

Title: Preliminary Proposal to Encode the Gondi Script in the UCS
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1 Introduction

The purpose of this document is to bring attention to the Gondi script. It provides a basic description of the writing system, a preliminary code chart and names list, character properties, and a few specimens. Additional research is required in order to determine the nature of usage and current status of the script.

2 Background

Gondi is a Brahmi-based script used for writing Gondi (ISO 639-3: gon), a Dravidian language spoken by 2.6 million people primarily in Madhya Pradesh, India, with some speakers in Maharashtra and Andhra Pradesh. The language is generally written in Devanagari and Telugu.

The Gondi script described here was designed by Munshi Mangal Singh Masaram of Balaghat district, Madhya Pradesh in 1928.¹ While letters of Gondi may resemble those of other scripts, it has no genetic relationship to any writing system.

The script is illustrated in several specimens. The Central Institute of Indian Languages (CIIL) has in its collections a hand-drawn chart of Masaram's script from 1951 (see Figure 3). An excerpt from a photograph of a Gondi alphabet chart is given in a presentation produced by the National Folklore Support Centre (NFSC) and Jatan Trust (see Figure 4). It appears that a digitized font for Gondi has been created, but the present author has seen its glyphs only in a keyboard map corresponding to a non-Unicode Devanagari font (see Figure 5).

An analysis of the available specimens shows that the script has evolved since its creation in 1928. The glyphs shown in the NFSC presentation and in the Gondi keyboard map appear to represent a modern form of Gondi, while those shown in the CIIL chart represent either the original script or an intermediate stage. The present author has not yet seen a specimen of Masaram's original script from 1928, therefore, it is uncertain how much of the 1951 script differs from the 1928 original. The majority of changes are the shapes of certain glyphs. These differences may be attributed to simplification for ease of writing, eg. independent circles being joined as loops with a single stroke.

3 Writing System

Character Repertoire The proposed Gondi script consists of 69 letters: 36 consonant letters, 10 vowel letters, 10 vowel signs, 3 various signs, and 10 digits. A preliminary code chart (Figure 1) and names list (Figure 2) are provided.

¹ Ramakrishna et al. 1983: 136.

Basis for Glyph Shapes The vowel letters and signs are based upon those shown in Masaram (1951); the consonant letters are based primarily upon glyphs shown in Mandavi (2008); the digits are based upon Mandavi (2008) with reference to Masaram (1951).

Character Names Names for the characters are based upon those given in Masaram (1951), as shown in Figure 3. The proposed names follow the UCS convention for Brahmi-based Indic scripts.

Directionality The script is written from left-to-right.

Structure Each consonant letter possesses the inherent vowel *a*, which is presumably indicated by the horizontal line attached to a letter. The inherent vowel is silenced by removing the horizontal line or changed using vowel signs.

Virama There is no explicit character for *virāma*. However, in order to produce conjuncts as shown in Figure 3, a VIRAMA character has been proposed for encoding.

Conjuncts Gondi does not represent consonant conjuncts using complex ligatures. Conjuncts are written using half-forms of consonant letters, which are produced by removing the horizontal stroke at the right of each letter. There are four special exceptions: RA and three *akhaṇḍa* ligatures. Gondi RA exhibits contextual variation similar to that of Devanagari, ie. *repha* and *vattu*. Secondly, the conjuncts *kṣa*, *jña*, and *tra* are written using special ligatures and are not formed using half-forms of letters (see Section 5).

Vowel Signs Each vowel letter has an accompanying sign. A sign for VOCALIC R is attested, but there is no corresponding letter. All vowel signs are written to the right of the consonant letter, joined to the horizontal stroke.

Nasalization Nasalization is marked using ANUSVARA. It is written to the right of the accompanying letter.

Digits A full set of digits are attested.

Punctuation Latin punctuation is used (see Figure 3). Script-specific punctuation is not attested.

4 Character Properties

Character properties for Gondi are as follows:

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11500;GONDI LETTER A;Lo;0;L;;;;;N;;;;;
11501;GONDI LETTER AA;Lo;0;L;;;;;N;;;;;
11502;GONDI LETTER I;Lo;0;L;;;;;N;;;;;
11503;GONDI LETTER II;Lo;0;L;;;;;N;;;;;
11504;GONDI LETTER U;Lo;0;L;;;;;N;;;;;
11505;GONDI LETTER UU;Lo;0;L;;;;;N;;;;;
11506;GONDI LETTER E;Lo;0;L;;;;;N;;;;;
11507;GONDI LETTER AI;Lo;0;L;;;;;N;;;;;
11508;GONDI LETTER O;Lo;0;L;;;;;N;;;;;
11509;GONDI LETTER AU;Lo;0;L;;;;;N;;;;;
1150A;GONDI LETTER KA;Lo;0;L;;;;;N;;;;;
1150B;GONDI LETTER KHA;Lo;0;L;;;;;N;;;;;
1150C;GONDI LETTER GA;Lo;0;L;;;;;N;;;;;
1150D;GONDI LETTER GHA;Lo;0;L;;;;;N;;;;;
1150E;GONDI LETTER NGA;Lo;0;L;;;;;N;;;;;
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1150F;GONDI LETTER CA;Lo;0;L;;;;;N;;;;;
11510;GONDI LETTER CHA;Lo;0;L;;;;;N;;;;;
11511;GONDI LETTER JA;Lo;0;L;;;;;N;;;;;
11512;GONDI LETTER JHA;Lo;0;L;;;;;N;;;;;
11513;GONDI LETTER NYA;Lo;0;L;;;;;N;;;;;
11514;GONDI LETTER TTA;Lo;0;L;;;;;N;;;;;
11515;GONDI LETTER TTHA;Lo;0;L;;;;;N;;;;;
11516;GONDI LETTER DDA;Lo;0;L;;;;;N;;;;;
11517;GONDI LETTER DDHA;Lo;0;L;;;;;N;;;;;
11518;GONDI LETTER NNA;Lo;0;L;;;;;N;;;;;
11519;GONDI LETTER TA;Lo;0;L;;;;;N;;;;;
1151A;GONDI LETTER THA;Lo;0;L;;;;;N;;;;;
1151B;GONDI LETTER DA;Lo;0;L;;;;;N;;;;;
1151C;GONDI LETTER DHA;Lo;0;L;;;;;N;;;;;
1151D;GONDI LETTER NA;Lo;0;L;;;;;N;;;;;
1151E;GONDI LETTER PA;Lo;0;L;;;;;N;;;;;
1151F;GONDI LETTER PHA;Lo;0;L;;;;;N;;;;;
11520;GONDI LETTER BA;Lo;0;L;;;;;N;;;;;
11521;GONDI LETTER BHA;Lo;0;L;;;;;N;;;;;
11522;GONDI LETTER MA;Lo;0;L;;;;;N;;;;;
11523;GONDI LETTER YA;Lo;0;L;;;;;N;;;;;
11524;GONDI LETTER RA;Lo;0;L;;;;;N;;;;;
11525;GONDI LETTER LA;Lo;0;L;;;;;N;;;;;
11526;GONDI LETTER VA;Lo;0;L;;;;;N;;;;;
11527;GONDI LETTER SHA;Lo;0;L;;;;;N;;;;;
11528;GONDI LETTER SSA;Lo;0;L;;;;;N;;;;;
11529;GONDI LETTER SA;Lo;0;L;;;;;N;;;;;
1152A;GONDI LETTER HA;Lo;0;L;;;;;N;;;;;
1152B;GONDI LETTER KSSA;Lo;0;L;;;;;N;;;;;
1152C;GONDI LETTER TRA;Lo;0;L;;;;;N;;;;;
1152D;GONDI LETTER JNYA;Lo;0;L;;;;;N;;;;;
11530;GONDI VOWEL SIGN AA;Mn;0;NSM;;;;;N;;;;;
11531;GONDI VOWEL SIGN I;Mn;0;NSM;;;;;N;;;;;
11532;GONDI VOWEL SIGN II;Mn;0;NSM;;;;;N;;;;;
11533;GONDI VOWEL SIGN U;Mn;0;NSM;;;;;N;;;;;
11534;GONDI VOWEL SIGN UU;Mn;0;NSM;;;;;N;;;;;
11535;GONDI VOWEL SIGN E;Mn;0;NSM;;;;;N;;;;;
11536;GONDI VOWEL SIGN AI;Mn;0;NSM;;;;;N;;;;;
11537;GONDI VOWEL SIGN O;Mn;0;NSM;;;;;N;;;;;
11538;GONDI VOWEL SIGN AU;Mn;0;NSM;;;;;N;;;;;
11539;GONDI SIGN ANUSVARA;Mn;0;NSM;;;;;N;;;;;
1153A;GONDI SIGN VISARGA;Mn;0;NSM;;;;;N;;;;;
1153B;GONDI VOWEL SIGN VOCALIC R;Mn;0;NSM;;;;;N;;;;;
1153C;GONDI SIGN VIRAMA;Mn;9;NSM;;;;;N;;;;;
11540;GONDI DIGIT ZERO;Nd;0;L;0;0;0;N;;;;;
11541;GONDI DIGIT ONE;Nd;0;L;1;1;1;N;;;;;
11542;GONDI DIGIT TWO;Nd;0;L;2;2;2;N;;;;;
11543;GONDI DIGIT THREE;Nd;0;L;3;3;3;N;;;;;
11544;GONDI DIGIT FOUR;Nd;0;L;4;4;4;N;;;;;
11545;GONDI DIGIT FIVE;Nd;0;L;5;5;5;N;;;;;
11546;GONDI DIGIT SIX;Nd;0;L;6;6;6;N;;;;;
11547;GONDI DIGIT SEVEN;Nd;0;L;7;7;7;N;;;;;
11548;GONDI DIGIT EIGHT;Nd;0;L;8;8;8;N;;;;;
11549;GONDI DIGIT NINE;Nd;0;L;9;9;9;N;;;;;

