

Proposal to encode the Gunjala Gondi script in Unicode

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1 Introduction

This is a proposal to encode the ‘Gunjala Gondi’ script in Unicode. It provides a brief description of the writing system, a character repertoire with representative glyphs, character properties, and specimens that illustrate usage of the script in hand-writing and print. This document supersedes “Preliminary Proposal to Encode the Gunjala Gondi Script in Unicode” (L2/15-086).

2 Background

The writing system described here is referred to as ‘Gunjala Gondi Lipi’ (गुंजाला गोंडी लिपि, గుంజాల గొండి లిపి), or simply ‘Gunjala Gondi’. The script is also known in some circles as ‘Koytura Gunjala Lipi’, the term ‘Koya’ being the indigenous name used by Gonds of Telangana and Gondwana for referring to their language. The script is named after the village Gunjala in the Adilabad district of Telangana, where manuscripts written in the script were recently found. Gunjala Gondi is associated with Southern Gondi (ISO 639-3: ggo), a Dravidian language presently spoken by 100,000 people across Telangana, Maharashtra, and Chhattisgarh. It is not the primary script for Southern Gondi, but is used alongside Telugu and Devanagari orthographies.

There is substantial interest in the Gunjala Gondi script within the Gondi-speaking and broader scholarly communities in India. The script is being actively taught. Documents in the script are being published. In 2008, the Integrated Tribal Development Authority published a book originally written in the script by Pendur Lingu in 1942. A digitized font has been developed and a script primer has been produced using the font. A presentation on the script and font was given by S. Sridhara Murthy and Jayadhir Tirumalrao at Typography Day 2014 in Pune, Maharashtra.

The Gunjala Gondi script differs from the writing system invented by Munshi Mangal Singh Masaram in 1918, which was proposed for encoding (see L2/15-090) and approved for inclusion in a future version of the Unicode standard.

3 Script Details

3.1 Structure

Gunjala Gondi is an alphasyllabic script that is written from left to right. It is based upon the Brahmi model. Consonant letters possess the inherent vowel *a*. Consonant clusters are represented as conjuncts, which are rendered linearly using half-forms of all letters except for the final consonant. Independent vowels are written using letters, while dependent signs are used for medial and final vowels. All vowel signs and modifiers are placed to the right of the consonant or above the head-stroke at the right edge. Consonant-vowel combinations involving certain vowel signs are rendered systematically for all consonants as ligatures.

3.2 Character repertoire

There are 63 characters proposed for encoding in the ‘Gunjala Gondi’ block. The repertoire is based upon characters found in primary sources and script primers.

The representative glyphs are modern interpretations of hand-written forms found in manuscripts. The glyphs were designed in a sans serif style with uniform stroke widths, and have accentuated loops. They are derived from a font designed originally by S. Sridhara Murthy and developed further by Karambir Singh Rohilla. The font is used with permission from the designer.

3.3 Character order

The arrangement of the script is notable. The vowel order follows the typical Brahmi pattern, but the consonant order is entirely different. Although consonants are not arranged according to classes of articulation, script charts reveal some presence of that logic in the pairing of unaspirated and aspirated consonants and in the alternating rows of voiced and unvoiced letters.

3.4 Writing style

Gunjala Gondi is an inherently cursive writing system. Hand-written sources show syllables of a word connected using pen strokes. These sources also show the script written upon pages with pre-drawn lines, in a fashion similar to Modi scribal traditions. The script is written such that it hangs from these lines. The intent of these pre-drawn lines may be to facilitate rapid writing by eliminating the need to draw the head-stroke for each letter. Alternately, the head-stroke that is shown as a component of the graphical structure of each letter in script charts may mimic the pre-drawn line.

3.5 Relationship to other scripts

The Gunjala script does not appear to be genetically related to other scripts. Nevertheless, it strongly resembles the Modi script in appearance and style, as well as in the structure of letterforms, the forms of some vowel signs, and the ligating behavior of vowel signs (see L2/11-212R2). Despite these similarities, Gunjala Gondi is a distinct script and is a suitable candidate for encoding in Unicode.

4 Encoding model

4.1 Vowel Letters

There are 10 vowel letters:

𑌨	GUNJALA GONDI LETTER A	𑌨	GUNJALA GONDI LETTER UU
𑌩	GUNJALA GONDI LETTER AA	𑌩	GUNJALA GONDI LETTER EE
𑌪	GUNJALA GONDI LETTER I	𑌪	GUNJALA GONDI LETTER AI
𑌫	GUNJALA GONDI LETTER II	𑌫	GUNJALA GONDI LETTER OO
𑌬	GUNJALA GONDI LETTER U	𑌬	GUNJALA GONDI LETTER AU

The script does not distinguish between the vowels /e/, /e:/ and /o/, /o:/ as do other scripts for Dravidian languages, eg. Telugu ఎ /e/, ఏ /e:/ and ఒ /o/, ఓ /o:/. The pairs of vowels are represented using చీ /e:/ and చో /o:/, respectively. The user community is discussing introducing new letters for these short vowels. In order to accommodate this, the letter చీ is assigned the name VOWEL LETTER EE and చో is named VOWEL LETTER OO. Space is reserved in the block for the future inclusion of *VOWEL LETTER E and *VOWEL LETTER O.

4.2 Vowel signs

There are 9 dependent vowel signs:

𑌭	GUNJALA GONDI VOWEL SIGN AA	𑌭	GUNJALA GONDI VOWEL SIGN EE
𑌮	GUNJALA GONDI VOWEL SIGN I	𑌮	GUNJALA GONDI VOWEL SIGN AI
𑌯	GUNJALA GONDI VOWEL SIGN II	𑌯	GUNJALA GONDI VOWEL SIGN OO
𑌰	GUNJALA GONDI VOWEL SIGN U	𑌰	GUNJALA GONDI VOWEL SIGN AU
𑌱	GUNJALA GONDI VOWEL SIGN UU		

The script lacks corresponding dependent vowel signs for the short vowels /e/ and /o/. The user community is discussing introducing new signs for these short vowels. In order to accommodate this, the sign 𑌭 is assigned the name VOWEL SIGN EE and 𑌯 is named VOWEL LETTER OO. Space is reserved in the block for the future inclusion of *VOWEL SIGN E and *VOWEL SIGN O.

The VOWEL SIGN AA, VOWEL SIGN OO, VOWEL SIGN AU have special rendering requirements (see § 4.7).

4.3 Vowel modifiers

There are 2 ‘vowel modifiers’:

◌̣	GUNJALA GONDI SIGN ANUSVARA
◌̣̌	GUNJALA GONDI SIGN VISARGA

The ◌̣ ANUSVARA is used for marking nasalization. The ◌̣̌ VISARGA is used for the representation of post-vocalic aspiration in words of Sanskrit origin.

4.4 Consonants

There are 30 consonant letters:

𑌶	GUNJALA GONDI LETTER YA	𑌷	GUNJALA GONDI LETTER CA
𑌸	GUNJALA GONDI LETTER VA	𑌹	GUNJALA GONDI LETTER CHA
𑌺	GUNJALA GONDI LETTER BA	𑌻	GUNJALA GONDI LETTER TTA
𑌼	GUNJALA GONDI LETTER BHA	𑌽	GUNJALA GONDI LETTER TTHA
𑌾	GUNJALA GONDI LETTER MA	𑌿	GUNJALA GONDI LETTER LLA
𑍀	GUNJALA GONDI LETTER KA	𑍁	GUNJALA GONDI LETTER JA
𑍂	GUNJALA GONDI LETTER KHA	𑍃	GUNJALA GONDI LETTER JHA
𑍄	GUNJALA GONDI LETTER TA	𑍅	GUNJALA GONDI LETTER DDA
𑍆	GUNJALA GONDI LETTER THA	𑍇	GUNJALA GONDI LETTER DDHA
𑍈	GUNJALA GONDI LETTER LA	𑍉	GUNJALA GONDI LETTER NGA
𑍊	GUNJALA GONDI LETTER GA	𑍋	GUNJALA GONDI LETTER PA
𑍌	GUNJALA GONDI LETTER GHA	𑍍	GUNJALA GONDI LETTER PHA
𑍎	GUNJALA GONDI LETTER DA	𑍏	GUNJALA GONDI LETTER HA
𑍐	GUNJALA GONDI LETTER DHA	𑍑	GUNJALA GONDI LETTER RA
𑍒	GUNJALA GONDI LETTER NA	𑍓	GUNJALA GONDI LETTER SA

The script does not have letters for *ṇa* and *ṇa*. These sounds are represented using ◌̣ SIGN ANUSVARA. Also lacking are distinct letters for *śa* and *ṣa*, which are represented using 𑍓 SA.

