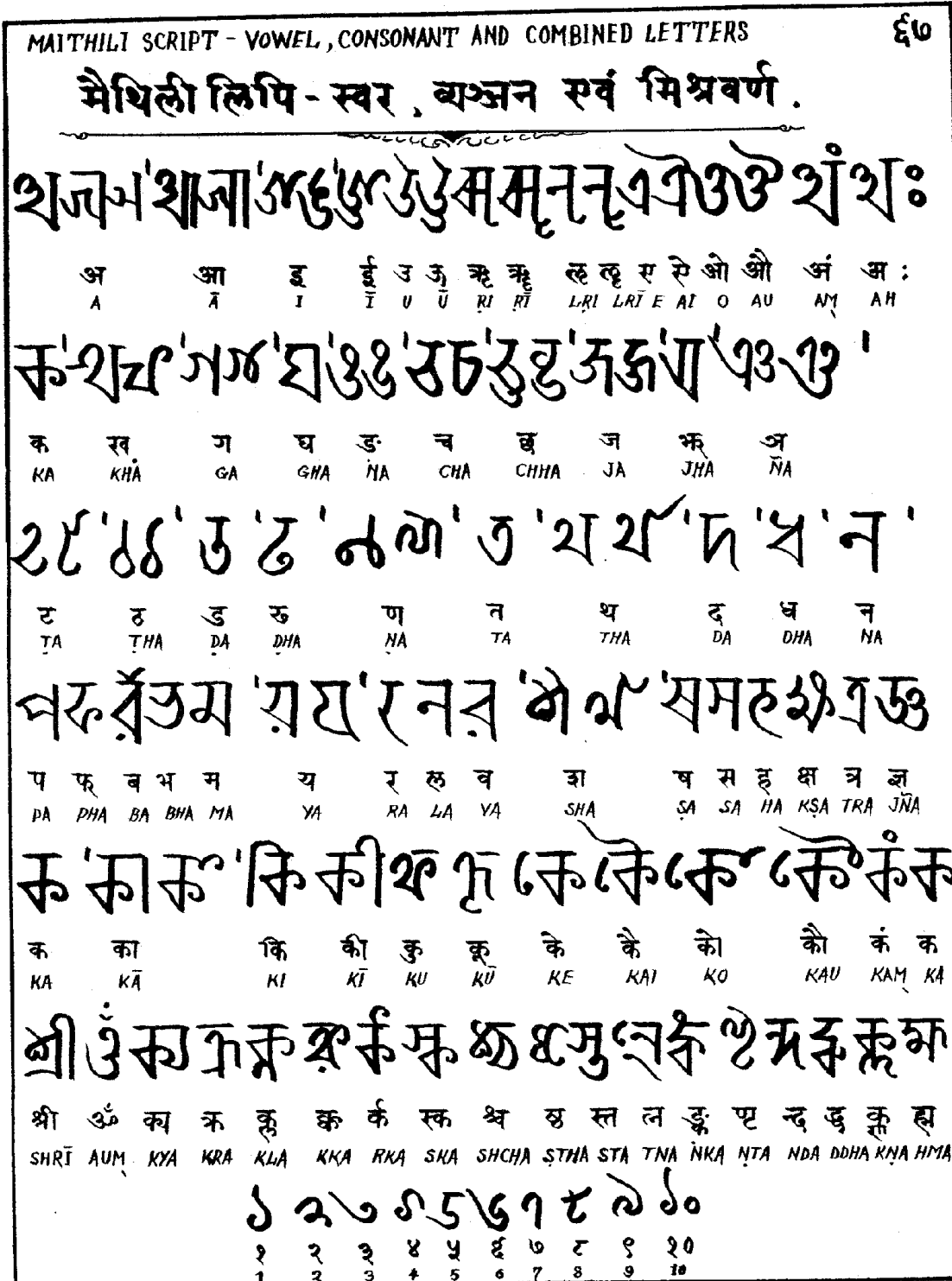


Figure 7: Chart of Tirhuta (from Śākyavamaśa 1974: 67).

