Preliminary Proposal to Encode the Jenticha Script in ISO/IEC 10646

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1   Introduction

This is a preliminary proposal to encode the Jenticha script in the Universal Character Set (ISO/IEC 10646). Jenticha is used in Sikkim, India, for writing the Sunuwar (Kõits) language. This document provides a description of the writing system, implementation details, a code chart and names list, and a few specimens.

There is another script used in Nepal for writing Sunuwar, which is called 'Tikamuli'. A preliminary proposal (N3963 L2/10-465R) to encode Tikamuli in the UCS has been submitted by the present author to the Unicode Technical Committee (UTC) and ISO/IEC JTC1/SC2/WG2 for review.

2   Background

2.1   Overview

Jenticha is a script used for writing Sunuwar (ISO 639-3: suz), a Tibeto-Burman language of the Kiranti family that is spoken in eastern Nepal and in the state of Sikkim, India. Sunuwar is spoken by forty thousand persons in Nepal. It was recognized as an official language of Sikkim in 1996.[1] Jenticha is a recognized script in Sikkim; however, Devanagari is most commonly used for writing Sunuwar.

Sunuwar (सुनुवार *sunuvāra*), alternately spelled 'Sunwar', is also known by the name 'Mukhiya' (मुखिया *mukhiyā*). Both are Nepali exonyms for the language and its speakers. The autonym is काँइच *kõica*, which is normalized as 'Kõits'. The language is called काँइच लो *kõica lo* 'Kõits Lo' or किराँती-काँइच *kirãtī-kõica* 'Kiranti-Kõits'. The name 'Kõits' is also romanized as 'Koinch', 'Koincha', 'Koints', etc.

The script was developed by Krishna Bahadur Jenticha (1926–1991) in 1942.[2] It is known indigenously as जैंःतिच ब्रेःसे *jẽtica brese*, 'Jenticha Brese'. The script is also called काँइच ब्रेःसे *kõica brese* 'Kõits Brese', or the 'Kõits script'; 'brese', or script, is also romanized as 'brehs', ie. 'Koinch Brehs'. The script is referred to here as 'Jenticha'. It has no genetic relationship to other writing systems. However, some of its letters resemble those of other scripts, such as Limbu and Latin.

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[1] Data for Sunuwar is absent from the 2001 Census of India.   [2] The name 'Karna Bahadur Jenticha' is used in some sources.

2.2　Development

There are two major phases in the development of Jenticha. The earliest script developed by K. B. Jenticha is a pure alphabet. The modern script is a revision of the original and differs from its precedessor in structure, letter forms, and character repertoire. Modern Jenticha possesses features of an alphasyllabic script, namely that each consonant letter has an inherent vowel.

2.3　Usage

Jenticha is currently used in writing and print for various purposes:

- *Educational Materials*　Primary educational materials for teaching Sunuwar and Jenticha are published by Kõic Bu in Sikkim. Examples of script primers are ꠱ꠦꠡꠡꠢꠢꠦ ꠱ꠕꠦꠧꠧ ꠱ꠡꠦꠡꠢꠢꠦꠡꠦ *Kirã̃tī-Kõica Blesethekā* (2003) and ꠱ꠕꠦꠧꠡ ꠢꠦꠦꠦ ꠡꠢꠕꠧꠡꠢ *Kõicā The:si Khyõpat* (2004); see Figure 6. The Department of Education of the Government of Sikkim is planning to prepare textbooks in the script for primary-level education.

- *Literary Works*　Anthologies of Sunuwar poetry are printed in the script.

- *Historical Records*　Histories of the Sunuwar communities, known as *vaṃśāvalī*, were written in Jenticha beginning in the 1940s.

- *Newspapers*　A Sunuwar ('Mukhiya') edition of the *Sikkim Herald* (꠱ꠡꠢꠦ ꠢꠦꠕꠡꠢꠢꠕꠦꠡꠡ) is produced in Jenticha. The newspaper was first published in April 2002 and maintains an active circulation.[3] The first edition was hand-written by Lāl-Śyāṃkārelu Rāpacā, with subsequent editions written by Balarām Sunuwār (see Figure 4). More recent editions are printed in digitized type (see Figure 5).

