

# Kannada Script LGR Proposal

Introduction, Current Analysis and Next Steps

Dr. U.B. Pavanaja

NBGP F2F Meeting, Colombo  
14 December 2017



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# Introduction to Kannada Script

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- ⦿ Population – there are about 60 million speakers of Kannada language which uses Kannada script.
- ⦿ Geographical area - Kannada is spoken predominantly by the people of Karnataka State of India. It is also spoken by significant linguistic minorities in the states of Andhra Pradesh, Telangana, Tamil Nadu, Maharashtra, Kerala, Goa and abroad
- ⦿ Languages written in Kannada script – Kannada, Tulu, Kodava (Coorgi), Konkani, Havyaka, Sanketi, Beary (byaari), Arebaase, Koraga

# Classification of Characters

## Swaras (vowels)

Letter	ಅ	ಆ	ಇ	ಈ	ಉ	ಊ	ಋ	ಎ	ಏ	ಐ	ಒ	ಓ	ಔ
Vowel sign/ matra	N/A	ಾ	ಿ	ೀ	ು	ೂ	ೃ	ೆ	ೇ	ೈ	ೊ	ೋ	ೌ

## Yogavahas

Anusvara	ಂ
Visarga	ಃ

In Kannada, all consonants (*vyanjanas*) when written as ಕ (ka), ಖ (kha), ಗ (ga), etc. actually have a built-in vowel sign (*matra*) of vowel ಅ (a) in them.

# Classification of Characters

## Vargeeya vyanjana (structured consonants)

	voiceless	voiceless aspirate	voiced	voiced aspirate	nasal
Velars	ಕ	ಖ	ಗ	ಘ	ಙ
Palatals	ಚ	ಛ	ಜ	ಝ	ಞ
Retroflex	ಟ	ಠ	ಡ	ಢ	ಣ
Dentals	ತ	ಥ	ದ	ಧ	ನ
Labials	ಪ	ಫ	ಬ	ಭ	ಮ

## Avargeeya vyanjana (unstructured consonants)

ಯ	ರ	ಱ (obsolete)	ಲ	ವ	ಶ	ಷ	ಸ	ಹ	ಳ	ಱ (obsolete)
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# Repertoire Included-1

Sr. No.	Unicode Code Point	Glyph	Character Name	Unicode General Category	Indic Syllabic Category	Ref	Widespread use ? [Yes/No]
1	0C82	◌◌	KANNADA SIGN ANUSVARA	Mc	Anusvara		Yes
2	0C83	◌ಃ	KANNADA SIGN VISARGA	Mc	Visarga		Yes
3	0C85	ಅ	KANNADA LETTER A	Lo	Vowel		Yes
4	0C86	ಆ	KANNADA LETTER AA	Lo	Vowel		Yes
5	0C87	ಇ	KANNADA LETTER I	Lo	Vowel		Yes
6	0C88	ಈ	KANNADA LETTER II	Lo	Vowel		Yes
7	0C89	ಉ	KANNADA LETTER U	Lo	Vowel		Yes
8	0C8A	ಊ	KANNADA LETTER UU	Lo	Vowel		Yes
9	0C8B	ಋ	KANNADA LETTER VOCALIC R	Lo	Vowel		Yes
10	0C8E	ಎ	KANNADA LETTER E	Lo	Vowel		Yes

# Repertoire Included-2

Sr. No.	Unicode Code Point	Glyph	Character Name	Unicode General Category	Indic Syllabic Category	Ref	Widespread use ? [Yes/No]
11	0C8F	ಏ	KANNADA LETTER EE	Lo	Vowel		Yes
12	0C90	ಐ	KANNADA LETTER AI	Lo	Vowel		Yes
13	0C92	ಒ	KANNADA LETTER O	Lo	Vowel		Yes
14	0C93	ಓ	KANNADA LETTER OO	Lo	Vowel		Yes
15	0C94	ಔ	KANNADA LETTER AU	Lo	Vowel		Yes
16	0C95	ಕ	KANNADA LETTER KA	Lo	Consonant		Yes
17	0C96	ಖ	KANNADA LETTER KHA	Lo	Consonant		Yes
18	0C97	ಗ	KANNADA LETTER GA	Lo	Consonant		Yes
19	0C98	ಘ	KANNADA LETTER GHA	Lo	Consonant		Yes
20	0C99	ಙ	KANNADA LETTER NGA	Lo	Consonant		Yes

# Repertoire Included-3

Sr. No.	Unicode Code Point	Glyph	Character Name	Unicode General Category	Indic Syllabic Category	Ref	Widespread use ? [Yes/No]
21	0C9A	ಚ	KANNADA LETTER CA	Lo	Consonant		Yes
22	0C9B	ಛ	KANNADA LETTER CHA	Lo	Consonant		Yes
23	0C9C	ಜ	KANNADA LETTER JA	Lo	Consonant		Yes
24	0C9D	ಝ	KANNADA LETTER JHA	Lo	Consonant		Yes
25	0C9E	ಞ	KANNADA LETTER NYA	Lo	Consonant		Yes
26	0C9F	ಟ	KANNADA LETTER TTA	Lo	Consonant		Yes
27	0CA0	ಠ	KANNADA LETTER TTHA	Lo	Consonant		Yes
28	0CA1	ಡ	KANNADA LETTER DDA	Lo	Consonant		Yes
29	0CA2	ಢ	KANNADA LETTER DDHA	Lo	Consonant		Yes
30	0CA3	ಣ	KANNADA LETTER NNA	Lo	Consonant		Yes