झारदा	सुरसुली	कैथि	बंगला	भैथिली	उत्कल	गुजराती	देव नामरी
७ 1	१ 1	१ 1	१ 1	१ 1	१ 1	१ 1	१ 1
३ 2	२ 2	२ 2	२ 2	२ 2	२ 2	२ 2	२ 2
३ 3	३ 3	३ 3	३ 3	३ 3	३ 3	३ 3	३ 3
४ 4	४ 4	४ 4	४ 4	४ 4	४ 4	४ 4	४ 4
५ 5	५ 5	५ 5	५ 5	५ 5	५ 5	५ 5	५ 5
६ 6	६ 6	६ 6	६ 6	६ 6	६ 6	६ 6	६ 6
७ 7	७ 7	७ 7	७ 7	७ 7	७ 7	७ 7	७ 7
८ 8	८ 8	८ 8	८ 8	८ 8	८ 8	८ 8	८ 8
९ 9	९ 9	९ 9	९ 9	९ 9	९ 9	९ 9	९ 9
१० 10	१० 10	१० 10	१० 10	१० 10	१० 10	१० 10	१० 10

Figure 8: Comparison of digits of Tirhuta and other scripts (from Śākyavaṃśa 1974: 76).

पाइ	आना	टाका	कनमा	सेर		
)	)०			५	५  ५	
)	)०	०.	०	*	५०	०
)	)०	५	५	*	५५	५
)	)५	)	५)	*	५	५  ५
) )	)५	)	५ )	*	५०	५५
) )	)५ )	०	५ ०	*	५५	५५
) )	)५ )	५	५ ५	*	५	५५०
) )	)५ )	५	५ ५		५	५५५
)०	)	)	५ )		५  ०	५५ ०

Figure 9: Chart of number forms used in Tirhuta (from Rāya 2003: 39).

Tirhuta Lipi: The Native Script of Maithilee

अ आ इ ई उ ऊ  
 अश्या ञ प्र ङ ड ङ

ए ऐ ओ औ अं अः  
 ए ऐ ओ औ अं अः

क ख ग घ ङ  
 क ख ग घ ङ

च छ ज झ ञ  
 च छ ज झ ञ

ट ठ ड ढ ण  
 ट ठ ड ढ ण

त थ द ध न  
 त थ द ध न

प फ ब भ म  
 प फ ब भ म

Tirhuta Lipi: The Native Script of Maithilee

य र ल व श ष स ह  
 य व न र श ष स ह

क्ष ष ङ  
 क्ष ष ङ

क का कि की कु कू  
 क का कि की कु कू

के कै को कौ कौ कः  
 के कै को कौ कौ कः

स ष वृ सं ढ  
 स ष वृ सं ढ

श ष  
 श ष

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Produced by: eCube: Solutions & Research, using Tirhuta Lipi Font available (free) at <http://www.tirhutalipi.fr.com>  
 Email: tirhutalipi@yahoo.com

Figure 10: A chart of Tirhuta typeset with the digitized font, “Tirhuta,” developed by eCube: Solutions &amp; Research (2003).



रि दे ह विदेह Videha विदेह विदेह प्रथम मैथिली पारिहिक ई पत्रिका Videha Ist Maithili Fortnightly e Magazine रिदेह प्रथम मैथिली पारिहिक ई पत्रिका 'विदेह' ८० म अंक १५ अप्रैल २०११ (वर्ष ४



मास ४० अंक ८०) <http://www.videha.co.in/>

मानुषीमिह संस्कृतान् ISSN

2229-547X VIDEHA

ततेक पाँक भवि देतीह जे जतेक मोनक कष्ट मोनमे  
सोचरँ ताहिँ रँशी उपजत ।

कनेक महग खेत किनरौक ह्खए तँ मोड रँना आ गम्हाविक  
गाछ नग रँना खेत कानू । एतए नोक खेतीसँ रँशी रँसोरँस  
नेन जमीन कानि बहन छथि ।

डकही पोखवि रँना खेतकेँ रँठमोतव कहन जागत छ्छि ।  
पहिले ब्रँहातव रुपमे किनको मँगनीमे बाजा द्वावा भेठन  
होएतछि । पहिले सुनेए छिये नीक खेती बहए ऋदा आग  
कान्हि पानि भवन बह छै । गनाकामे जे छिड़्खा धानक खेती  
होगत छ्छि से खली रँधमे ।