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5 Issues

Encoding Ligatures as Atomic Characters Three of the consonant letters proposed for encoding are ligatures: KSSA, JNYA, and TRA. As in other Indic scripts, these are *akhaṇḍa* ligatures. These would normally

be produced using VIRAMA and the ligature would be managed at the font level. Since Gondi does not have complex ligatures, it might be useful to encode these three ligatures as atomic characters.

6 References

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7 Acknowledgments

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














































































	1150	1151	1152	1153	1154
0	 11500	 11510	 11520	 11530	 11540
1	 11501	 11511	 11521	 11531	 11541
2	 11502	 11512	 11522	 11532	 11542
3	 11503	 11513	 11523	 11533	 11543
4	 11504	 11514	 11524	 11534	 11544
5	 11505	 11515	 11525	 11535	 11545
6	 11506	 11516	 11526	 11536	 11546
7	 11507	 11517	 11527	 11537	 11547
8	 11508	 11518	 11528	 11538	 11548
9	 11509	 11519	 11529	 11539	 11549
A	 1150A	 1151A	 1152A	 1153A	
B	 1150B	 1151B	 1152B	 1153B	
C	 1150C	 1151C	 1152C	 1153C	
D	 1150D	 1151D	 1152D		
E	 1150E	 1151E			
F	 1150F	 1151F			

Figure 1: Proposed code chart for Gondi

Vowel letters

11500	᱁	GONDI LETTER A
11501	᱂	GONDI LETTER AA
11502	᱃	GONDI LETTER I
11503	᱄	GONDI LETTER II
11504	᱅	GONDI LETTER U
11505	᱆	GONDI LETTER UU
11506	᱇	GONDI LETTER E
11507	᱈	GONDI LETTER AI
11508	᱉	GONDI LETTER O
11509	᱊	GONDI LETTER AU

Digits

11540	᱀	GONDI DIGIT ZERO
11541	᱁	GONDI DIGIT ONE
11542	᱂	GONDI DIGIT TWO
11543	᱃	GONDI DIGIT THREE
11544	᱄	GONDI DIGIT FOUR
11545	᱅	GONDI DIGIT FIVE
11546	᱆	GONDI DIGIT SIX
11547	᱇	GONDI DIGIT SEVEN
11548	᱈	GONDI DIGIT EIGHT
11549	᱉	GONDI DIGIT NINE

Consonant letters

1150A	᱋	GONDI LETTER KA
1150B	᱌	GONDI LETTER KHA
1150C	ᱍ	GONDI LETTER GA
1150D	ᱎ	GONDI LETTER GHA
1150E	ᱏ	GONDI LETTER NGA
1150F	᱐	GONDI LETTER CA
11510	᱑	GONDI LETTER CHA
11511	᱒	GONDI LETTER JA
11512	᱓	GONDI LETTER JHA
11513	᱔	GONDI LETTER NYA
11514	᱕	GONDI LETTER TTA
11515	᱖	GONDI LETTER TTHA
11516	᱗	GONDI LETTER DDA
11517	᱘	GONDI LETTER DDHA
11518	᱙	GONDI LETTER NNA
11519	ᱚ	GONDI LETTER TA
1151A	ᱛ	GONDI LETTER THA
1151B	ᱜ	GONDI LETTER DA
1151C	ᱝ	GONDI LETTER DHA
1151D	ᱞ	GONDI LETTER NA
1151E	ᱟ	GONDI LETTER PA
1151F	ᱠ	GONDI LETTER PHA
11520	ᱡ	GONDI LETTER BA
11521	ᱢ	GONDI LETTER BHA
11522	ᱣ	GONDI LETTER MA
11523	ᱤ	GONDI LETTER YA
11524	ᱥ	GONDI LETTER RA
11525	ᱦ	GONDI LETTER LA
11526	ᱧ	GONDI LETTER VA
11527	ᱨ	GONDI LETTER SHA
11528	ᱩ	GONDI LETTER SSA
11529	ᱪ	GONDI LETTER SA
1152A	ᱫ	GONDI LETTER HA
1152B	ᱬ	GONDI LETTER KSSA
1152C	ᱭ	GONDI LETTER TRA
1152D	ᱮ	GONDI LETTER JNYA