- *Linguistic Works*　Grammars of Sunuwar use the script, eg. *Elementary Grammar of Kiranti-Sunuwar* by Kamalādevī Ṅāvacā-Mukhiyā, Raghuvīra Rujicā-Mukhiya, and Lāla Rāpacā (Sikkim: Kõica Bu, 2003).

- *Government Records*　Proceedings of the Sikkim legislative assembly are translated into Sunuwar using the script.

- *Academic Works*　The script is used in several scholarly works on the Sunuwar language and it is also the focus of scholarly attention (cf. Rāpacā 2009).

- *Ephemera*　The Sikkim Sunuwar Mukhia Koinchbu (SSMK) produces and distributes calendars using Jenticha (see Figure 13 and 14).

- *Digital Resources*　Jenticha has been adapted for use in digital media. A digitized font for the script named 'Kirat1' was developed by Shyan Kirat Rai. It is based upon a non-Unicode encoding and is mapped to Latin letters. The font is used for publishing the *Sikkim Herald* (see Figure 5) and by Rāpacā in the charts and examples shown in figures 7–9. Another effort is the Jenticha font used in this document. This font was designed by the present author and will be further developed to support the Unicode implementation for Jenticha.

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[3] Lāl-Śyāṃkārelu Rāpacā, personal correspondence, November 2010.

3 Implementation Details

3.1 Script

The script is assigned the name 'Jenticha'. It is also called 'Koints Brese'. The proposed characters are intended for representing historical and current forms of Jenticha. The set consists of 44 characters: 6 vowel letters, 25 consonant letters, 3 signs, and 10 digits. A code chart and names list is given in Figure 1.

3.2 Structure

Modern Jenticha is an alphabetic writing system with alphasyllabic features. The early version of the script is a pure alphabet. Both forms of the script are written from left to right. Jenticha should be implemented according to the *virāma* model used for Brahmi-based scripts. This encoding model offers the most appropriate methods for representing consonant conjuncts written in the script.

3.3 Vowels

Vowels are represented using individual letters, of which there are six:

ϑ	JENTICHA LETTER A	/ə/	अ		ર	JENTICHA LETTER U	/u/	उ
ฮ	JENTICHA LETTER AA	/a/	आ		±	JENTICHA LETTER E	/e/	ए
ϯ	JENTICHA LETTER I	/i/	इ		O	JENTICHA LETTER O	/o/	ओ

3.4 Vowel Length

Vowel length is indicated using the sign ○: GYOSH.

3.5 Diphthongs

The diphthongs of Sunuwar are written as digraphs:

/ai/	ϑϯ	ϑ A + ϯ I	ऐ		/ui/	રϯ	ર U + ϯ I	उइ
/au/	ϑર	ϑ A + ર U	औ		/oi/	Oϯ	O O + ϯ I	ओइ
/eu/	±ર	± E + ર U	एउ					

3.6 Virāma

The ○ SANGMILU behaves similar to the ○ VIRAMA of Devanagari. It is used in modern Jenticha and is not attested in early forms of the script.

3.7 Consonants

There are 25 consonant letters:

3

ꠄ	JENTICHA LETTER KA	/k/	क	�	JENTICHA LETTER PA	/p/	प
ꠅ	JENTICHA LETTER KHA	/kʰ/	ख	ꠀ	JENTICHA LETTER PHA	/pʰ/	फ
꠆	JENTICHA LETTER GA	/g/	ग	ꠁ	JENTICHA LETTER BA	/b/	ब
ꠇ	JENTICHA LETTER NGA	/ŋ/	ङ	ꠈ	JENTICHA LETTER MA	/m/	म
ꠉ	JENTICHA LETTER GLOTTAL STOP	/ʔ/	अ	ꠊ	JENTICHA LETTER YA	/y/	य
ꠋ	JENTICHA LETTER CA	/tʃ/	च	ꠌ	JENTICHA LETTER RA	/r/	र
ꠍ	JENTICHA LETTER JA	/dʒ/	ज	ꠎ	JENTICHA LETTER LA	/l/, [l̩]	ल
ꠏ	JENTICHA LETTER TTA	/ʈ/	ट	ꠐ	JENTICHA LETTER VA	/v/	व
ꠑ	JENTICHA LETTER TTHA	/ʈʰ/	ठ	ꠒ	JENTICHA LETTER SHA	/ʃ/	श, ष
ꠓ	JENTICHA LETTER TA	/t/	त	ꠔ	JENTICHA LETTER SA	/s/	स
ꠕ	JENTICHA LETTER THA	/tʰ/	थ	ꠖ	JENTICHA LETTER HA	/h/	ह
ꠗ	JENTICHA LETTER DA	/d/	द, ड	ꠘ	JENTICHA LETTER HHA	/ɦ/	व्हो, ह्व
ꠙ	JENTICHA LETTER NA	/n/	न, ण				

In early Jenticha, consonant letters are purely alphabetic. In modern Jenticha, each consonant letter, except for ꠉ GLOTTAL STOP, bears the inherent vowel /ə/, which corresponds to the letter ꠉ A. The inherent vowel is changed by writing a vowel letter after the consonant, eg. ꠄ *ka*, ꠄꠠ *kā*, etc. The inherent vowel is silenced by writing ꠥ SANGMILU beneath the consonant, eg. <ꠄ *ka* + ꠥ> → <ꠄ> *k*.

3.8   Consonant Conjuncts

Consonant conjuncts are represented differently in the early and modern forms of Jenticha. In early Jenticha, conjuncts are written as a sequence of consonant letters without VIRAMA or special rendering. In modern Jenticha, conjuncts are represented in two ways:

1. *Visible virāma*   The default representation of conjuncts uses a 'visible *virāma*' (the ꠥ SANGMILU) to mark all vowel-less consonants, eg. ꠁꠎ *bla*. The encoded representation is <C_1 + SANGMILU + C_2>.

2. *Half-Forms*   In current orthography, certain consonant letters may be alternately written using half-forms (pre-base forms) when they appear as C_1 in a conjunct:

	REGULAR FORM	DEFAULT BARE FORM	HALF-FORM	DEVANAGARI HALF-FORM
CA	ꠋ	ꠋ	ꠋ	च्‍
MA	ꠈ	ꠈ	ꠈ	म्‍
SA	ꠔ	ꠔ	ꠔ	स्‍

The encoded representation for half-forms is <C_1 + SANGMILU + ZWJ + C_2>. These use of ZERO WIDTH JOINER permits conjuncts to appear in plain text with both 'visible *virāma*' and pre-base forms.

In current orthography, the letter ꠌ RA has contextual forms when it occurs in conjuncts:

(a) *Conjunct Initial*   The default behavior for RA as C_1 is with visible *virāma*: ꠌꠋ *rca*. The alternate is the form ꠌ *sangkirs*, which is written above C_2: ꠋ *rca*. It corresponds to *repha* in Devanagari. The encoded representation for *sangkirs* is <RA + SANGMILU + ZWJ + C>.

(b) *Conjunct Final*   The default behavior for RA as *C₂* is with visible *virāma*: Ⱬℕ *bra*. The alternate is the form ◌̫ *sangrums*, which is written with *C₁*: Ɫ *bra*. It corresponds to *vattu-ra* or *ra-kāra* in Devanagari. The encoded representation for *sangrums* is *<C +* SANGMILU *+* [ZW] ZWJ *+* RA*>*.

3.9   Geminate Consonants

There are no formal rules for writing geminate consonants. They may be represented by writing a consonant letter twice or they may be left unmarked. In the modern script, they may be treated as a conjunct with the first consonant marked with a visible *virāma*.

3.10   Nasalization

Nasalization is indicated by ◌̇ TASLATHENK. It corresponds to the ◌̆ CANDRABINDU in Devanagari.

