

TO: Unicode Technical Committee  
FROM: Ken Whistler  
TITLE: Towards a Consensus Encoding of Newa  
DATE: 24 October 2014

The “Recommendations to the UTC” (L2/14-253) provided input from members of a meeting held in Kathmandu, Nepal, from October 4-7, 2014, on the “Nepaalalipi”/”Newar” script. In an effort to help make progress, the following is a set of revised code charts charts that could serve as the basis for a formal proposal to the UTC and WG2.

This document contains 3 parts:

Part 1: A revised repertoire proposed for encoding in the Unicode Standard, with updated code points and names and other modifications which aim towards a consensus encoding.

Part 2: A Newa script subset appropriate for the Nepal Bhasa language modern use, omitting characters not needed for modern use, showing translated character names more appropriate to the community, and additional common use punctuation characters from other blocks also used in Nepal Bhasa text. (This information would be appropriate, for example, for establishing the exemplar characters for a Nepal Bhasa localization.)

Part 3: An explanatory chart demonstrating how the encoded Newa characters would be used to represent all required vowel and diphthong sequences for the popular modern orthography of Nepal Bhasa.

	1140	1141	1142	1143	1144	1145
0	ॐ 11400	ॐ 11410	ॐ 11420	ॐ 11430	ॐ 11440	ॐ 11450
1	ॐ 11401	ॐ 11411	ॐ 11421	ॐ 11431	ॐ 11441	ॐ 11451
2	ॐ 11402	ॐ 11412	ॐ 11422	ॐ 11432	ॐ 11442	ॐ 11452
3	ॐ 11403	ॐ 11413	ॐ 11423	ॐ 11433	ॐ 11443	ॐ 11453
4	ॐ 11404	ॐ 11414	ॐ 11424	ॐ 11434	ॐ 11444	ॐ 11454
5	ॐ 11405	ॐ 11415	ॐ 11425	ॐ 11435	ॐ 11445	ॐ 11455
6	ॐ 11406	ॐ 11416	ॐ 11426	ॐ 11436	ॐ 11446	ॐ 11456
7	ॐ 11407	ॐ 11417	ॐ 11427	ॐ 11437	ॐ 11447	ॐ 11457
8	ॐ 11408	ॐ 11418	ॐ 11428	ॐ 11438	ॐ 11448	ॐ 11458
9	ॐ 11409	ॐ 11419	ॐ 11429	ॐ 11439	ॐ 11449	ॐ 11459
A	ॐ 1140A	ॐ 1141A	ॐ 1142A	ॐ 1143A	ॐ 1144A	ॐ 1145A
B	ॐ 1140B	ॐ 1141B	ॐ 1142B	ॐ 1143B	ॐ 1144B	ॐ 1145B
C	ॐ 1140C	ॐ 1141C	ॐ 1142C	ॐ 1143C	ॐ 1144C	ॐ 1145C
D	ॐ 1140D	ॐ 1141D	ॐ 1142D	ॐ 1143D	ॐ 1144D	ॐ 1145D
E	ॐ 1140E	ॐ 1141E	ॐ 1142E	ॐ 1143E	ॐ 1144E	
F	ॐ 1140F	ॐ 1141F	ॐ 1142F	ॐ 1143F	ॐ 1144F	

*This script is also known as Nepaalalipi, Nepalakshar, Newah Akhah, Newar, Newari, Pachumol, and Prachalit.*

### Independent vowels

11400	अ	NEWA LETTER A
11401	आ	NEWA LETTER AA
11402	इ	NEWA LETTER I
11403	ई	NEWA LETTER II
11404	उ	NEWA LETTER U
11405	ऊ	NEWA LETTER UU
11406	ऋ	NEWA LETTER VOCALIC R
11407	ॠ	NEWA LETTER VOCALIC RR
11408	ऌ	NEWA LETTER VOCALIC L
11409	ॡ	NEWA LETTER VOCALIC LL
1140A	ए	NEWA LETTER E
1140B	ऐ	NEWA LETTER AI
1140C	ओ	NEWA LETTER O
1140D	औ	NEWA LETTER AU

### Consonants

*6 consonant letters whose forms are derived from conjuncts involving ha are encoded for the representation of murmured resonants in Nepal Bhasa, a Tibeto-Burman language. Those letters are not used for the representation of Sanskrit in the Newa script.*