Contextual alternates of some vowel signs are used with 𑌸 VA, 𑌺 BA, 𑍒 NA, 𑌹 CHA on account of the ascending right terminals in these letters (see § 4.7).

4.5 Virama

The following character is proposed as an addition to the script block:

𑌧 GUNJALA GONDI VIRAMA

The 𑌧 GUNJALA GONDI VIRAMA is a control character that is used for producing the half form of a consonant letter for use in a conjunct. It is represented in the code chart as 𑌧 in order to indicate that it is a special character. The Gunjala Gondi VIRAMA behaves similarly to the function of ् U+094D DEVANAGARI SIGN VIRAMA in forming conjuncts, but unlike the Devanagari VIRAMA it does not silence the inherent vowel of a consonant. In fact, there is no *halanta* in Gunjala Gondi for supressing the inherent vowel.

4.6 Consonant-Vowel Combinations

Vowel signs are written with consonant letters as follows:


𑌧	𑌧𑌶	𑌧𑌶𑌶	𑌧𑌶𑌶𑌶	𑌧𑌶𑌶𑌶𑌶	𑌧𑌶𑌶𑌶𑌶𑌶	𑌧𑌶𑌶𑌶𑌶𑌶𑌶	𑌧𑌶𑌶𑌶𑌶𑌶𑌶𑌶	𑌧𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶	𑌧𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶
<i>ya</i>	<i>yā</i>	<i>yi</i>	<i>yī</i>	<i>yu</i>	<i>yū</i>	<i>yē</i>	<i>yai</i>	<i>yō</i>	<i>yau</i>


The encoded representations of the above are as follows:


<i>yā</i>	𑌧𑌶	<𑌧 YA, 𑌶 VOWEL SIGN AA>
<i>yi</i>	𑌧𑌶𑌶	<𑌧 YA, 𑌶𑌶 VOWEL SIGN I>
<i>yī</i>	𑌧𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶 VOWEL SIGN II>
<i>yu</i>	𑌧𑌶𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶𑌶 VOWEL SIGN U>
<i>yū</i>	𑌧𑌶𑌶𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶𑌶𑌶 VOWEL SIGN UU>
<i>yē</i>	𑌧𑌶𑌶𑌶𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶𑌶𑌶 VOWEL SIGN EE>
<i>yai</i>	𑌧𑌶𑌶𑌶𑌶𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶𑌶𑌶 VOWEL SIGN AI>
<i>yō</i>	𑌧𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶𑌶𑌶𑌶 VOWEL SIGN OO>
<i>yau</i>	𑌧𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶𑌶𑌶𑌶𑌶 VOWEL SIGN AU>

The ANUSVARA and VISARGA are always placed after any a base letter and any accompanying vowel signs:

<i>yam</i>	𑌧𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶	<𑌧 YA, 𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶𑌶 SIGN ANUSVARA>
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





$yāṃ$  <𑌎 YA, 𑌐 SIGN AA, 𑌑 SIGN ANUSVARA>

yah  <𑌎 YA, 𑌐 SIGN VISARGA>




$yāḥ$  <𑌎 YA, 𑌐 SIGN AA, 𑌐 SIGN VISARGA>




4.7 Contextual forms of vowel signs




Consonant-vowel combinations that involve 𑌐 VOWEL SIGN AA, 𑌑 VOWEL SIGN OO, 𑌒 VOWEL SIGN AU are normatively rendered as ligatures:

		Correct	Incorrect
$yā$	<𑌎 YA, 𑌐 VOWEL SIGN AA>		
$yō$	<𑌎 YA, 𑌑 VOWEL SIGN OO>		
yau	<𑌎 YA, 𑌒 VOWEL SIGN AU>		



These ligatures are formed using a modified form of all consonants. For letters with looped strokes at the right edge, modified form is produced by truncating the upward stroke and turning it to the right, such that it joins with the left stroke of the vowel sign:



KA  →   $kā$



TA  →   $tā$



TTA  →   $tā$

With letters that have a straight ascending stroke at the right edge, the stroke is truncated and curved rightward to join with the vowel sign. This occurs with the letters 𑌕 VA, 𑌖 BA, 𑌗 NA, 𑌘 CHA.

VA 𑌕 →   $vā$

BA 𑌖 →   $bā$

NA 𑌗 →   $nā$

CHA 𑌘 →   $chā$

4.8 Consonant Conjuncts

Consonant clusters are written as conjuncts, which are rendered linearly using half-forms of all but the final letter in a cluster. Conjuncts are represented in encoded text by placing the sign 𑌑 VIRAMA after each non-final consonant in a cluster. Consonants are ordered as they occur in the cluster.

kka ીଁଁଁଁ <ଁଁଁଁ KA, ીଁଁଁଁ VIRAMA, ીଁଁଁଁ KA>
dna ીଁଁଁଁ <ଁଁଁଁ DA, ીଁଁଁଁ VIRAMA, ીଁଁଁଁ NA>
tra ીଁଁଁଁ <ଁଁଁଁ TA, ીଁଁଁଁ VIRAMA, ીଁଁଁଁ RA>
rka ીଁଁଁଁ <ଁଁଁଁ RA, ીଁଁଁଁ VIRAMA, ીଁଁଁଁ KA>

Unlike the *ra* in other Indic scripts, the Gunjala Gondi ીଁଁଁଁ RA does not have any special forms, such as *repha* or *vattu*, when it occurs in conjuncts. The half-form is used when it occurs in cluster-initial position.

A half-form of a consonant is similar to the modified form of the letter that is used in consonant-vowel ligatures. It is produced by truncating the upward right stroke at half its height. A complete list of half-forms is shown below:

	full	half		full	half		full	half
YA	ਯ	ਯ	GA	ਗ	ਗ	JA	ਜ	ਜ
VA	ਵ	ਵ	GHA	ਘ	ਘ	JHA	ਯ	ਯ
BA	ਬ	ਬ	DA	ਡ	ਡ	DDA	ਢ	ਢ
BHA	ਭ	ਭ	DHA	ਢ	ਢ	DDHA	ਢ	ਢ
MA	ਮ	ਮ	NA	ਨ	ਨ	NGA	ੰ	ੰ
KA	ਕ	ਕ	CA	ਚ	ਚ	PA	ਪ	ਪ
KHA	ਖ	ਖ	CHA	ਚ	ਚ	PHA	ਫ	ਫ
TA	ਤ	ਤ	TTA	ਟ	ਟ	HA	ਹ	ਹ
THA	ਠ	ਠ	TTHA	ਠ	ਠ	RA	ਰ	ਰ
LA	ਲ	ਲ	LLA	ਲ	ਲ	SA	ਸ	ਸ

4.9 Digits

There is a full set of digits:

୦	GONDI DIGIT ZERO	୩	GONDI DIGIT FOUR	୮	GONDI DIGIT EIGHT
୧	GONDI DIGIT ONE	୪	GONDI DIGIT FIVE	୯	GONDI DIGIT NINE
୨	GONDI DIGIT TWO	୫	GONDI DIGIT SIX		
୩	GONDI DIGIT THREE	୬	GONDI DIGIT SEVEN		

4.10 Symbol

The 𑌐 GUNJALA GONDI OM is a sacred symbol.