3.11   Aspiration

Early Jenticha did not have unique letters for the aspirated consonants /kʰ/, /ṭʰ/, /tʰ/, /pʰ/ (see Figure 11). In this orthography, aspiration was represented by writing � HA after an unaspirated consonant letter, eg. *<*Ϥ PA *+* ⱷ HA*> → <*Ϥⱷ*>* /pʰ/. The modern script has unique letters for the four aspirated consonants.

3.12   Digits

Digits represent decimal numbers: ⵀ ZERO, ⵏ ONE, Ɫ TWO, Ⱦ THREE, ⵔ FOUR, ⵀ FIVE, ⵡ SIX, Ⅲ SEVEN, Ⅹ EIGHT, ⵑ NINE.

3.13   Punctuation

There are no script-specific punctuation marks. Latin marks, such as periods and commas, are used. Colon is represented at times using ◌: GYOSH, but this practice is to be avoided.

3.14   Collation

The sort order follows the encoding order.

3.15   Line-Breaking

All characters have line-breaking rules similar to that of Devanagari.

3.16   Ordering

A letter with two combining marks is common in Jenticha, namely, the nasalization sign and the vowel length mark, eg. *<*◌̇:*>*. In such cases, the nasalization sign should be ordered first: *<*◌̇ TASLATHENK *+* ◌: GYOSH*>*. Rendering engines should recognize this sequence of combining marks as valid.

3.17   Character Properties

```
11C00;JENTICHA LETTER A;Lo;0;L;;;;;N;;;;;
11C01;JENTICHA LETTER AA;Lo;0;L;;;;;N;;;;;
11C02;JENTICHA LETTER I;Lo;0;L;;;;;N;;;;;
11C03;JENTICHA LETTER U;Lo;0;L;;;;;N;;;;;
11C04;JENTICHA LETTER E;Lo;0;L;;;;;N;;;;;
11C05;JENTICHA LETTER O;Lo;0;L;;;;;N;;;;;
11C06;JENTICHA LETTER KA;Lo;0;L;;;;;N;;;;;
11C07;JENTICHA LETTER KHA;Lo;0;L;;;;;N;;;;;
11C08;JENTICHA LETTER GA;Lo;0;L;;;;;N;;;;;
11C09;JENTICHA LETTER NGA;Lo;0;L;;;;;N;;;;;
11C0A;JENTICHA LETTER CA;Lo;0;L;;;;;N;;;;;
11C0B;JENTICHA LETTER JA;Lo;0;L;;;;;N;;;;;
11C0C;JENTICHA LETTER TTA;Lo;0;L;;;;;N;;;;;
11C0D;JENTICHA LETTER TTHA;Lo;0;L;;;;;N;;;;;
11C0E;JENTICHA LETTER TA;Lo;0;L;;;;;N;;;;;
11C0F;JENTICHA LETTER THA;Lo;0;L;;;;;N;;;;;
11C10;JENTICHA LETTER DA;Lo;0;L;;;;;N;;;;;
11C11;JENTICHA LETTER NA;Lo;0;L;;;;;N;;;;;
11C12;JENTICHA LETTER PA;Lo;0;L;;;;;N;;;;;
11C13;JENTICHA LETTER PHA;Lo;0;L;;;;;N;;;;;
11C14;JENTICHA LETTER BA;Lo;0;L;;;;;N;;;;;
11C15;JENTICHA LETTER MA;Lo;0;L;;;;;N;;;;;
11C16;JENTICHA LETTER YA;Lo;0;L;;;;;N;;;;;
11C17;JENTICHA LETTER RA;Lo;0;L;;;;;N;;;;;
11C18;JENTICHA LETTER LA;Lo;0;L;;;;;N;;;;;
11C19;JENTICHA LETTER VA;Lo;0;L;;;;;N;;;;;
11C1A;JENTICHA LETTER SHA;Lo;0;L;;;;;N;;;;;
11C1B;JENTICHA LETTER SA;Lo;0;L;;;;;N;;;;;
11C1C;JENTICHA LETTER HA;Lo;0;L;;;;;N;;;;;
11C1D;JENTICHA LETTER HHA;Lo;0;L;;;;;N;;;;;
11C1E;JENTICHA LETTER GLOTTAL STOP;Lo;0;L;;;;;N;;;;;
11C1F;JENTICHA SIGN SANGMILU;Mn;9;NSM;;;;;N;;;;;
11C20;JENTICHA SIGN TASLATHENK;Mn;0;NSM;;;;;N;;;;;
11C21;JENTICHA SIGN GYOSH;Mc;0;L;;;;;N;;;;;
11C26;JENTICHA DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
11C27;JENTICHA DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
11C28;JENTICHA DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
11C29;JENTICHA DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
11C2A;JENTICHA DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
11C2B;JENTICHA DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
11C2C;JENTICHA DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
11C2D;JENTICHA DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
11C2E;JENTICHA DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
11C2F;JENTICHA DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
```