1140E	क	NEWA LETTER KA
1140F	ख	NEWA LETTER KHA
11410	ग	NEWA LETTER GA
11411	घ	NEWA LETTER GHA
11412	ङ	NEWA LETTER NGA
11413	झ	NEWA LETTER NGHHA
• murmured nasal for Nepal Bhasa language		
11414	च	NEWA LETTER CA
11415	छ	NEWA LETTER CHA
11416	ज	NEWA LETTER JA
11417	झ	NEWA LETTER JHA
11418	ञ	NEWA LETTER NYA
11419	झ	NEWA LETTER NYHA
• murmured nasal for Nepal Bhasa language		
1141A	ट	NEWA LETTER TTA
1141B	ठ	NEWA LETTER TTHA
1141C	ड	NEWA LETTER DDA
1141D	ढ	NEWA LETTER DDHA
1141E	ण	NEWA LETTER NNA
1141F	त	NEWA LETTER TA
11420	थ	NEWA LETTER THA
11421	द	NEWA LETTER DA
11422	ध	NEWA LETTER DHA
11423	न	NEWA LETTER NA
11424	झ	NEWA LETTER NHA
• murmured nasal for Nepal Bhasa language		
11425	प	NEWA LETTER PA
11426	फ	NEWA LETTER PHA
11427	ब	NEWA LETTER BA
11428	भ	NEWA LETTER BHA
11429	म	NEWA LETTER MA
1142A	झ	NEWA LETTER MHA
• murmured nasal for Nepal Bhasa language		
1142B	य	NEWA LETTER YA
1142C	र	NEWA LETTER RA
1142D	र	NEWA LETTER RHA
• murmured tap for Nepal Bhasa language		
1142E	ल	NEWA LETTER LA

1142F	ळ	NEWA LETTER LHA
• murmured lateral for Nepal Bhasa language		
11430	व	NEWA LETTER WA
11431	श	NEWA LETTER SHA
11432	ष	NEWA LETTER SSA
11433	स	NEWA LETTER SA
11434	ह	NEWA LETTER HA

### Dependent vowel signs

11435	ा	NEWA VOWEL SIGN AA
11436	ि	NEWA VOWEL SIGN I
11437	ी	NEWA VOWEL SIGN II
11438	ु	NEWA VOWEL SIGN U
11439	ू	NEWA VOWEL SIGN UU
1143A	ॠ	NEWA VOWEL SIGN VOCALIC R
1143B	ॡ	NEWA VOWEL SIGN VOCALIC RR
1143C	ॢ	NEWA VOWEL SIGN VOCALIC L
1143D	ॣ	NEWA VOWEL SIGN VOCALIC LL
1143E	ए	NEWA VOWEL SIGN E
1143F	ऐ	NEWA VOWEL SIGN AI
11440	ओ	NEWA VOWEL SIGN O
11441	औ	NEWA VOWEL SIGN AU

### Various signs

11442	◌̣	NEWA SIGN VIRAMA
= tutisaalaa		
11443	◌̤	NEWA SIGN CANDRABINDU
= milaaphuti		
11444	◌̥	NEWA SIGN ANUSVARA
= sinhaphuti		
11445	◌̦	NEWA SIGN VISARGA
= liphuti		
11446	◌̧	NEWA SIGN NUKTA
11447	◌̨	NEWA SIGN AVAGRAHA
= sulaa		
11448	◌̩	NEWA SIGN FINAL ANUSVARA
= baadipu		

### Invocation signs

11449	ॐ	NEWA OM
1144A	ॐ	NEWA SIDDHI

### Punctuation

1144B	।	NEWA DANDA
= dipu		
1144C	॥	NEWA DOUBLE DANDA
1144D	、	NEWA COMMA
= jhaasu		
1144E		NEWA GAP FILLER
= thaayjaayekaa		
1144F	°	NEWA ABBREVIATION SIGN

### Digits

11450	०	NEWA DIGIT ZERO
= guli		
11451	१	NEWA DIGIT ONE
= chi		
11452	२	NEWA DIGIT TWO
= nasi		
11453	३	NEWA DIGIT THREE
= swa		
11454	४	NEWA DIGIT FOUR
= pi		
11455	५	NEWA DIGIT FIVE
= nja		

- 11456 𑌶 NEWA DIGIT SIX  
= khu
- 11457 𑌷 NEWA DIGIT SEVEN  
= nhasa
- 11458 𑌸 NEWA DIGIT EIGHT  
= cyaa
- 11459 𑌹 NEWA DIGIT NINE  
= gu

### Various signs

- 1145A 𑌺 NEWA FLOWER  
= swaan
- 1145B 𑌻 NEWA PLACEHOLDER MARK  
= jaayekaa
- 1145C 𑌼 NEWA DELETION MARK  
= mhusaa
- 1145D 𑌽 NEWA INSERTION SIGN  
= tansaa

## UNICODE NEWA SUBSET FOR NEWA LANGUAGE USE

The following is a list of characters needed for Newa language use. The italicized names reflect the preferred names of the characters by the experts attending the Script Meeting in Nepal. The highlighted letters and words indicate any differences from the code chart names.