4.11 Punctuation

Script-specific marks of punctuation are not attested. The manuscript sources show usage of middle dots, periods, and colons for marking word and sentence boundaries. Some sources show usage of the | *daṇḍā* or || double *daṇḍā*. The *daṇḍā*-s are not proposed for separate encoding as part of the Gunjala Gondi block, but are to be unified with | U+0964 DEVANAGARI DANDA and || U+0965 DEVANAGARI DOUBLE DANDA.

5 Character Data

5.1 Character Properties

The properties for Gunjala Gondi in the Unicode Character Database format are:

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11D60;GUNJALA GONDI LETTER A;Lo;0;L;;;;N;;;;;
11D61;GUNJALA GONDI LETTER AA;Lo;0;L;;;;N;;;;;
11D62;GUNJALA GONDI LETTER I;Lo;0;L;;;;N;;;;;
11D63;GUNJALA GONDI LETTER II;Lo;0;L;;;;N;;;;;
11D64;GUNJALA GONDI LETTER U;Lo;0;L;;;;N;;;;;
11D65;GUNJALA GONDI LETTER UU;Lo;0;L;;;;N;;;;;
11D67;GUNJALA GONDI LETTER EE;Lo;0;L;;;;N;;;;;
11D68;GUNJALA GONDI LETTER AI;Lo;0;L;;;;N;;;;;
11D6A;GUNJALA GONDI LETTER OO;Lo;0;L;;;;N;;;;;
11D6B;GUNJALA GONDI LETTER AU;Lo;0;L;;;;N;;;;;
11D6C;GUNJALA GONDI LETTER YA;Lo;0;L;;;;N;;;;;
11D6D;GUNJALA GONDI LETTER VA;Lo;0;L;;;;N;;;;;
11D6E;GUNJALA GONDI LETTER BA;Lo;0;L;;;;N;;;;;
11D6F;GUNJALA GONDI LETTER BHA;Lo;0;L;;;;N;;;;;
11D70;GUNJALA GONDI LETTER MA;Lo;0;L;;;;N;;;;;
11D71;GUNJALA GONDI LETTER KA;Lo;0;L;;;;N;;;;;
11D72;GUNJALA GONDI LETTER KHA;Lo;0;L;;;;N;;;;;
11D73;GUNJALA GONDI LETTER TA;Lo;0;L;;;;N;;;;;
11D74;GUNJALA GONDI LETTER THA;Lo;0;L;;;;N;;;;;
11D75;GUNJALA GONDI LETTER LA;Lo;0;L;;;;N;;;;;
11D76;GUNJALA GONDI LETTER GA;Lo;0;L;;;;N;;;;;
11D77;GUNJALA GONDI LETTER GHA;Lo;0;L;;;;N;;;;;
11D78;GUNJALA GONDI LETTER DA;Lo;0;L;;;;N;;;;;
11D79;GUNJALA GONDI LETTER DHA;Lo;0;L;;;;N;;;;;
11D7A;GUNJALA GONDI LETTER NA;Lo;0;L;;;;N;;;;;
11D7B;GUNJALA GONDI LETTER CA;Lo;0;L;;;;N;;;;;
11D7C;GUNJALA GONDI LETTER CHA;Lo;0;L;;;;N;;;;;
11D7D;GUNJALA GONDI LETTER TA;Lo;0;L;;;;N;;;;;
11D7E;GUNJALA GONDI LETTER THA;Lo;0;L;;;;N;;;;;
11D7F;GUNJALA GONDI LETTER LLA;Lo;0;L;;;;N;;;;;
11D80;GUNJALA GONDI LETTER JA;Lo;0;L;;;;N;;;;;
11D81;GUNJALA GONDI LETTER JHA;Lo;0;L;;;;N;;;;;
11D82;GUNJALA GONDI LETTER DDA;Lo;0;L;;;;N;;;;;
11D83;GUNJALA GONDI LETTER DDHA;Lo;0;L;;;;N;;;;;
11D84;GUNJALA GONDI LETTER NNA;Lo;0;L;;;;N;;;;;
11D85;GUNJALA GONDI LETTER PA;Lo;0;L;;;;N;;;;;
11D86;GUNJALA GONDI LETTER PHA;Lo;0;L;;;;N;;;;;
11D87;GUNJALA GONDI LETTER HA;Lo;0;L;;;;N;;;;;
11D88;GUNJALA GONDI LETTER RA;Lo;0;L;;;;N;;;;;

```

```

11D89;GUNJALA GONDI LETTER SA;Lo;0;L;;;;N;;;;;
11D8A;GUNJALA GONDI VOWEL SIGN AA;Mc;0;L;;;;N;;;;;
11D8B;GUNJALA GONDI VOWEL SIGN I;Mc;0;L;;;;N;;;;;
11D8C;GUNJALA GONDI VOWEL SIGN II;Mc;0;L;;;;N;;;;;
11D8D;GUNJALA GONDI VOWEL SIGN U;Mc;0;L;;;;N;;;;;
11D8E;GUNJALA GONDI VOWEL SIGN UU;Mc;0;L;;;;N;;;;;
11D90;GUNJALA GONDI VOWEL SIGN EE;Mn;0;NSM;;;;N;;;;;
11D91;GUNJALA GONDI VOWEL SIGN AI;Mn;0;NSM;;;;N;;;;;
11D93;GUNJALA GONDI VOWEL SIGN OO;Mc;0;L;;;;N;;;;;
11D94;GUNJALA GONDI VOWEL SIGN AU;Mc;0;L;;;;N;;;;;
11D95;GUNJALA GONDI SIGN ANUSVARA;Mn;0;NSM;;;;N;;;;;
11D96;GUNJALA GONDI SIGN VISARGA;Mc;0;L;;;;N;;;;;
11D97;GUNJALA GONDI VIRAMA;Mn;9;NSM;;;;N;;;;;
11D98;GUNJALA GONDI OM;Lo;0;L;;;;N;;;;;
11DA0;GUNJALA GONDI DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
11DA1;GUNJALA GONDI DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
11DA2;GUNJALA GONDI DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
11DA3;GUNJALA GONDI DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
11DA4;GUNJALA GONDI DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
11DA5;GUNJALA GONDI DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
11DA6;GUNJALA GONDI DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
11DA7;GUNJALA GONDI DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
11DA8;GUNJALA GONDI DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
11DA9;GUNJALA GONDI DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;

```

5.2 Linebreaking

Linebreaking properties given in the data format of LineBreak.txt:

```

11D60..11D65; AL # GUNJALA GONDI LETTER A .. GUNJALA GONDI LETTER UU
11D67..11D68; AL # GUNJALA GONDI LETTER EE .. GUNJALA GONDI LETTER AI
11D6A..11D89; AL # GUNJALA GONDI LETTER OO .. GUNJALA GONDI LETTER SA
11D8A..11D8E; CM # GUNJALA GONDI VOWEL SIGN AA .. GUNJALA GONDI VOWEL SIGN UU
11D90..11D91; CM # GUNJALA GONDI VOWEL SIGN EE .. GUNJALA GONDI VOWEL SIGN AI
11D93..11D96; CM # GUNJALA GONDI VOWEL SIGN OO .. GUNJALA GONDI SIGN VISARGA
11D97; CM # GUNJALA GONDI SIGN VIRAMA
11D98; AL # GUNJALA GONDI OM
11DA0..11DA9; NU # GUNJALA GONDI DIGIT ZERO .. GUNJALA GONDI DIGIT NINE

```

5.3 Syllabic Categories

Syllabic categories given in the format of IndicSyllabicCategory.txt:

```

# Indic_Syllabic_Category=Bindu
11D95 ; Bindu # Mn SIGN ANUSVARA

# Indic_Syllabic_Category=Visarga
11D96 ; Visarga # Mc SIGN VISARGA

# Indic_Syllabic_Category=Virama
11D97 ; Virama # Mn VIRAMA

# Indic_Syllabic_Category=Vowel_Independent
11D60..11D65 ; Vowel_Independent # Lo [6] LETTER A .. LETTER UU
11D67..11D68 ; Vowel_Independent # Lo [2] LETTER EE .. LETTER AI
11D6A..11D6B ; Vowel_Independent # Lo [2] LETTER OO .. LETTER AU

```

```
# Indic_Syllabic_Category=Vowel_Dependent
11D8A..11D8E ; Vowel_Dependent # Mc [5] VOWEL SIGN AA .. VOWEL SIGN UU
11D90..11D91 ; Vowel_Dependent # Mn [2] VOWEL SIGN EE .. VOWEL SIGN AI
11D93..11D94 ; Vowel_Dependent # Mc [2] VOWEL SIGN OO .. VOWEL SIGN AU

# Indic_Syllabic_Category=Consonant
11D6C..11D89 ; Consonant # Lo [30] LETTER YA .. LETTER SA
```

5.4 Positional Categories

Positional data for Gondi combining signs in the format of `IndicPositionalCategory.txt`:

```
# Indic_Positional_Category=Top
11D90..11D91 ; Top # Mn [2] VOWEL SIGN EE .. VOWEL SIGN AI
11D95 ; Top # Mn SIGN ANUSVARA

# Indic_Positional_Category=Right
11D8A..11D8E ; Right # Mc [5] VOWEL SIGN AA .. VOWEL SIGN UU
11D93..11D94 ; Right # Mc [2] VOWEL SIGN OO .. VOWEL SIGN AU
11D96 ; Right # Mc SIGN VISARGA
```

5.5 Script extensions

The following characters should be extended for usage with Gunjala Gondi in `ScriptExtensions.txt`:

```
0964 ; # Po DEVANAGARI DANDA
0965 ; # Po DEVANAGARI DOUBLE DANDA
```

6 References

Murthy, S. Sridhara; and Jayadhir Tirumalrao. 2014. “Gunjala Gondi Script: A New Tracing”. Typography Day presentation. Pune.

Pandey, Anshuman. 2011. “Proposal to Encode the Modi Script in ISO/IEC 10646”. N4034 L2/11-212R2. <http://www.unicode.org/L2/L2011/11212r2-n4034-modi.pdf>

———. 2015a. “Preliminary Proposal to Encode the Gunjala Gondi Script in Unicode”. L2/15-086. <http://www.unicode.org/L2/L2015/15086-gunjala-gondi.pdf>

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Rao, Arka Manik; Pendur Durnath Rao; and Mark Penny [eds]. 2008. “Let’s read with Kōṭṇaka Jangu from Gunjaḍa: A historical reader in the Gondi language which is spoken in Adilabad District of Andhra Pradesh”. Based upon the original manuscript of Pendur Lingu from 1942, read by Kōṭṇaka Jangu. Uttnoor, Andhra Pradesh: Integrated Tribal Development Agency.

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	11D6	11D7	11D8	11D9	11DA
0	ଘ 11D60	ଝ 11D70	ଞ 11D80	ଠ 11D90	ଠ 11DA0
1	ଘ 11D61	ଞ 11D71	ଞ 11D81	ଠ 11D91	ଠ 11DA1
2	ଘ 11D62	ଞ 11D72	ଞ 11D82		ଠ 11DA2
3	ଘ 11D63	ଞ 11D73	ଞ 11D83	ଠ 11D93	ଠ 11DA3
4	ଘ 11D64	ଞ 11D74	ଞ 11D84	ଠ 11D94	ଠ 11DA4
5	ଘ 11D65	ଞ 11D75	ଞ 11D85	ଠ 11D95	ଠ 11DA5
6		ଞ 11D76	ଞ 11D86	ଠ 11D96	ଠ 11DA6
7	ଘ 11D67	ଞ 11D77	ଞ 11D87	ଠ 11D97	ଠ 11DA7
8	ଘ 11D68	ଞ 11D78	ଞ 11D88	ଠ 11D98	ଠ 11DA8
9		ଞ 11D79	ଞ 11D89		ଠ 11DA9
A	ଘ 11D6A	ଞ 11D7A	ଞ 11D8A		
B	ଘ 11D6B	ଞ 11D7B	ଞ 11D8B		
C	ଘ 11D6C	ଞ 11D7C	ଞ 11D8C		
D	ଘ 11D6D	ଞ 11D7D	ଞ 11D8D		
E	ଘ 11D6E	ଞ 11D7E	ଞ 11D8E		
F	ଘ 11D6F	ଞ 11D7F			

The script is also known as *Koytura Gunjala Lipi*.

Vowels

11D60	𑌂	GUNJALA GONDĪ LETTER A
11D61	𑌃	GUNJALA GONDĪ LETTER AA
11D62	𑌄	GUNJALA GONDĪ LETTER I
11D63	𑌅	GUNJALA GONDĪ LETTER II
11D64	𑌆	GUNJALA GONDĪ LETTER U
11D65	𑌇	GUNJALA GONDĪ LETTER UU
11D66	𑌈	<reserved>
11D67	𑌉	GUNJALA GONDĪ LETTER EE
11D68	𑌊	GUNJALA GONDĪ LETTER AI
11D69	𑌋	<reserved>
11D6A	𑌌	GUNJALA GONDĪ LETTER OO
11D6B	𑌍	GUNJALA GONDĪ LETTER AU

Consonants

11D6C	𑌎	GUNJALA GONDĪ LETTER YA
11D6D	𑌏	GUNJALA GONDĪ LETTER VA
11D6E	𑌐	GUNJALA GONDĪ LETTER BA
11D6F	𑌑	GUNJALA GONDĪ LETTER BHA
11D70	𑌒	GUNJALA GONDĪ LETTER MA
11D71	𑌓	GUNJALA GONDĪ LETTER KA
11D72	𑌔	GUNJALA GONDĪ LETTER KHA
11D73	𑌕	GUNJALA GONDĪ LETTER TA
11D74	𑌖	GUNJALA GONDĪ LETTER THA
11D75	𑌗	GUNJALA GONDĪ LETTER LA
11D76	𑌘	GUNJALA GONDĪ LETTER GA
11D77	𑌙	GUNJALA GONDĪ LETTER GHA