3.18   'Confusable' Characters

Below is a basic list of Jenticha characters that are 'confusable' with those encoded in other script blocks:

```
11C01 JENTICHA LETTER AA       ; 1900 LIMBU VOWEL-CARRIER LETTER
11C05 JENTICHA LETTER O        ; 004F LATIN CAPITAL LETTER O
11C0C JENTICHA LETTER TTA      ; 1916 LIMBU LETTER RA
11C0D JENTICHA LETTER TTHA     ; 190F LIMBU LETTER NA
11C0F JENTICHA LETTER THA      ; 190C LIMBU LETTER THA
11C13 JENTICHA LETTER PHA      ; 03B1 GREEK SMALL LETTER ALPHA
11C1B JENTICHA LETTER SA       ; 1919 LIMBU LETTER SHA
11C1F JENTICHA SIGN SANGMILU   ; 0332 COMBINING LOW LINE
11C21 JENTICHA SIGN GYOSH      ; 0903 DEVANAGARI SIGN VISARGA
```

```
11C27 JENTICHA DIGIT ONE     ; 0964 DEVANAGARI DANDA
11C2E JENTICHA DIGIT EIGHT   ; 0058 LATIN CAPITAL LETTER X
```

4   References

Borchers, Dörte. 2008. *A Grammar of Sunwar: Descriptive Grammar, Paradigms, Texts and Glossary*. Tibetan Studies Library; Languages of the Greater Himalayan Region, vol. 5/7. Leiden: Brill.

kiratsunuwar.org.np. (n.d.) "Summary of K. B. Sunuwar". Written by Shankar Sunuwar. Source: Purna Bahadur Sunuwar. `http://kiratsunuwar.org.np/index.php?option=com_content&view=article&id=8:summary-of-kb-sunuwar&catid=3:articles&Itemid=19`. Accessed January 2011.

Mukhia, Kamaladevi, and Raghubir Mukhia, and Lal Rapaca. 2004. ꠅꠥꠈ ꠡꠣꠃꠣ ꠇꠣꠣꠅ [= *Elementary Reader of Sunuwar*]. 1st ed. Sikkim: Kõica Bu.

Pandey, Anshuman. 2011. "Preliminary Proposal to Encode the Tikamuli Script in ISO/IEC 10646" (N3963 L2/10-465R). January 25, 2011. `http://std.dkuug.dk/JTC1/SC2/WG2/docs/n3963.pdf`

रापचा, लाल-श्याँकारेलु [Rāpacā, Lāl-Śyāṃkārelu]. 2009. नेपालको आदिवासी किराँती जाति सेरोफेरो : ओल्लो, माझ र पल्लो किराँत. काठमांडौ : किरांतविज्ञान अध्ययन संस्थान.

Subba, Jash Raj. 2008. *The Evolution of Man and the Modern Society in Mountainous Sikkim*. Delhi: Gyan Publishing House.