### Independent Vowels

11400 ञ *letter a*  
11401 ञा *letter aa*  
11402 ञ् *letter i*  
11403 ञ् *letter ii*  
11404 उ *letter u*  
11405 उ *letter uu*  
1140A ए *letter e*  
1140C ओ *letter o*

### Consonants

1140E क *letter k*  
1140F ख *letter kh*  
11410 ग *letter g*  
11411 घ *letter gh*  
11412 ङ *letter ng*  
11413 ङ *letter ngh*  
11414 च *letter c*  
11415 छ *letter ch*  
11416 ज *letter j*  
11417 ञ *letter jh*  
11418 ञ *letter nj*  
11419 ञ *letter njh*  
1141A ट *letter tt*  
1141B ठ *letter tth*  
1141C ड *letter dd*  
1141D ढ *letter ddh*  
1141E ण *letter nn*  
1141F त *letter t*  
11420 थ *letter th*  
11421 द *letter d*  
11422 ध *letter dh*

11423 न letter n  
11424 ण letter nh  
11425 प letter p  
11426 फ letter ph  
11427 ब letter b  
11428 भ letter bh  
11429 म letter m  
1142A ढ letter mh  
1142B य letter y  
1142C र letter r  
1142D ढ letter rh  
1142E ल letter l  
1142F ळ letter lh  
11430 व letter w  
11431 श letter sh  
11432 ष letter ss  
11433 स letter s  
11434 ह letter h

#### Dependent vowel signs

11435 ा vowel sign aa  
11436 ि vowel sign i  
11437 ी vowel sign ii  
11438 ू vowel sign u  
11439 ू vowel sign uu  
1143E े vowel sign e  
1143F ै vowel sign ai  
11440 ो vowel sign o  
11441 ौ vowel sign au

#### Various signs

11442 ॠ sign tutisaalaa  
11443 ॡ sign milaaphuti  
11444 ॢ sign sinhaphuti  
11445 ॣ sign liphuti  
11447 ॥ sign sulaa  
11448 ० sign baadipu

#### Invocation signs

11449 ॐ *om*

1144A ॐ *siddhi*

#### Punctuation

1144B । *dipu*

1144D \ *jhaasu*

1144E ः *thaayjaayekaa*

#### Digits

11450 ० *guli*

11451 १ *chi*

11452 २ *nasi*

11453 ३ *swa*

11454 ४ *pi*

11455 ५ *nja*

11456 ६ *khu*

11457 ७ *nhasa*

11458 ८ *cyaa*

11459 ९ *gu*

#### Various signs

1145A ॐ *swaan*

= flower, use with dandas

1145B ॐ *jaayekaa*

1145C ॐ *mhusaa*

1145D ॐ *tansaa*

#### Characters from other blocks

0020 SPACE

0021 ! EXCLAMATION MARK

0023 # NUMBER SIGN

0028 ( LEFT PARENTHESIS

0029 ) RIGHT PARENTHESIS

002A \* ASTERISK

002C , COMMA

002E . FULL STOP

003F ? QUESTION MARK

2010 - HYPHEN

2018 ' LEFT SINGLE QUOTATION MARK

2019 ' RIGHT SINGLE QUOTATION MARK

Notes:

1. The following characters were deemed controversial amongst experts and are postponed:

☯ *svasti*

· *high spacing dot*

× *abbreviation sign cross*

⚡ *vajra*

☯ *swaapu*

2. Secondary weighting of the retroflex consonants will produce the following order of consonants:

K, KH, G, GH, NG, NGH, C, CH, J, JH, NJ, NJH, T, TT, TH, TTH, D, DD, DH, DDH, N, NN,

NH, P, PH, B, BH, M, MH, Y, R, RH, L, LH, W, S, SH, SS, H



# UNICODE NEWA SYLLABLE CHARTS FOR NEWA LANGUAGE USE

The tables below draw from tables in *Nepālabhāsā: A Monosyllabic Language* by Bishnu Chitrakar (Kathmandu, 2013), but the Devanagari has been converted to Newa (Table 1 below = Table 10 in *Nepālabhāsā* [page 24], Table 2 below =Table 12b [p. 27], Table 3 below=Table 12a [pp. 27]). Note: In the following charts, “ā” indicates /a/, “a” indicates /ɔ/.