रँडका कोना, धूपपव, भोवहा आ पुर्णाहा रँधक अतिविज आग  
कान्हि किछ गोष्टे छहवक ठनानपव सेहो खेती-रँबी शुक क२  
देने छथि, सीठी रँना क२ खेती केनिहावक संख्या भूगोनक  
पोखीमे भने पहाडपव मात्र देखोने होथि । महीसक मवनापव  
कन्नारोहठक सुव आ जादूठेना, ककरो दवरँज्जापव पूजन हुन  
वातिमे फेरकँ । आरँ नोको ऋदा रँमि गेन छ्छि जे आ  
कोनो छेड़ एक किवदानी छ्छि ।

पुषि-म३.७-पशुपानन आधावित महिसरँव ब्रँह्म रँहन एहि गामक  
चाककात पठन निखन (ऋदा एकठाँ चोवक ठेन सेहो छ्छि  
उतए), ततेक नहि पठन निखन आ ऋदुष्वँव गाम सभ छ्छि ।  
पड़ असक चोव सभक हिन्मत नहि छ्छि जे एहि गाममे कोनो  
जातिक घबमे चोवि क२ नेथि । एहि गाममे जे रियाह भ२  
गेन तँ सभठाँ फसादी जमीनक निपठाँव भ२ जागत छ्छि, नोक  
सर्मगव भ२ जागत छ्छि । एतएसँ हसेवी दूब-दूब धवि जागत  
छ्छि । ऋदुमक जमीनक नगड़ एक निपठाँवासँ न२ क२ रोठ

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Figure 11: Excerpt from a Maithili e-journal in Tirhuta published as a PDF (from *Videha* no. 80: 22).

*Table shewing the various alphabets used in Mithila.*

<i>Devanagari</i>	<i>Kayathi</i>	<i>Maithili</i>	<i>English Transliteration</i>	<i>Devanagari</i>	<i>Kayathi</i>	<i>Maithili</i>	<i>English Transliteration</i>
अ	𑒀	𑒀	a	अ	𑒀	𑒀	a
आ	𑒁	𑒁	ā	आ	𑒁	𑒁	ā
इ	𑒂	𑒂	i	इ	𑒂	𑒂	i
उ	𑒃	𑒃	u	उ	𑒃	𑒃	u
ऋ	𑒄	𑒄	rī	ऋ	𑒄	𑒄	rī
ॠ	𑒅	𑒅	rī	ॠ	𑒅	𑒅	rī
ऌ	𑒆	𑒆	lī	ऌ	𑒆	𑒆	lī
ॡ	𑒇	𑒇	e	ॡ	𑒇	𑒇	e
ओ	𑒈	𑒈	o	ओ	𑒈	𑒈	o
औ	𑒉	𑒉	au	औ	𑒉	𑒉	au
न	𑒊	𑒊	n	न	𑒊	𑒊	n
क	𑒋	𑒋	k	क	𑒋	𑒋	k
ख	𑒌	𑒌	kh	ख	𑒌	𑒌	kh
ग	𑒍	𑒍	g	ग	𑒍	𑒍	g
घ	𑒎	𑒎	gh	घ	𑒎	𑒎	gh
ङ	𑒏	𑒏	ṅ	ङ	𑒏	𑒏	ṅ
च	𑒐	𑒐	ch	च	𑒐	𑒐	ch
छ	𑒑	𑒑	chh	छ	𑒑	𑒑	chh
ज	𑒒	𑒒	j	ज	𑒒	𑒒	j
झ	𑒓	𑒓	jh	झ	𑒓	𑒓	jh

Figure 12: A chart of Devanagari, Kaithi, and Tirhuta ('Maithili') (from Grierson 1882: Appendix 1a).

*A Sanskrit Sloka written in the three characters  
of Mithilā..*

उद्गस्मास्वात्मीयताविह्मिदमेवास्मदृश्यते ॥  
दयालुरपियत्कुरोनास्मद्दुःखंजिहीर्षति ॥१॥

अस्मास्वात्मीअशापीठमीदमेवासीअदीशीअटे।  
दआहूनपीणत्कीरुनास्मद्दुःखंदीदीव्येती॥१॥

*The Kayathi character is not adapted for writing  
Sanskrit. It has no form for short media: 1 and  
has no semivowel ya.*

अस्मास्वात्मीयताविह्मिदमेवास्मदृश्यते ॥  
दयालुरपियत्कुरोनास्मद्दुःखंजिहीर्षति ॥१॥

Figure 13: Specimens of Devanagari, Kaithi, and Tirhuta (from Grierson 1882: Appendix 1b).