5   Acknowledgments

	11C0	11C1	11C2
0	11C00	11C10	11C20
1	11C01	11C11	11C21
2	11C02	11C12	
3	11C03	11C13	
4	11C04	11C14	
5	11C05	11C15	
6	11C06	11C16	11C26
7	11C07	11C17	11C27
8	11C08	11C18	11C28
9	11C09	11C19	11C29
A	11C0A	11C1A	11C2A
B	11C0B	11C1B	11C2B
C	11C0C	11C1C	11C2C
D	11C0D	11C1D	11C2D
E	11C0E	11C1E	11C2E
F	11C0F	11C1F	11C2F

Vowels

11C00	ꓱ	JENTICHA LETTER A
11C01		JENTICHA LETTER AA
11C02		JENTICHA LETTER I
11C03		JENTICHA LETTER U
11C04		JENTICHA LETTER E
11C05	O	JENTICHA LETTER O

Consonants

11C06		JENTICHA LETTER KA
11C07		JENTICHA LETTER KHA
11C08		JENTICHA LETTER GA
11C09		JENTICHA LETTER NGA
11C0A	<	JENTICHA LETTER CA
11C0B		JENTICHA LETTER JA
11C0C		JENTICHA LETTER TTA
11C0D		JENTICHA LETTER TTHA
11C0E		JENTICHA LETTER TA
11C0F		JENTICHA LETTER THA
11C10		JENTICHA LETTER DA
11C11		JENTICHA LETTER NA
11C12		JENTICHA LETTER PA
11C13	α	JENTICHA LETTER PHA
11C14		JENTICHA LETTER BA
11C15		JENTICHA LETTER MA
11C16		JENTICHA LETTER YA
11C17		JENTICHA LETTER RA
11C18		JENTICHA LETTER LA
11C19	N	JENTICHA LETTER VA
11C1A	U	JENTICHA LETTER SHA
11C1B		JENTICHA LETTER SA
11C1C		JENTICHA LETTER HA
11C1D		JENTICHA LETTER HHA
11C1E	ꓖ	JENTICHA LETTER GLOTTAL STOP

Various signs

11C1F		JENTICHA SIGN SANGMILU
		= virama, halant
11C20		JENTICHA SIGN TASLATHENK
		= candrabindu
11C21		JENTICHA SIGN GYOSH
		= dirghata

Digits

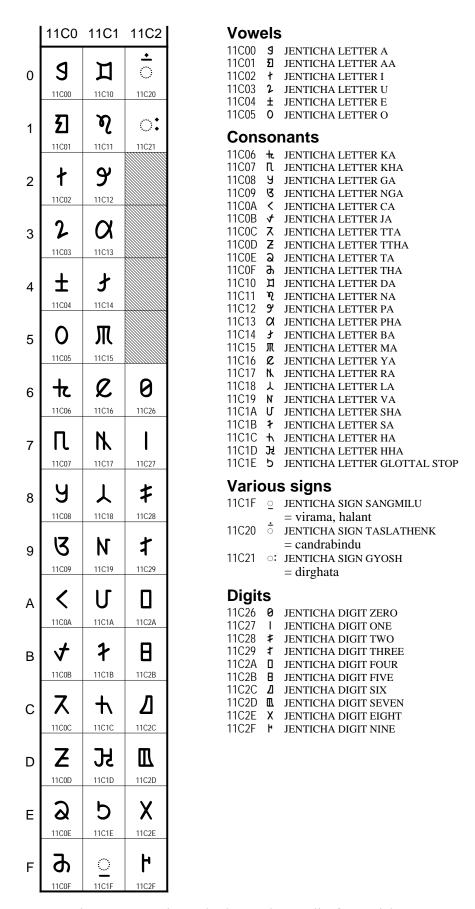|		
11C26	0	JENTICHA DIGIT ZERO
11C27	I	JENTICHA DIGIT ONE
11C28		JENTICHA DIGIT TWO
11C29		JENTICHA DIGIT THREE
11C2A		JENTICHA DIGIT FOUR
11C2B		JENTICHA DIGIT FIVE
11C2C		JENTICHA DIGIT SIX
11C2D		JENTICHA DIGIT SEVEN
11C2E	X	JENTICHA DIGIT EIGHT
11C2F		JENTICHA DIGIT NINE

Figure 1: Tentative code chart and nameslist for Jenticha.