11D78	𑌚	GUNJALA GONDĪ LETTER DA
11D79	𑌛	GUNJALA GONDĪ LETTER DHA
11D7A	𑌜	GUNJALA GONDĪ LETTER NA
11D7B	𑌝	GUNJALA GONDĪ LETTER CA
11D7C	𑌞	GUNJALA GONDĪ LETTER CHA
11D7D	𑌟	GUNJALA GONDĪ LETTER TTA
11D7E	𑌠	GUNJALA GONDĪ LETTER TTHA
11D7F	𑌡	GUNJALA GONDĪ LETTER LLA
11D80	𑌢	GUNJALA GONDĪ LETTER JA
11D81	𑌣	GUNJALA GONDĪ LETTER JHA
11D82	𑌤	GUNJALA GONDĪ LETTER DDA
11D83	𑌥	GUNJALA GONDĪ LETTER DDHA
11D84	𑌦	GUNJALA GONDĪ LETTER NGA
11D85	𑌧	GUNJALA GONDĪ LETTER PA
11D86	𑌨	GUNJALA GONDĪ LETTER PHA
11D87	𑌩	GUNJALA GONDĪ LETTER HA
11D88	𑌪	GUNJALA GONDĪ LETTER RA
11D89	𑌫	GUNJALA GONDĪ LETTER SA

Dependent vowel signs

11D8A	𑌬	GUNJALA GONDĪ VOWEL SIGN AA
11D8B	𑌭	GUNJALA GONDĪ VOWEL SIGN I
11D8C	𑌮	GUNJALA GONDĪ VOWEL SIGN II
11D8D	𑌯	GUNJALA GONDĪ VOWEL SIGN U
11D8E	𑌰	GUNJALA GONDĪ VOWEL SIGN UU
11D8F	𑌱	<reserved>
11D90	𑌲	GUNJALA GONDĪ VOWEL SIGN EE
11D91	𑌳	GUNJALA GONDĪ VOWEL SIGN AI
11D92	𑌴	<reserved>
11D93	𑌵	GUNJALA GONDĪ VOWEL SIGN OO
11D94	𑌶	GUNJALA GONDĪ VOWEL SIGN AU

Various signs

11D95	𑌷	GUNJALA GONDĪ SIGN ANUSVARA
11D96	𑌸	GUNJALA GONDĪ SIGN VISARGA

Virama

11D97	𑌹	GUNJALA GONDĪ VIRAMA
• used for producing conjuncts		

Symbol

11D98	𑌺	GUNJALA GONDĪ OM
-------	---	------------------

Digits

11DA0	𑌻	GUNJALA GONDĪ DIGIT ZERO
11DA1	𑌼	GUNJALA GONDĪ DIGIT ONE
11DA2	𑌽	GUNJALA GONDĪ DIGIT TWO
11DA3	𑌾	GUNJALA GONDĪ DIGIT THREE
11DA4	𑌿	GUNJALA GONDĪ DIGIT FOUR
11DA5	𑍀	GUNJALA GONDĪ DIGIT FIVE
11DA6	𑍁	GUNJALA GONDĪ DIGIT SIX
11DA7	𑍂	GUNJALA GONDĪ DIGIT SEVEN
11DA8	𑍃	GUNJALA GONDĪ DIGIT EIGHT
11DA9	𑍄	GUNJALA GONDĪ DIGIT NINE

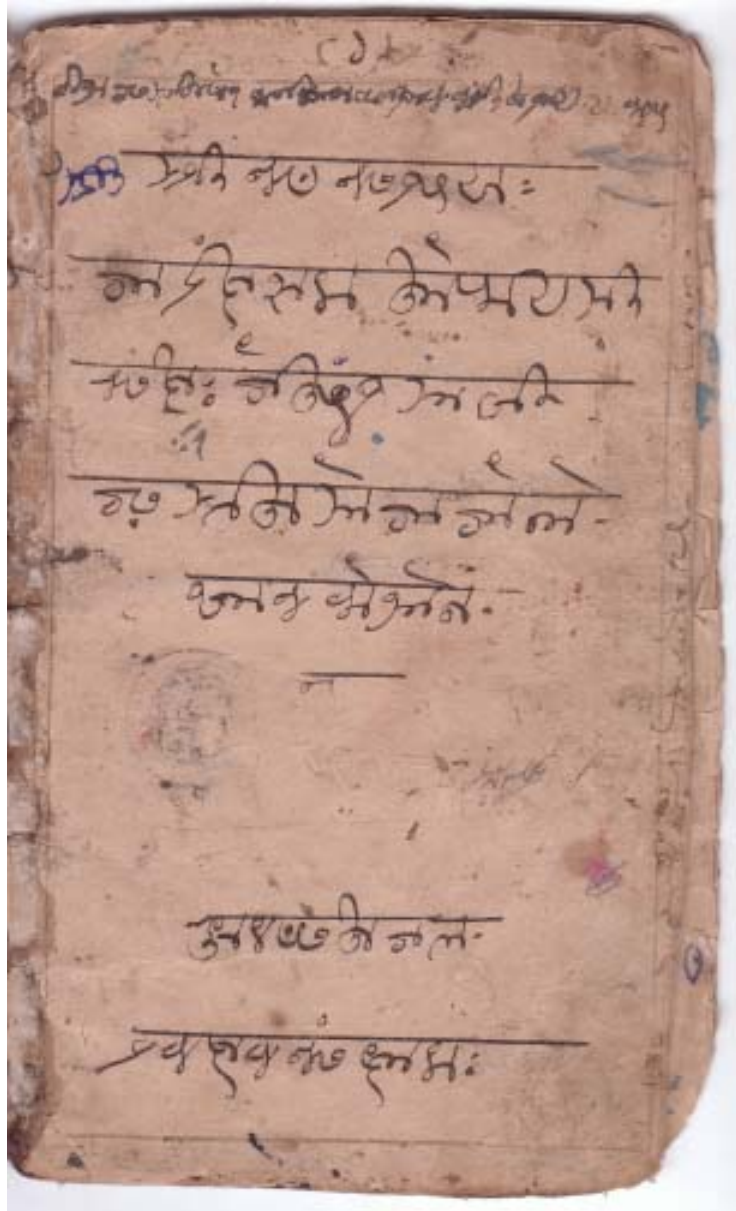


Figure 1: Title page from a hand-written book in Gunjala Gondi (from Rao, et al. 2008).

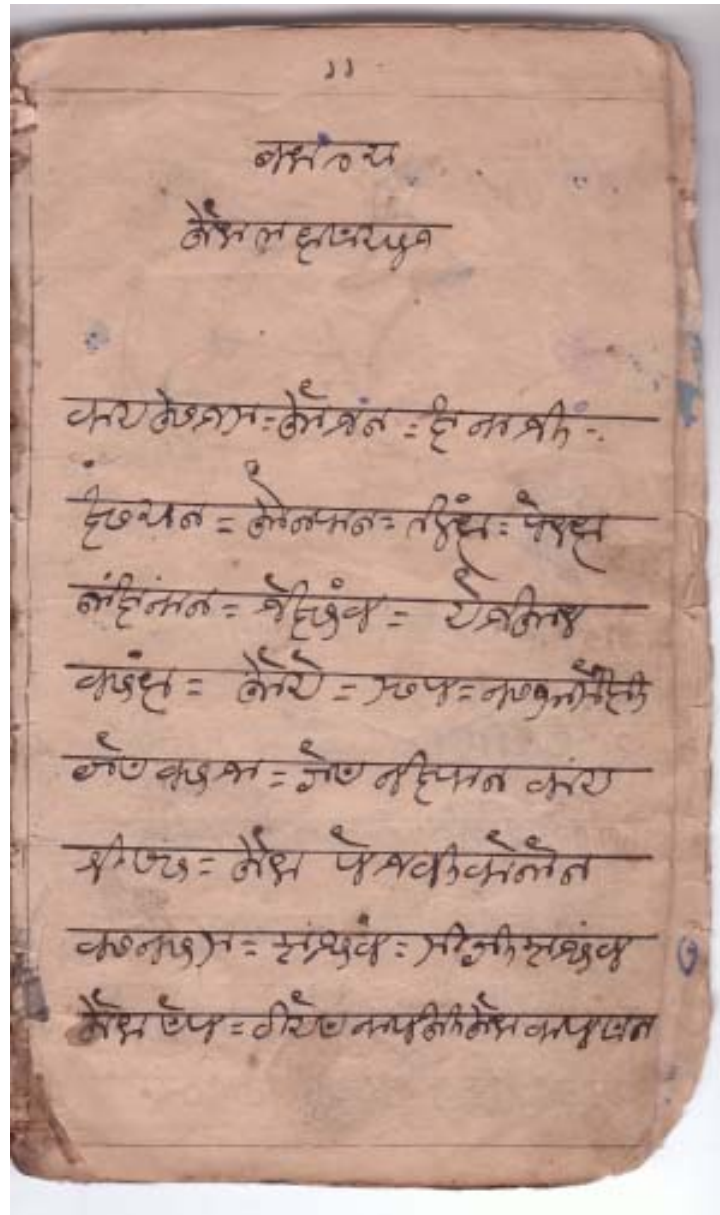


Figure 2: Page from a hand-written book in Gunjala Gondi (from Rao, et al. 2008).

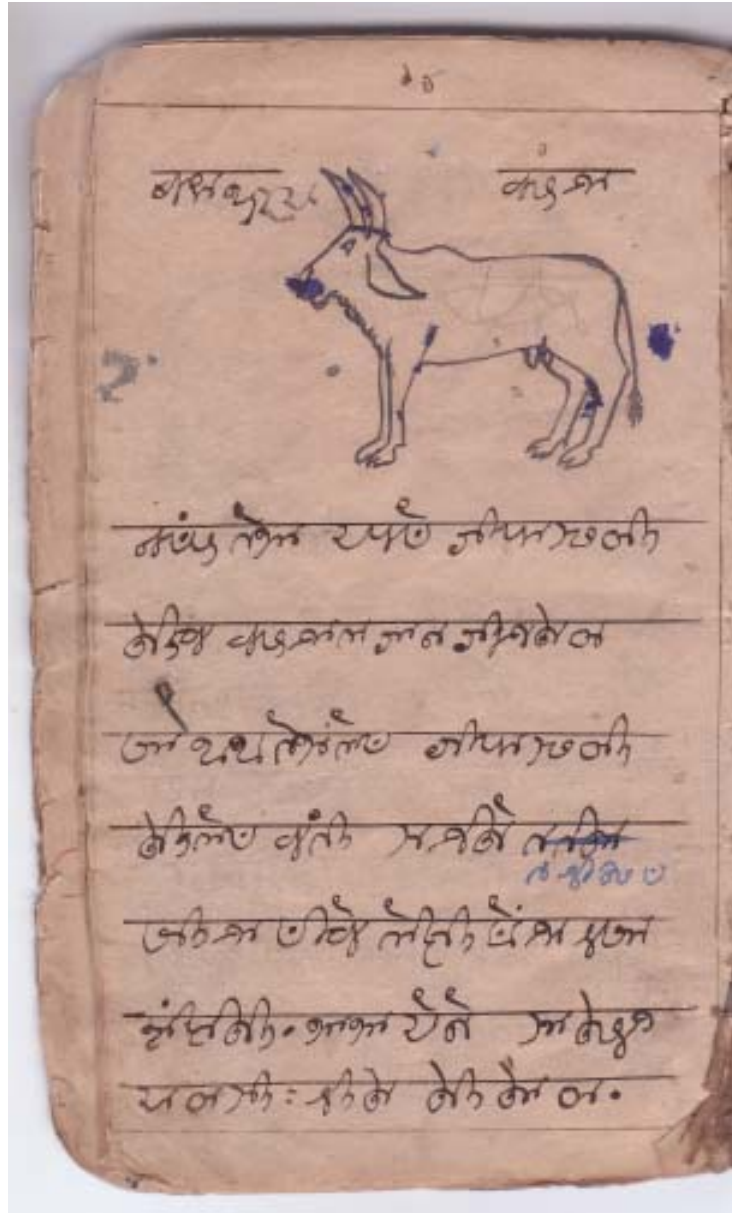


Figure 3: Page from a hand-written book in Gunjala Gondi (from Rao, et al. 2008).

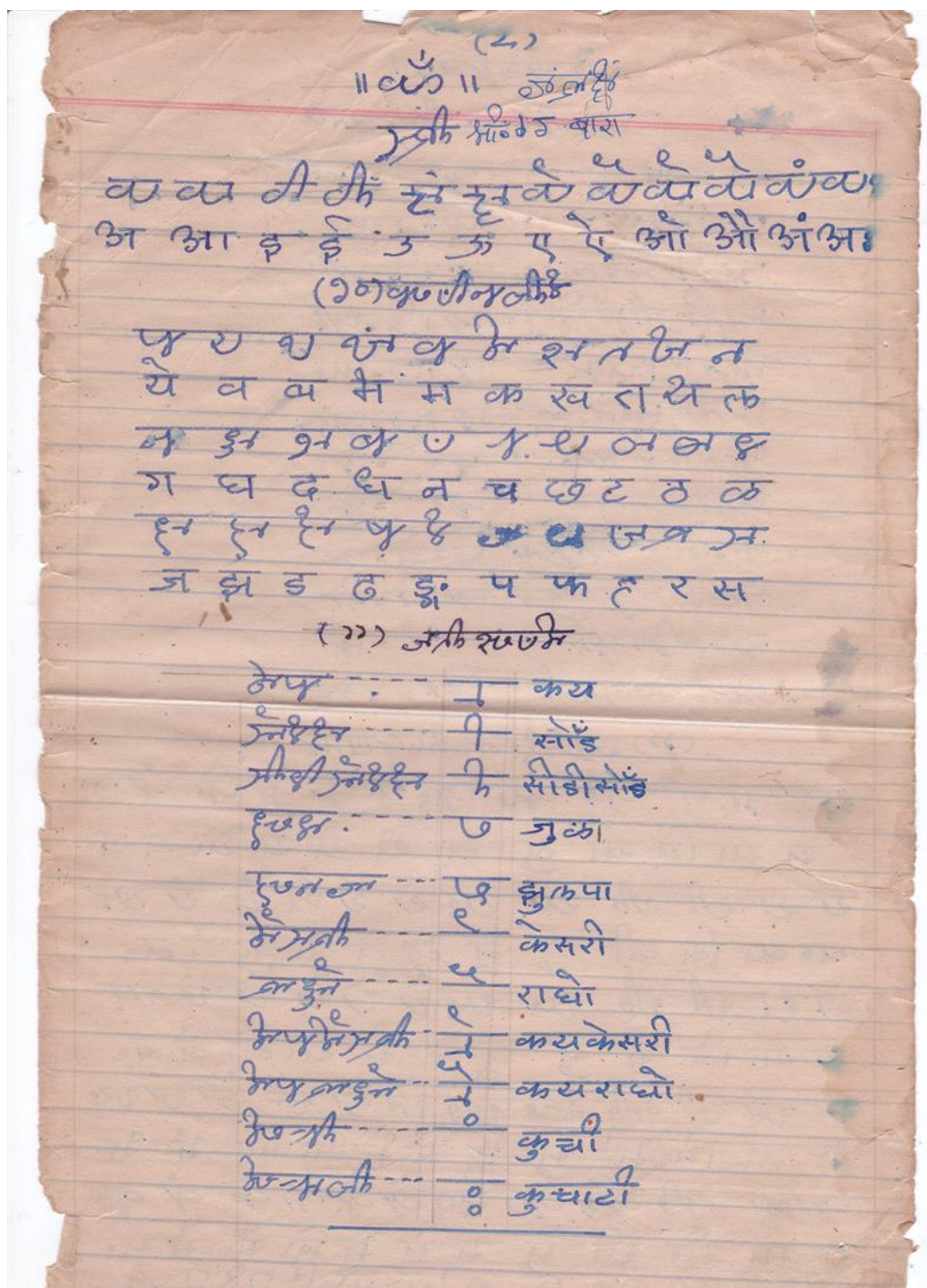
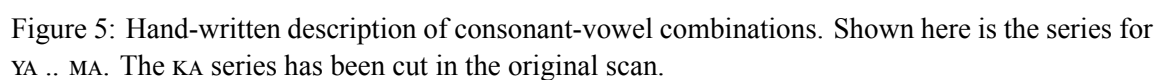


Figure 4: Hand-written page showing the Gunjala Gondi vowel letters, consonants, and vowel signs. The ుଁ GUNJALA GONDI OM is shown at the top of the page.



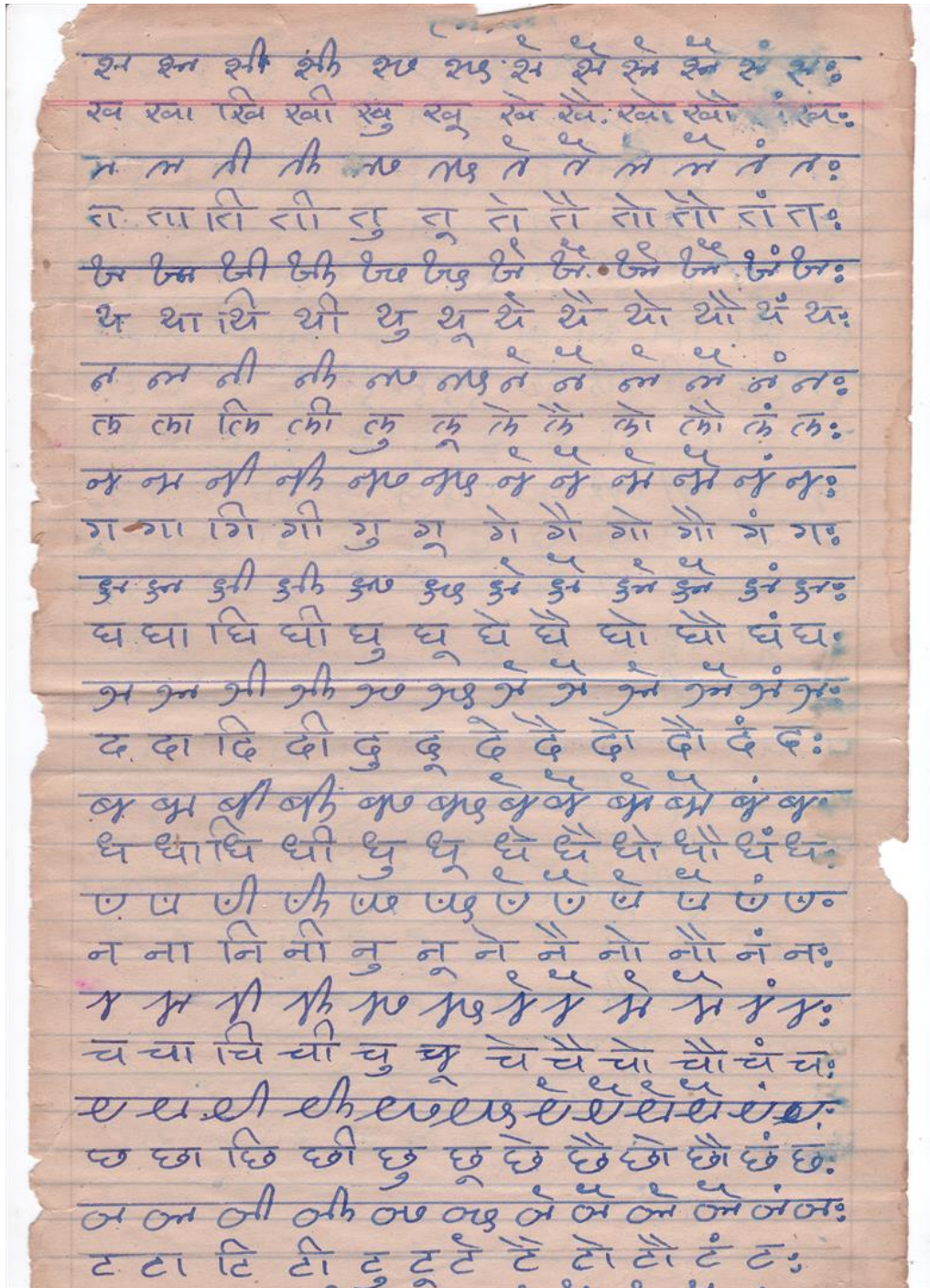


Figure 6: Hand-written forms of consonant-vowel combinations for KHA .. TTA. The TTHA series has been cut in the original scan.

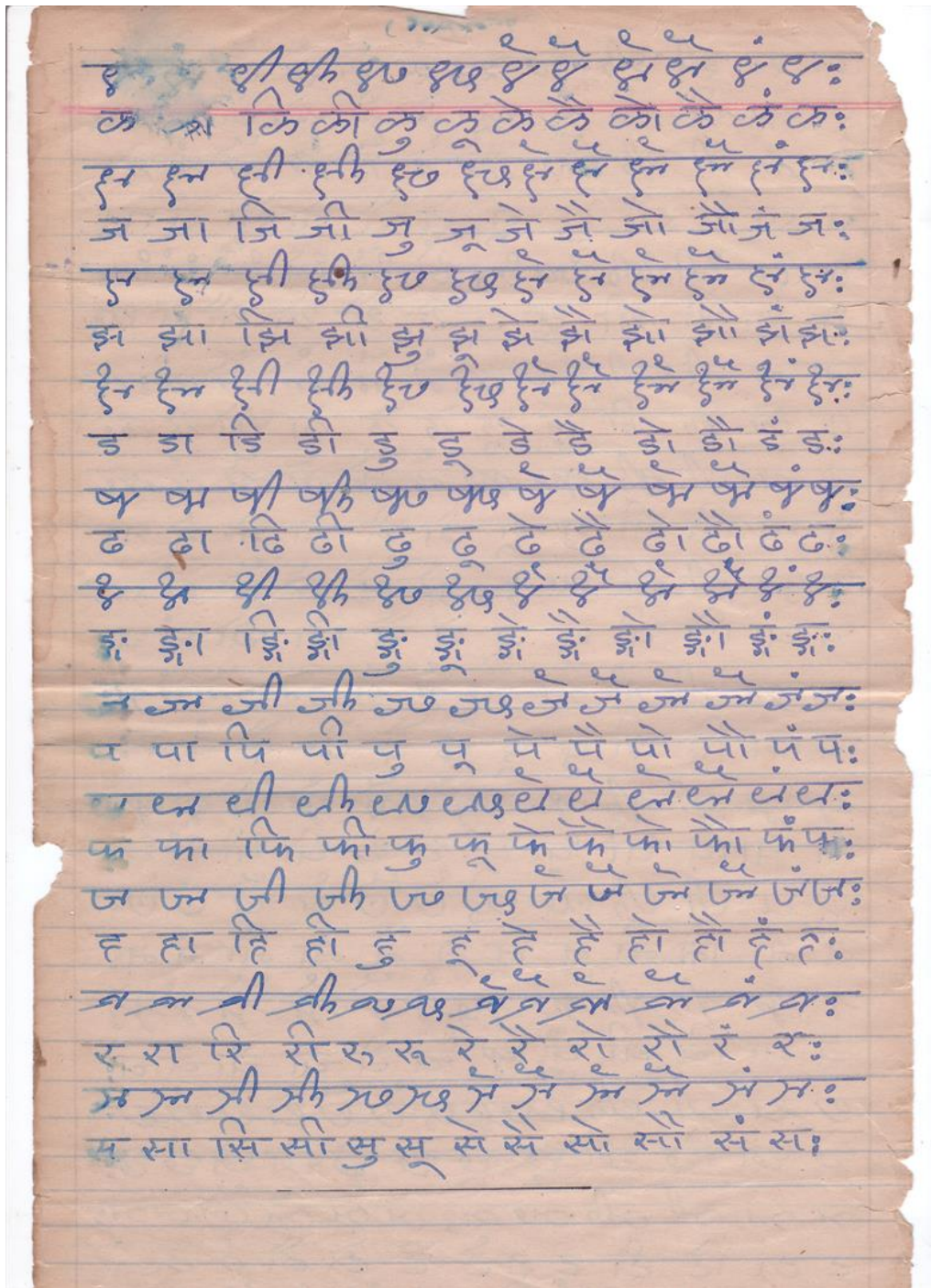