Scripts Used in Writing Maithili

मैथिली लिखबामे व्यवहृत लिपि

(1) Tirhutā (2) Newārī (3) Nāgarī (4) Roman

(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
अ	अ	अ	a	छ	छ	छ	chh
आ	आ	आ	ā	ज	ज	ज	j
इ	इ	इ	i	झ	झ	झ	jh
ई	ई	ई	ī	ञ	ञ	ञ	ñ
उ	उ	उ	u	ट	ट	ट	t
ऊ	ऊ	ऊ	ū	ठ	ठ	ठ	th
ऋ	ऋ	ऋ	ri	ड	ड	ड	d
ए	ए	ए	e	ढ	ढ	ढ	dh
ऐ	ऐ	ऐ	ai	ण	ण	ण	n
ओ	ओ	ओ	o	त	त	त	t
औ	औ	औ	au	थ	थ	थ	th
अं	अं	अं	m̐	द	द	द	d
अः	अः	अः	h	ध	ध	ध	dh
क	क	क	k	न	न	न	n
ख	ख	ख	kh	प	प	प	p
ग	ग	ग	g	फ	फ	फ	ph
घ	घ	घ	gh	ब	ब	ब	b
ङ	ङ	ङ	ṅ	भ	भ	भ	bh
च	च	च	ch	म	म	म	m

xxx1

(1)	(2)	(3)	(4)
य	य	य	y
र	र	र	r
ल	ल	ल	l
व	व	व	v
श	श	श	sh
ष	ष	ष	ṣ
स	स	स	s
ह	ह	ह	h
क	क	क	ka
का	का	का	kā
कि	कि	कि	ki
की	की	की	kī
कु	कु	कु	ku
कू	कू	कू	kū
के	के	के	ke
कै	कै	कै	kai
को	को	को	ko
कौ	कौ	कौ	kau
क्ष	क्ष	क्ष	kṣ
त्र	त्र	त्र	tr
ज्ञ	ज्ञ	ज्ञ	gy

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(1)	(2)	(3)	(4)
कृ	कृ	कृ	kri
क्य	क्य	क्य	ky
क्र	क्र	क्र	kr
क्व	क्व	क्व	kv
द्ध	द्ध	द्ध	ddh
त्त	त्त	त्त	tt
श्र	श्र	श्र	shr
स्थ	स्थ	स्थ	sth
नु	नु	नु	nu
न्व	न्व	न्व	nv
ह्म	ह्म	ह्म	hm
१	१	१	1
२	२	२	2
३	३	३	3
४	४	४	4
५	५	५	5
६	६	६	6
७	७	७	7
८	८	८	8
९	९	९	9
१०	१०	१०	10

Figure 14: Comparison of Tirhuta, Newari, and Devanagari (from G. Jhā 1999: xxxi–xxxii).

# बृहत् मैथिली शब्दकोश

## बृहत् मैथिली शब्दकोश

BRĤAT MAITHILĪ ŚABDAKOŚA

Fascicule I

ख अ A—खव अव Ava

श्रीजयकान्तुमिश्र

श्रीजयकान्तुमिश्र

Jayakanta Mishra



INDIAN INSTITUTE OF ADVANCED STUDY

SIMLA

Figure 15: Title page of *Brĥat MaithilĪ Śabdakośa* (from Mishra 1973).

मैथिल लिपि.

अ आ इ ई उ ऊ ऋ ॠ ए ऐ ओ औ अं अः  
 ञ म न् न्ना न्ना ञ् ञ् ञ् ञ् म म् न् न् ए उ उ उं ञ् ञ्ः  
 क ख ग घ ङ ब ङ ज झ ञ ट ठ ड ढ ण न य द  
 ङ च म घ ङ ठ रु ज ग ङ् ङ् ङ् ङ् न न त थ द  
 ध न प फ व भ म य र ल व य य व म ह का कि  
 ङ म फ र उ म य र न र न् न् च म ह का कि  
 की कु कू के के के को को १ २ ३ ४ ५ ६ ७ ८ ९  
 की कु कू के के के को को १ २ ३ ४ ५ ६ ७ ८ ९ .

বঙ্গলা লিপি.