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Figure 2: Krishna Bahadur Jenticha (Sunuwar), the inventor of the Jenticha script (from kirat-sunuwar.org.np).
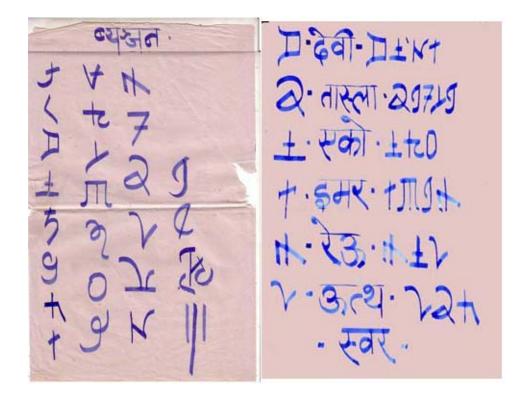

Figure 3: Early Jenticha letterforms (from kiratsunuwar.org.np).

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Figure 4: A hand-written edition of the *Sikkim Herald*, 2005.

Figure 5: A digitally typeset edition of the *Sikkim Herald*, 2009.

Figure 6: Excerpt from the *Elementary Reader of Sunuwar* showing example words beginning with
ʎ LA and N VA (from Mukhia, Mukhia, and Rapaca 2004: 40).

किराँती-कोँइच ब्रे:स (जेँ:तिचा लिपि) को मोडिफाइड र रिफर्म्ड भर्सन नमूना ट्रान्स्लिटरेशन सहित

Consonants व्यन्जन वर्ण

卍	Π	�	ㅇ	ㅎ
/k,क/	/kʰ,ख/	/g,ग/	/ŋ,ङ /	/ʔ,अ्/
‹	ｆ			
/c,च/	/dz,ज/			
ㅈ	Ⴜ			
/ᴛ,य/	/ᴛʰ,ठ/			
ㆍ	㆒	ㄲ	ㄲ	
/t,त/	/th,थ/	/d,द/	/n,न/	
ㄱ	α	ｆ	ㅠ	
/p,प/	/pʰ,फ/	/b,ब/	/m,म/	
ㄹ	Ν	ㅅ	Ν	
/y,य/	/r,र/	/l,ल/	/w,व/	
ㅈ	Ʋ	ㅆ		
/s,स/	/š,श/	/h,ह/		

Vowels स्वर वर्ण

ㅏ	2
/i,इ/	/u,उ/
	ㅐ 0(☉)*
	/ə,अ/ /o,आ/
±	刃
/ε,ए/	/ā,आ/

----

*means optional and /ε, ā, i, u/ are also subject to have such lengthening phonetically only and all 6 vowels have nasal differences

(स्रोतः रापचा ई.२००१ए २००२डी)

Figure 7: Consonants and vowels of Jenticha (from Rāpacā 2009: 143).

किराँती-कोँइच ब्रे:स (जेँ:तिचा लिपि) को अङ्क लेखन विधिमा कुनै परिमार्जन नगरिएको सबै भन्दा बायाँ

0	卍2ㅠ	*sum* /sum/ 'zero' शुन्य
I	卍刃	*kA* /kā/ 'one' एक
⚡	ㄲㅏㅎㅏ	*niʔsi* /niʔsi/ 'two' दुई
⚡	卍𝐚̄	*sAN* /sā/ 'three' तीन
Ⅰ	ㅅ±	*le* /lε/ 'four' चार
Ⅱ	ㅇㅐ	*nga* /ŋə/ 'five' पाँच
Ⅱ	Ν卍2	raku /rəku/ 'six' ६
Ⅲ	‹ㄲㅏ	*tsani* /cəni/ 'seven' सात
Ⅹ	ㅈㅏ	*sasi* /səsi/ 'eight' आठ
ㅏ	ㄹ𝐚̄	*yAN* /yā/ 'nine' नौ
Ⅰ0	ㅂㅐ2	gau /gəu/ 'ten' दश

Figure 8: Digits of Jenticha (from Rāpacā 2009: 144).