Figure 7: Hand-written forms of consonant-vowel combinations for LLA .. SA

గుంజాల గోండి లిపి అచ్చులు - హల్లులు

ఠోఠో = లేక్ = అచ్చులు

చ అ	ఛ ఆ	చి ఇ	చి ఈ	ఞ ఉ	ఞ ఊ
చీ ఏ	చీ ఐ	ఛో ఓ	ఛో ఔ	చే అం	చే అః

ఠోఠోఠో = సూర్క్ = హల్లులు

ఞ య	ఞ వ	ఞ బ	ఞ భ	ఞ మ
ఠో క	ఠో ఖ	ఠో త	ఠో థ	ఠో ల
ఠో గ	ఠో ఘ	ఠో ద	ఠో ధ	ఠో న
ఠో చ	ఠో ఛ	ఠో ట	ఠో ఠ	ఠో ణ
ఠో జ	ఠో ఝ	ఠో డ	ఠో ఢ	ఠో జ
ఠో ప	ఠో ఫ	ఠో హ	ఠో ర	ఠో స

Figure 8: A chart of Gunjala Gondi vowel and consonants letters from a printed primer, with Telugu correspondences.

గుణింతాలు-గుర్తులు

—	ఁ	ి	ీ	ు	ృ
్	్	్	్	్	్
—	నన	తల			
ఁ	కెళ	కయ్			
ి	నోండ				
ీ	సిడినోండ				
ు	జూడ				
ృ	జుల్ప				
్	కేసరి				
్	రాగొ				
్	కైకేసరి				
్	కైరాగొ				
్	కుచి				
్	కుచటి				

Figure 9: A chart of Gunjala Gondi dependent vowel signs from a printed primer, with Telugu correspondences.

గుంజాల గోండి అంకెలు

1	౧	ఁఁఁఁ	1	ఉంది
2	౨	ఁఁఁఁ	2	రండ్
3	౩	ఁఁఁఁ	3	ముండ్
4	౪	ఁఁఁఁ	4	నాలుంగ్
5	౫	ఁఁఁఁ	5	సియుంగ్
6	౬	ఁఁఁఁ	6	సారుంగ్
7	౭	ఁఁఁఁ	7	యేడుంగ్
8	౮	ఁఁఁఁ	8	అన్
9	౯	ఁఁఁఁ	9	పొన్
10	౧౦	ఁఁఁఁ	10	ధన్
11	౧౧	ఁఁఁఁ	11	పతి
12	౧౨	ఁఁఁఁ	12	పారండ్
13	౧౩	ఁఁఁఁ	13	ముద్ద
14	౧౪	ఁఁఁఁ	14	నంద
15	౧౫	ఁఁఁఁ	15	సీప
16	౧౬	ఁఁఁఁ	16	సట్ట
17	౧౭	ఁఁఁఁ	17	రేఖ
18	౧౮	ఁఁఁఁ	18	అప్ప
19	౧౯	ఁఁఁఁ	19	దర్నిన్
20	౨౦	ఁఁఁఁ	20	కండిన్

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Figure 10: A chart showing Gunjala Gondi digits from a printed primer, with Telugu correspondences.

గుంజాల గోండి లిపి ఒత్తులు

య్య	వ్	బ్	భ్	మ్	క్క	బ్	త్త	థ్	ల్
కొక	లల	లల	లలల	కొక	రెరె	కొక	గ	లెలె	నన
కొక	లల	లల	లలల	కొక	రెరె	కొక	గ	లెలె	నన
కొక	లల	లల	లలల	కొక	రెరె	కొక	గ	లెలె	నన
కొక	లల	లల	లలల	కొక	రెరె	కొక	గ	లెలె	నన
గ	ప్తు	త్త	త్త	న్న	చ్చ	భ్	ట్	థ్	ణ్
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక
జ్	ట్టు	త్త	త్త	జ్	ప్ప	భ్	హ్	ర	స్
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక
కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక	కొక

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Figure 11: A chart containing examples of Gunjala Gondi conjuncts from a printed primer.

	Gunjala Gondi	Modi		Gunjala Gondi	Modi
YA	ਯ	ਯ	CA	ਯ	ਯ
VA	ਵ	ਵ	CHA	ਯ	ਯ
BA	ਬ	ਬ	TTA	ਯ	ਯ
BHA	ਯ	ਯ	TTHA	ਯ	ਯ
MA	ਮ	ਮ	LLA	ਯ	ਯ
KA	ਕ	ਕ	JA	ਯ	ਯ
KHA	ਕ	ਕ	JHA	ਯ	ਯ
TA	ਤ	ਤ	DDA	ਯ	ਯ
THA	ਯ	ਯ	DDHA	ਯ	ਯ
LA	ਲ	ਲ	NGA	ਯ	ਯ
GA	ਗ	ਗ	PA	ਯ	ਯ
GHA	ਗ	ਗ	PHA	ਯ	ਯ
DA	ਯ	ਯ	HA	ਯ	ਯ
DHA	ਯ	ਯ	RA	ਯ	ਯ
NA	ਨ	ਨ	SA	ਯ	ਯ

Table 4: Comparison of Gunjala Gondi and Modi consonant letters.

	Gunjala Gondi	Modi		Gunjala Gondi	Modi
A	𑌒	𑌒			
AA	𑌓	𑌓	VOWEL SIGN AA	𑌓̄	𑌓̄
I	𑌔	𑌔	VOWEL SIGN I	𑌔̄	𑌔̄