অ আ ই ई উ উ ঋ ৠ এ ऐ ও ঔ অং অঃ ক খ গ ঘ  
 ঙ ঞ ন্ ন্না ন্না ঞ্ ঞ্ ঞ্ ঞ্ ম ম্ ন্ ন্ এ উ উং উঃ ক খ গ ঘ  
 ঙ চ ছ জ ঙ ঞ্ ঞ্ ঞ্ ঞ্ ট ঠ ড ঢ ণ ত থ দ ধ ন প ফ  
 ব ভ ম য র ল ব য য ব ম হ কা কি কী কু কূ কে  
 কৈ কো কৌ কং কঃ ১ ২ ৩ ৪ ৫ ৬ ৭ ৮ ৯ ০ . য  
 কৈ কো কৌ কং কঃ ১ ২ ৩ ৪ ৫ ৬ ৭ ৮ ৯ ০ . য

Figure 16: Comparison of hand-written Tirhuta (‘Maithili’) and Bengali letters (from Ojhā 1971: Plate LXXVIII).



लिच्छवि पूर्वकाल PRE-LICHCHHAVI PERIOD	लिच्छविकाल LICHCHHAVI PERIOD		मल्ल एवं शाहकाल MALLA AND SHĀHA PERIOD							
	पूर्वलिच्छवि PRO-LICHCHHAVI	उत्तरलिच्छवि POST-LICHCHHAVI	किरात KIRAT	रञ्जना RANJANA	भुजिमे BHUJIMO	नेवारी NEWARI	मैथिली MAITHILI	तिब्बती TIBETAN	नदिनागरी NANDINAGARI	देवनागरी DEVANAGARI
𑒠	𑒠	𑒡	𑒢	𑒣	𑒤	𑒥	𑒦	𑒧	𑒨	अ <sub>A</sub>
𑒩	𑒩	𑒪	𑒫	𑒬	𑒭	𑒮	𑒯	𑒰	𑒱	आ <sub>Ā</sub>
𑒲	𑒲	𑒳		𑒴	𑒵	𑒶	𑒷	𑒸	𑒹	इ <sub>I</sub>
	𑒲	𑒳	𑒴	𑒵	𑒶	𑒷	𑒸	𑒹	𑒺	ई <sub>ī</sub>
𑒻	𑒻	𑒼		𑒽	𑒾	𑒿	𑓀	𑓁	𑓂	उ <sub>U</sub>
		𑒼	𑒽	𑒾	𑒿	𑓀	𑓁	𑓂	𑓃	ऊ <sub>ū</sub>
		𑓄		𑓅	𑓆	𑓇	𑓈	𑓉	𑓊	ऋ <sub>ṚI</sub>
		𑓋		𑓌	𑓍	𑓎	𑓏	𑓐	𑓑	ऋ <sub>ṚĀ</sub>
		𑓒		𑓓	𑓔	𑓕	𑓖	𑓗	𑓘	ऌ <sub>ṚĪ</sub>
		𑓙		𑓚	𑓛	𑓜	𑓝	𑓞	𑓟	ऌ <sub>ṚĪ</sub>
𑓠	𑓠	𑓡	𑓢	𑓣	𑓤	𑓥	𑓦	𑓧	𑓨	ए <sub>E</sub>
	𑓠	𑓡	𑓢	𑓣	𑓤	𑓥	𑓦	𑓧	𑓨	ऐ <sub>AI</sub>
𑓩	𑓩	𑓪	𑓫	𑓬	𑓭	𑓮	𑓯	𑓰	𑓱	ओ <sub>O</sub>
	𑓩	𑓪	𑓫	𑓬	𑓭	𑓮	𑓯	𑓰	𑓱	औ <sub>AU</sub>
𑓲	𑓲	𑓳	𑓴	𑓵	𑓶	𑓷	𑓸	𑓹	𑓺	अं <sub>AM</sub>
𑓻	𑓻	𑓼	𑓽	𑓾	𑓿	𑔀	𑔁	𑔂	𑔃	अः <sub>AH</sub>
𑔄	𑔄	𑔅	𑔆	𑔇	𑔈	𑔉	𑔊	𑔋	𑔌	क <sub>KA</sub>
𑔍	𑔍	𑔎	𑔏	𑔐	𑔑	𑔒	𑔓	𑔔	𑔕	ख <sub>KHA</sub>

Figure 18: Excerpt from a chart of scripts used in Nepal (from Thāpā et al.).