Table 1

NON-NASALIZED		NASALIZED	
short	long	short	long
क	कः	कँ	कँः
ka	ka:	kā	kā:
1140E	1140E	1140E	1140E
	11445	11443	11444
का	काः	काँ	काँः
kā	kā:	kā̃	kā̃:
1140E	1140E	1140E	1140E
11435	11435	11435	11435
	11445	11443	11444
कि	की / किँ	किँ	किँ / किँँ
ki	ki:/kii	kĩ	kĩ:/kĩi
1140E	1140E	1140E	1140E
11436	11437	11436	11436
	/1140E	11443	11444
	11436		/1140E
	11402		11436
			11443
			11402
कु	कू / कुँ	कुँ	कूँ / कुँँ
ku	ku:/kuu	kũ	kũ:/kũu
1140E	1140E	1140E	1140E
11438	11439	11438	11438
	/1140E	11443	11444
	11438		/1140E
	11404		11438
			11443
			11404
क	के	कँ	कँ / कँँ
ke	ke:/kee	kẽ	kẽ:/kẽe
1140E	1140E	1140E	1140E
1143E	1143E	1143E	1143E
	1142B	11443	11444
	11442		/1140E
			1143E
			11443
			1142B
			11442
को	कोः	कोँ	कोँः
ko	ko:	kô	kô:
1140E	1140E	1140E	1140E
11440	11440	11440	11440
	11445	11443	11444

TABLE 2

	(a)	(i)	(u)	(e)
क	कऱ् = कऱ्	कऱ् / कौ	कऱ् / कौ	कऱ् = कऱ्
ka	ka - a = ka:	ka - i / ka - ai	ka - u / ka - au	ka - e
1140E	1140E	1140E	1140E	1140E
	11400	11402	11404	1140A
	=1140E	/1140E	/1140E	=1140E
	11445	1143F	11441	1142B
				11442
का	काऱ् = काऱ्	काऱ्	काऱ्	काऱ् / काऱ्
kā	kā - a = kā:	kā - i	kā - u	kā - e
1140E	1140E	1140E	1140E	1140E
11435	11435	11435	11435	11435
	11400	11402	11404	1140A
	=1140E			/1140E
	11435			11435
	11445			1142B
				11442
कि		किऱ् / की	किऱ् / *	किऱ् = किऱ्
ki	-	ki - i	ki - u	ki - e = ki - i
1140E		1140E	1140E	1140E
11436		11436	11436	11436
		11402	11404	1140A
		/1140E	/* font	=1140E
		11437	missing	11436
			glyphs	11402
कू		कूऱ्	कूऱ् / कू	कूऱ् = कूऱ्
ku	-	ku - i	ku - u	ku - e = ku - i
1140E		1140E	1140E	1140E
11438		11438	11438	11438
		11402	11404	1140A
			/1140E	=1140E
			11439	11438
				11402
के		केऱ्	केऱ्	केऱ् = केऱ्
ke	-	ke - i	ke - u	ke - e
1140E		1140E	1140E	1140E
1143E		1143E	1143E	1143E
		11402	11404	1140A
				=1140E
				1143E
				1142B
				11442

TABLE 3

	(a)	(i)	(u)	(e)
क	का = क	कि / कै	कु / कौ	के / क्य
kā	kā - a = kā:	kā - i	kā - u	kā - e
1140E	1140E	1140E	1140E	1140E
11443	11443	11443	11443	11443
	11400	11402	11404	1140A
	=1140E	/1140E	/1140E	/1140E
	11444	1143F	11441	11443
		11443	11443	1142B
				11442
का	का = का	का	का	का = का
kā	kā - a = kā:	kā - i	kā - u	kā - e
1140E	1140E	1140E	1140E	1140E
11435	11435	11435	11435	11435
11443	11443	11443	11443	11443
	11400	11402	11404	1140A
	=1140E			=1140E
	11435			11435
	11444			11443
				1142B
				11442
कि		कि / कि	कु / **	के = कि
kī	-	kī - i	kī - u	kī - e = kī-i
1140E		1140E	1140E	1140E
11436		11436	11436	11436
11443		11443	11443	11443
		11402	11404	1140A
		/1140E	/** font	=1140E
		11436	missing	11436
		11444	glyphs	11443
				11402
कु		कु	कु / कु	कु = कु
kū	-	kū - i	kū - u	kū - e = kū - i
1140E		1140E	1140E	1140E
11438		11438	11438	11438
11443		11443	11443	11443
		11402	11404	1140A
			/1140E	=1140E
			11438	11438
			11444	11443
				11402
क		क	क	क = क
kē	-	kē - i	kē - u	kē - e
1140E		1140E	1140E	1140E
1143E		1143E	1143E	1143E
11443		11443	11443	11443
		11402	11404	1140A
				=1140E
				1143E
				11443
				1142B
				11442