# Repertoire Included-4

Sr. No.	Unicode Code Point	Glyph	Character Name	Unicode General Category	Indic Syllabic Category	Ref	Widespread use ? [Yes/No]
31	0CA4	ತ	KANNADA LETTER TA	Lo	Consonant		Yes
32	0CA5	ಥ	KANNADA LETTER THA	Lo	Consonant		Yes
33	0CA6	ದ	KANNADA LETTER DA	Lo	Consonant		Yes
34	0CA7	ಧ	KANNADA LETTER DHA	Lo	Consonant		Yes
35	0CA8	ನ	KANNADA LETTER NA	Lo	Consonant		Yes
36	0CAA	ಪ	KANNADA LETTER PA	Lo	Consonant		Yes
37	0CAB	ಫ	KANNADA LETTER PHA	Lo	Consonant		Yes
38	0CAC	ಬ	KANNADA LETTER BA	Lo	Consonant		Yes
39	0CAD	ಭ	KANNADA LETTER BHA	Lo	Consonant		Yes
40	0CAE	ಮ	KANNADA LETTER MA	Lo	Consonant		Yes

# Repertoire Included-5

Sr. No.	Unicode Code Point	Glyph	Character Name	Unicode General Category	Indic Syllabic Category	Ref	Widespread use ? [Yes/No]
41	0CAF	ಯ	KANNADA LETTER YA	Lo	Consonant		Yes
42	0CB0	ರ	KANNADA LETTER RA	Lo	Consonant		Yes
43	0CB2	ಲ	KANNADA LETTER LA	Lo	Consonant		Yes
44	0CB3	ಳ	KANNADA LETTER LLA	Lo	Consonant		Yes
45	0CB5	ವ	KANNADA LETTER VA	Lo	Consonant		Yes
46	0CB6	ಶ	KANNADA LETTER SHA	Lo	Consonant		Yes
47	0CB7	ಷ	KANNADA LETTER SSA	Lo	Consonant		Yes
48	0CB8	ಸ	KANNADA LETTER SA	Lo	Consonant		Yes
49	0CB9	ಹ	KANNADA LETTER HA	Lo	Consonant		Yes
50	0CBE	ಾ	KANNADA VOWEL SIGN AA	Mc	Matra		Yes

# Repertoire Included-6

Sr. No.	Unicode Code Point	Glyph	Character Name	Unicode General Category	Indic Syllabic Category	Ref	Widespread use ? [Yes/No]
51	0CBF	ೞ	KANNADA VOWEL SIGN I	Mn	Matra		Yes
52	0CC0	ೞೆ	KANNADA VOWEL SIGN II	Mc	Matra		Yes
53	0CC1	ಱ	KANNADA VOWEL SIGN U	Mc	Matra		Yes
54	0CC2	ಱು	KANNADA VOWEL SIGN UU	Mc	Matra		Yes
55	0CC3	ಱ್ರ	KANNADA VOWEL SIGN VOCALIC R	Mc	Matra		Yes
56	0CC4	ಱ್ರ	KANNADA VOWEL SIGN VOCALIC RR	Mc	Matra		No
57	0CC6	ಱ್	KANNADA VOWEL SIGN E	Mn	Matra		Yes
58	0CC7	ಱ್ಱೆ	KANNADA VOWEL SIGN EE	Mc	Matra		Yes
59	0CC8	ಱ್ಱ್ರ	KANNADA VOWEL SIGN AI	Mc	Matra		Yes
60	0CCA	ಱ್ಱು	KANNADA VOWEL SIGN O	Mc	Matra		Yes

# Repertoire Included-7

Sr. No.	Unicode Code Point	Glyph	Character Name	Unicode General Category	Indic Syllabic Category	Ref	Widespread use ? [Yes/No]
61	0CCB	ೞ	KANNADA VOWEL SIGN OO	Mc	Matra		Yes
62	0CCC	ೞ	KANNADA VOWEL SIGN AU	Mn	Matra		Yes
63	0CCD	ೞ	KANNADA SIGN VIRAMA	Mn	Halant / Virama		Yes