Devanagari	Grantha	Kaithi	Maithili	Tulu	Sarada	Takari	Gurumukhi
अ	𑌀	𑌀	𑌀	𑌀	𑌀	𑌀	𑌀
आ	𑌁	𑌁	𑌁	𑌁	𑌁	𑌁	𑌁
इ	𑌂	𑌂	𑌂	𑌂	𑌂	𑌂	𑌂
ई	𑌃	𑌃	𑌃	𑌃	𑌃	𑌃	𑌃
उ	𑌄	𑌄	𑌄	𑌄	𑌄	𑌄	𑌄
ऊ	𑌅	𑌅	𑌅	𑌅	𑌅	𑌅	𑌅
ऋ	𑌆	𑌆	𑌆	𑌆	𑌆	𑌆	𑌆
ॠ	𑌇	𑌇	𑌇	𑌇	𑌇	𑌇	𑌇
ऌ	𑌈	𑌈	𑌈	𑌈	𑌈	𑌈	𑌈
ॡ	𑌉	𑌉	𑌉	𑌉	𑌉	𑌉	𑌉
ए	𑌊	𑌊	𑌊	𑌊	𑌊	𑌊	𑌊
ऐ	𑌋	𑌋	𑌋	𑌋	𑌋	𑌋	𑌋
ओ	𑌌	𑌌	𑌌	𑌌	𑌌	𑌌	𑌌
ऋ	𑌍	𑌍	𑌍	𑌍	𑌍	𑌍	𑌍
ॠ	𑌎	𑌎	𑌎	𑌎	𑌎	𑌎	𑌎
ऌ	𑌏	𑌏	𑌏	𑌏	𑌏	𑌏	𑌏
ॡ	𑌐	𑌐	𑌐	𑌐	𑌐	𑌐	𑌐
क	𑌑	𑌑	𑌑	𑌑	𑌑	𑌑	𑌑
ख	𑌒	𑌒	𑌒	𑌒	𑌒	𑌒	𑌒
ग	𑌓	𑌓	𑌓	𑌓	𑌓	𑌓	𑌓
घ	𑌔	𑌔	𑌔	𑌔	𑌔	𑌔	𑌔
ङ	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕	𑌕
च	𑌖	𑌖	𑌖	𑌖	𑌖	𑌖	𑌖
छ	𑌗	𑌗	𑌗	𑌗	𑌗	𑌗	𑌗
ज	𑌘	𑌘	𑌘	𑌘	𑌘	𑌘	𑌘
झ	𑌙	𑌙	𑌙	𑌙	𑌙	𑌙	𑌙
ञ	𑌚	𑌚	𑌚	𑌚	𑌚	𑌚	𑌚
ट	𑌛	𑌛	𑌛	𑌛	𑌛	𑌛	𑌛
ठ	𑌜	𑌜	𑌜	𑌜	𑌜	𑌜	𑌜
ड	𑌝	𑌝	𑌝	𑌝	𑌝	𑌝	𑌝
ढ	𑌞	𑌞	𑌞	𑌞	𑌞	𑌞	𑌞
ण	𑌟	𑌟	𑌟	𑌟	𑌟	𑌟	𑌟
त	𑌠	𑌠	𑌠	𑌠	𑌠	𑌠	𑌠
थ	𑌡	𑌡	𑌡	𑌡	𑌡	𑌡	𑌡
द	𑌢	𑌢	𑌢	𑌢	𑌢	𑌢	𑌢
ध	𑌣	𑌣	𑌣	𑌣	𑌣	𑌣	𑌣
न	𑌤	𑌤	𑌤	𑌤	𑌤	𑌤	𑌤
प	𑌥	𑌥	𑌥	𑌥	𑌥	𑌥	𑌥
फ	𑌦	𑌦	𑌦	𑌦	𑌦	𑌦	𑌦
ब	𑌧	𑌧	𑌧	𑌧	𑌧	𑌧	𑌧
भ	𑌨	𑌨	𑌨	𑌨	𑌨	𑌨	𑌨
म	𑌩	𑌩	𑌩	𑌩	𑌩	𑌩	𑌩
य	𑌪	𑌪	𑌪	𑌪	𑌪	𑌪	𑌪
र	𑌫	𑌫	𑌫	𑌫	𑌫	𑌫	𑌫
ल	𑌬	𑌬	𑌬	𑌬	𑌬	𑌬	𑌬
व	𑌭	𑌭	𑌭	𑌭	𑌭	𑌭	𑌭
श	𑌮	𑌮	𑌮	𑌮	𑌮	𑌮	𑌮
ष	𑌯	𑌯	𑌯	𑌯	𑌯	𑌯	𑌯
स	𑌰	𑌰	𑌰	𑌰	𑌰	𑌰	𑌰
ह	𑌱	𑌱	𑌱	𑌱	𑌱	𑌱	𑌱
ळ	𑌲	𑌲	𑌲	𑌲	𑌲	𑌲	𑌲
ख़	𑌳	𑌳	𑌳	𑌳	𑌳	𑌳	𑌳
ग़	𑌴	𑌴	𑌴	𑌴	𑌴	𑌴	𑌴