II	𑌕	𑌕	VOWEL SIGN II	𑌕̄	𑌕̄
U	𑌖	𑌖	VOWEL SIGN U	𑌖̄	𑌖̄
UU	𑌗	𑌗	VOWEL SIGN UU	𑌗̄	𑌗̄
E	—	𑌘	VOWEL SIGN E	—	𑌘̄
EE	𑌙	—	VOWEL SIGN EE	𑌙̄	—
AI	𑌚	𑌙	VOWEL SIGN AI	𑌚̄	𑌙̄
O	—	𑌛	VOWEL SIGN O	—	𑌛̄
OO	𑌜	—	VOWEL SIGN OO	𑌜̄	—
AU	𑌝	𑌛	VOWEL SIGN AU	𑌝̄	𑌛̄

Table 5: Comparison of Gunjala Gondi and Modi vowel letters and signs.

	Gunjala Gondi	Modi
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 6: Comparison of Gunjala Gondi and Modi digits.

**ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹**

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.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://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title: **Proposal to encode the Gunjala Gondi script in Unicode**
2. Requester's name: **Anshuman Pandey / Script Encoding Initiative**
3. Requester type (Member body/Liaison/Individual contribution): **Liaison contribution**
4. Submission date: **4 November 2015**
5. Requester's reference (if applicable):
6. Choose one of the following:
- This is a complete proposal: **Yes**
- (or) More information will be provided later:

B. Technical – General

1. Choose one of the following:
- a. This proposal is for a new script (set of characters): **Yes**
- Proposed name of script: **Gunjala Gondi**
- b. The proposal is for addition of character(s) to an existing block:
- Name of the existing block:
2. Number of characters in proposal: **63**
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) | | B.2-Specialized (large collection) | |
| C-Major extinct | | D-Attested extinct | | E-Minor extinct | |
| F-Archaic Hieroglyphic or Ideographic | | G-Obscure or questionable usage symbols | | | |
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?
- b. Are the character shapes attached in a legible form suitable for review?
5. Fonts related:
- a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard? **Anshuman Pandey**
- b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.): **Sridhar Murthy**
6. References:
- a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? **Yes**
- b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? **Yes**
7. Special encoding issues:
- Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? **Yes**

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.

¹ Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

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