तालिका घ
किराँती-कोँइच ब्रेःसमा लेखन नमूना ट्रान्स्लिटरेसन सहित

ləlmits məmibə
<ललमिच् ममिबः>

gom tənātən
<गोम् तनातन्>

rāgiā ləlmits rəwākəli
<रागीआ ललमिच् रवाकलि>

rɛum tupšo yo məməi
<रेउम् तुप्शो यो ममइ>

pʰəsim hɛmšoyo məməi
<फश्यीम् हेम्शो यो ममइ>

nām k´išo yo məməi
<नाम की'शो या ममइ>

gom təšonu
<गोम् तशोनु>

mɛko ləlmits rəwā
<मेको ललमिच् रवा>

boisšon bāʔbə
<बोइस्शोन् बाअ्बः>

s´išon bāʔbə
<सी'शोन् बाअ्बः>

kā pāts ā ts´ibpiki
<का पाच्आ ची'बपिकी>

mɛkɛn bɛrnimi
<मेकेन् बेरनमी>

mɛkɛn nā thɛrnimi
<मेकेन् ना थेरनमी>

mɛkɛn dz´unimi
<मेकेन् जू'निमी>

minu
<मिनु>

kumšo pəšyā šyil pāinimi
<कुम्शो पश्या श्यील् पाइनिमी>

šyɛŋ mɛko rāgin ā
<श्यङ् मेको रागीन्आ>

wɛk pāts ā
<वेक् पाच्आ>

ts´ib ānkəli
<चीःबआन्कलि>

ãkɛ rāgimi gɛnāiyo ləlmits məmibə
<आँके रागीमि गेनाइयो ललमिच् ममिबः>

(Source: Rapacha (2001a: 24)
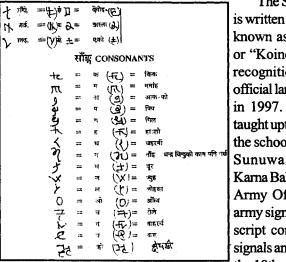
Figure 9: Sunuwar phrases given in Jenticha, Latin, and Devanagari transliteration (adapted from Rāpacā 2009: 145–146).

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Sunwar	Deva nā-garī	Roman	Sunwar	Deva-nāgarī	Roman/ Arabic
	अ	a		उ ऊ	u, ū
	ब	b		व	v
	च	c		व्हो	vho
	द	d		य	y
	ए॒	e, e		०	0
	ग	g		१	1
	ह	h		२	2
	इ ई	i, ī		३	3
	ज	j		४	4
	क	k		५	5
	ल	l		६	6
	म	m		७	7
	न	n		८	8
	ओ	o		९	9
	प	p		१०	10
	र ड	r, ḍ			
	स	s			
	त ट	t, ṭ			

Figure 10: A chart of Jenticha (from Borchers 2008: 47).

Figure 11: A table showing names for chronological and calendrical terminology in Sunuwar (with Hindi equivalents) written in Jenticha and Devanagari (from Borchers 2008: 48).

7.6 Sunuwar Script (Koinch Bress):

The Sunuwar language is written in Sunuwar script known as "Koinch Bress" or "Koinch Bnu" since its recognition as one of the official languages of Sikkim in 1997. Now, it is being taught upto primary level in the schools of Sikkim. The Sunuwars believe that Karna Bahadur Jehntich, an Army Officer engaged in army signals developed the script combining wireless signals and Brahmi script in the 19th century. The script has three vowels and 16 consonants. A considerable effort is yet to be put in for further development of writing systems in this script (personal interview with many Sunuwars; Mukhia, R.B. in Lipi Sangalo (ed) by Limboo, R.B. 1998: 113-139)

Figure 12: A description of the Jenticha script in a book about Sikkim (from Subba 2008: 95).

Figure 13: An excerpt from a 2009 wall calendar in Jenticha published by the Sikkim Sunuwar Mukhia Koinchbu.

Figure 14: An excerpt from a 2010 wall calendar in Jenticha published by the Sikkim Sunuwar Mukhia Koinchbu.