Dependent vowel signs

11530	ᱠᱟ	GONDI VOWEL SIGN AA
11531	ᱠᱟ᱃	GONDI VOWEL SIGN I
11532	ᱠᱟ᱄	GONDI VOWEL SIGN II
11533	ᱠᱟ᱅	GONDI VOWEL SIGN U
11534	ᱠᱟ᱆	GONDI VOWEL SIGN UU
11535	ᱠᱟ᱇	GONDI VOWEL SIGN E
11536	ᱠᱟ᱈	GONDI VOWEL SIGN AI
11537	ᱠᱟ᱉	GONDI VOWEL SIGN O
11538	ᱠᱟ᱊	GONDI VOWEL SIGN AU

Various signs

11539	ᱠᱟᱨ	GONDI SIGN ANUSVARA
1153A	ᱠᱟᱩ	GONDI SIGN VISARGA
1153B	ᱠᱟᱪ	GONDI VOWEL SIGN VOCALIC R
1153C	ᱠᱟᱫ	GONDI SIGN VIRAMA

Figure 2: Proposed names list for Gondi

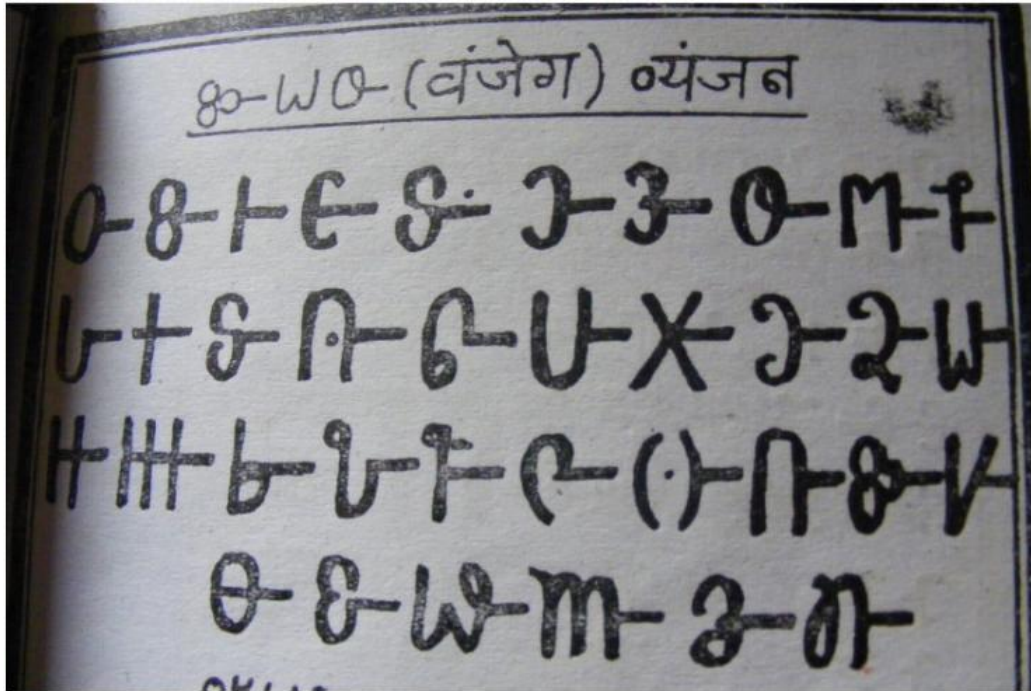


Figure 4: (from National Folklore Support Center and Jatan Trust: 13).

HINDI KRUTI DEV AND GONDI FONT KEYBOARD

!!	/	रु	++	":	'	'-	'	;;	ख	.
७	ॱ	ॱ३	ॱ४	ॱ५	ॱ६	ॱ७	ॱ८	ॱ९	ॱ०	ॱ१
ॱ५	ॱ६	ॱ७	ॱ८	ॱ९	ॱ०	ॱ१	ॱ२	ॱ३	ॱ४	ॱ५
ॱ६	ॱ७	ॱ८	ॱ९	ॱ०	ॱ१	ॱ२	ॱ३	ॱ४	ॱ५	ॱ६
ॱ७	ॱ८	ॱ९	ॱ०	ॱ१	ॱ२	ॱ३	ॱ४	ॱ५	ॱ६	ॱ७
ॱ८	ॱ९	ॱ०	ॱ१	ॱ२	ॱ३	ॱ४	ॱ५	ॱ६	ॱ७	ॱ८
ॱ९	ॱ०	ॱ१	ॱ२	ॱ३	ॱ४	ॱ५	ॱ६	ॱ७	ॱ८	ॱ९
ॱ०	ॱ१	ॱ२	ॱ३	ॱ४	ॱ५	ॱ६	ॱ७	ॱ८	ॱ९	ॱ०
ॱ१	ॱ२	ॱ३	ॱ४	ॱ५	ॱ६	ॱ७	ॱ८	ॱ९	ॱ०	ॱ१

Figure 5: (from Mandavi 2008).