Figure 19: Comparison of Tirhuta ('Maithili') with other Brahmi-based scripts (from Naik 1971: Table 13).

	TIRUTA	BENGALI	TIRHUTA	BENGALI
A	ଅ	অ	<i>no dependent form</i>	
AA	আ	আ	া	া
I	ই	ই	ি	ি
II	ঈ	ঈ	ী	ী
U	উ	উ	ূ	ূ
UU	ঊ	ঊ	্ৰূ	্ৰূ
VOCALIC R	ঋ	ঋ	ৄ	ৄ
VOCALIC RR	ঠ	ঠ	৅	৅
VOCALIC L	ূ	ূ	৆	৆
VOCALIC LL	ৃ	ৃ	ে	ে
E	এ	এ	ে	ে
SHORT E	<i>no independent form</i>		ে	—
AI	ঐ	ঐ	ে	ে
O	ও	ও	ো	ো
SHORT O	<i>no independent form</i>		ী	ী
AU	ঔ	ঔ	ৌ	ৌ

Table 3: Comparison of Tirhuta and Bengali vowel letters and signs (differences highlighted).

	TIRHUTA	BENGALI		TIRHUTA	BENGALI
KA	କ	ক	DA	দ	দ
KHA	খ	খ	DHA	ধ	ধ
GA	গ	গ	NA	ন	ন
GHA	ঘ	ঘ	PA	প	প
NGA	ଂ	ঙ	PHA	ଫ	ফ
CA	ଚ	চ	BA	ଝ	ব
CHA	ଢ	ছ	BHA	ଭ	ভ
JA	ଜ	জ	MA	ମ	ম
JHA	ଞ	ঝ	YA	য	য
NYA	ଞେ	ঞ	RA	ର	র
TTA	ଟ	ট	LA	ଲ	ল
TTHA	ଠ	ঠ	VA	ୱ	—
DDA	ଡ	ড	SHA	ଶ	শ
DDHA	ଢ	ঢ	SSA	ଷ	ষ
NNA	ଣ	ণ	SA	স	স
TA	ତ	ত	HA	ହ	হ
THA	ଥ	থ			

Table 4: Comparison of Tirhuta and Bengali consonant letters (differences highlighted).

	TIRHUTA	BENGALI
ZERO	୦	୦
ONE	୧	୧
TWO	୨	୨
THREE	୩	୩
FOUR	୪	୪
FIVE	୫	୫
SIX	୬	୬
SEVEN	୭	୭
EIGHT	୮	୮
NINE	୯	୯

Table 5: Comparison of Tirhuta and Bengali digits (differences highlighted).

	TIRHUTA	BENGALI
CANDRABINDU	◌̣	◌̣
ANUSVARA	◌̣	◌̣
VISARGA	◌̣◌̣	◌̣◌̣
VIRAMA	◌̣	◌̣
AVAGRAHA	।	।
ANJI	।	—
OM	ॐ	—
GVANG	◌̣̣	—

Table 6: Comparison of Tirhuta and Bengali miscellaneous signs (differences highlighted).