# Repertoire Excluded-1

Sr. No.	Unicode Code Point	Glyph	Character Name	Reason for exclusion
1	U+080	□	KANNADA SIGN SPACING CANDRABINDU	Not in MSR-2
2	U+081	◌̣	KANNADA SIGN CANDRABINDU	Not in MSR-2
3	U+C8C	ಁ	KANNADA LETTER VOCALIC L	Not used in Kannada
4	U+CB1	ಱ	KANNADA LETTER RRA	Obsolete character, not used in modern Kannada
5	U+CBC	◌̣̣	KANNADA SIGN NUKTA	Does not belong to Kannada, not needed in LGR
6	U+CBD	ಽ	KANNADA SIGN AVAGRAHA	Not in MSR-2
7	U+CE0	ಋ	KANNADA LETTER VOCALIC RR	Not in MSR-2
8	U+CE1	ೠ	KANNADA LETTER VOCALIC LL	Not in MSR-2
9	U+0CE2	◌̣̣̣	KANNADA VOWEL SIGN VOCALIC L	Not in MSR-2
10	U+0CE3	◌̣̣̣̣	KANNADA VOWEL SIGN VOCALIC LL	Not in MSR-2

# Repertoire Excluded-2

Sr. No.	Unicode Code Point	Glyph	Character Name	Reason for exclusion
11	U+0CD5	◌e	KANNADA LENGTH MARK	Wrongly encoded by Unicode. Not to be used
12	U+0CD6	◌᳚	KANNADA AI LENGTH MARK	Wrongly encoded by Unicode. Not to be used
13	U+CF1	᳞	KANNADA SIGN JIHVAMULIYA	Not in MSR-2
14	U+CF2	◌oo	KANNADA SIGN UPADHMANIYA	Not in MSR-2

# Within Script Variants for Kannada

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- ⦿ There are no variants within the script for Kannada

# Cross-Script Variants for Kannada

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- ⦿ There are no cross-script variants for Kannada



# Whole Label Evaluation Rules (in plain English) - 1

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V	→	Vowel
M	→	Matra
C	→	Consonant
H	→	Halant / Virama
B	→	Anusvara
X	→	Visarga

# Whole Label Evaluation Rules (in plain English)

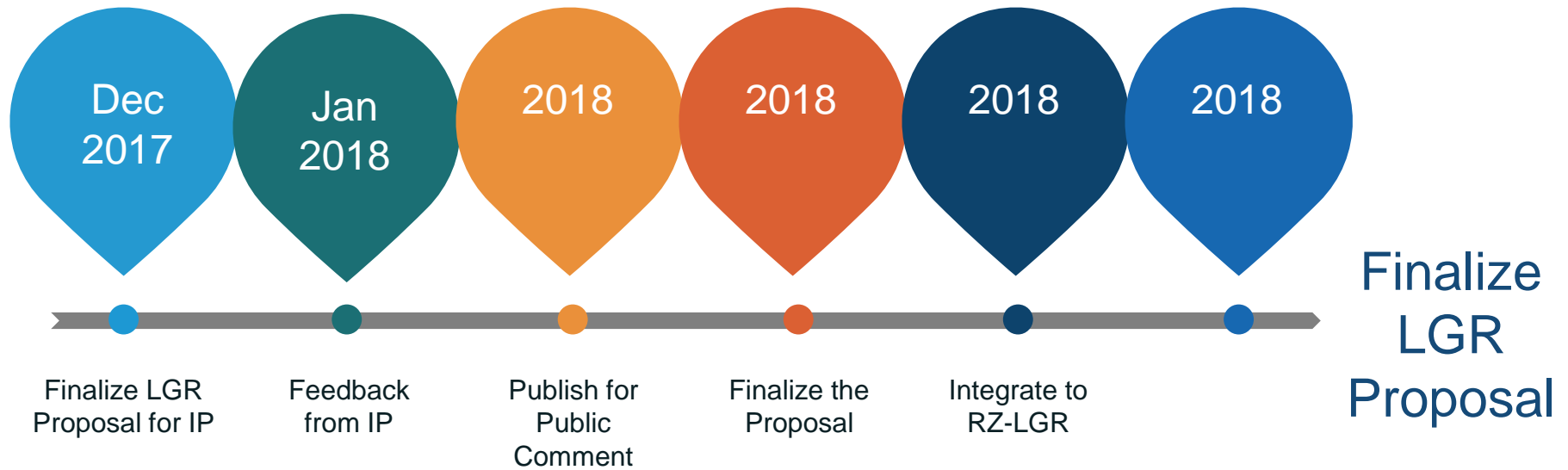
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- ⦿ Rule 1: H must be preceded by C and followed by Cs only
- ⦿ Rule 2: M must be preceded by C
- ⦿ Rule 3: B must be preceded by C, V or M
- ⦿ Rule 4: X must be preceded by C, V or M

# Current Status

Section in Google Doc	Status (To be initiated / In Progress / Completed / Reviewed)	Additional Notes
Description of Script and use	Completed	
Languages using Script	Completed	
Classification of characters	Completed	
Repertoire Analysis	Completed	
Within-script Variants	Completed	
Cross-script Variants	Completed	List scripts with cross-script variants here
WLE Rules	Completed	
References		

# Timeline Till Completion of Work



## To Summarize

The LGR proposal for Kannada script is progressing well and most of the components have been completed. Ideally, we are expecting a final proposal by end of December for feedback from the Integration Panel.

# Thank You and Question

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- ⦿ Dr. U.B. Pavanaja, [pavanaja@vishvakannada.com](mailto:pavanaja@vishvakannada.com)