	TIRHUTA	BENGALI		TIRHUTA	BENGALI
<i>kta</i>	କ	କ	<i>tta</i>	ଡ଼	ଡ
<i>kra</i>	କ୍ରେ	କ୍ର	<i>tya</i>	ଟ	ତ
<i>kṣa</i>	କ୍ଷ	କ୍ଷ	<i>tva</i>	ଡ଼୍	ଡ
<i>gga</i>	ଗ୍ଗ	ଗ୍ଗ	<i>ddha</i>	ଦ୍ଦ	ଦ୍ଦ
<i>gdha</i>	ଘ	ଘ	<i>dya</i>	ଡ଼ା	ଦା
<i>nika</i>	କ୍ନି	କ୍ନ	<i>ndha</i>	ନ୍ଦ	ନ୍ଦ
<i>nikha</i>	କ୍ନି	କ୍ନି	<i>nha</i>	ନ୍ଧ	ନ୍ଧ
<i>nga</i>	କ୍ନି	କ୍ନ	<i>bda</i>	ବ୍ଦ	ବ
<i>ngha</i>	କ୍ନି	କ୍ନି	<i>bdha</i>	ବ୍ଦ୍ଧ	ବ୍ଦ୍ଧ
<i>cca</i>	ଚ	ଚ	<i>ścha</i>	ଚ୍ଚେ	ଚ୍ଚ
<i>ccha</i>	ଚ୍ଚ	ଚ୍ଚ	<i>ṣṭa</i>	ଷ୍ଟ	ଷ୍ଟ
<i>jña</i>	ଜ୍ଞ	ଜ୍ଞ	<i>ṣṭha</i>	ଷ୍ଟା	ଷ୍ଟ
<i>ñca</i>	ଜ୍ଞ	ଜ୍ଞ	<i>ṣṇa</i>	ଷ୍ଟା	ଷ୍ଟ
<i>ñcha</i>	ଜ୍ଞେ	ଜ୍ଞେ	<i>rga</i>	ଗ୍ଗ	ଗ୍ଗ
<i>ṭṭa</i>	ଟ୍ଟ	ଟ୍ଟ	<i>hṇa</i>	ହ୍ନ	ହ୍ନ
<i>ṭṭha</i>	ଟ୍ଟ୍	ଟ୍ଟ	<i>hna</i>	ହ୍ନ	ହ୍ନ
<i>ṇṭa</i>	ଟ୍ଟେ	ଟ୍ଟ	<i>hma</i>	ହ୍ମ	ହ୍ମ
<i>ṇṭha</i>	ଟ୍ଟେ	ଟ୍ଟ	<i>hra</i>	ହ୍ମ	ହ୍ମ
<i>ṇḍa</i>	ଢ୍	ଢ	<i>hla</i>	ହ୍ଲ	ହ୍ଲ
<i>ṇḍha</i>	ଢ୍	ଢ	<i>hva</i>	ହ୍ଭ	ହ୍ଭ

Table 7: Comparison of conjunct forms used in Tirhuta and Bengali.

**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:	<b>Proposal to Encode the Tirhuta Script in ISO/IEC 10646</b>
2. Requester's name:	<i>Script Encoding Initiative (SEI) / Anshuman Pandey (pandey@umich.edu)</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Liaison contribution</i>
4. Submission date:	<i>2011-05-05</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<input checked="" type="checkbox"/> Yes
(or) More information will be provided later:	<input type="checkbox"/>

**B. Technical – General**

1. Choose one of the following:		
a. This proposal is for a new script (set of characters):	<input checked="" type="checkbox"/> Yes	
Proposed name of script:	<i>Tirhuta</i>	
b. The proposal is for addition of character(s) to an existing block:		
Name of the existing block:		
2. Number of characters in proposal:	<i>82</i>	
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"/>	
4. Is a repertoire including character names provided?	<input checked="" type="checkbox"/> Yes	
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	<input checked="" type="checkbox"/> Yes	
b. Are the character shapes attached in a legible form suitable for review?	<input checked="" type="checkbox"/> Yes	
5. Fonts related:		
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>Anshuman Pandey</i>	
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>Anshuman Pandey (pandey@umich.edu)</i>	
6. References:		
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<input checked="" type="checkbox"/> Yes	
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<input checked="" type="checkbox"/> 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)?	<input checked="" type="checkbox"/> Yes	

**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: N3902-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)

### 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>See text of proposal</i> <i>See text of proposal</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 <i>Size of user community is unknown. Script is used for print and digital publications.</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	Common <i>The Tirhuta script is used for writing Maithili. See text of proposal for details.</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	Yes <i>Bihar (India) and Nepal. See text of proposal for details.</i>
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:	No
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 an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:	Yes Yes <i>See text of proposal for similarities between Tirhuta and Bengali.</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>Combining vowel signs</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</i> <i>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