## Language Specific Peculiarities Document for

## Assamese as Spoken in Assam

## 1. Special handling of dialects

| Dialects | Districts in Assam |
| :--- | :--- |
| Eastern <br> Assamese | Sibsagar, Lakhimpur, Jorhat, Golaghat, Sonitpur, Karbi <br> Anglong, Nagaoan, Dibrugarh, Dhemaji, Tinsukia |
| Central | Marigaon, (Eastern) Kamrup |
| Western | Goalpara, Dhubri, Bongaigaon, Kokrajhar, Barpeta, <br> Nalbari, Darrang, (Western) Kamrup |

Despite the language spoken in Sibsagar being considered the standard, and the literary dominance of Eastern Assamese since the $13^{\text {th }}$ Century, the modern standard dialect has started assimilating to the dialect spoken in Guwahati (Eastern Kamrup in the table above), mirroring a recent shift of the cultural center from Sibsagar to Guwahati. Guwahati did not historically have a dialect of its own, as it was largely a place of military fortification.

## 2. Deviation from native-speaker principle

No special deviation - only native speakers of Assamese, born in India will be collected in this project.

## 3. Special handling of spelling

There will be no particular special handling of spelling in this collection. English loan words will be spelled in the Assamese script rather than the Latin alphabet.

The Hemkosh (also known as the Hema Kosha) will be used as a reference for spelling.

## 4. Description of character set used for orthographic transcription

The Assamese script will be used for the orthographic transcription of Assamese.
The Unicode range for both Assamese and Bengali is U+0980-U+09FF. Presentation forms of these glyphs depend on the display font used, however, this does not affect the underlying Unicode. The Lohit Assamese font will be used. This Unicode-based font correctly renders all Assamese characters and can be downloaded from the following website: https://fedorahosted.org/lohit/.

Combined presentation glyphs are represented through the use of the virama ("hashanta" in Assamese) character (U+09CD), which suppresses the inherent vowel and dictates that the characters should render together.
In some cases, the characters should render separately, including the virama (hashanta) symbol, but this is generally a function of the font used to view the text. In some cases where separate rendering must be forced, such as for morphological boundaries or loan words, zero-width characters (U+200c and U+200d) may be used.

Certain words that would otherwise be homographs are distinguished by the use of the apostrophe ("urdhokôma" in Assamese; U+0027), as in ল'बा "boy" and लबा "move". This apostrophe is added to the inherent vowel and its initial variant "অ" to specify which of its pronunciations is being used.

## 5. Description of Romanization scheme

The following is Appen Butler Hill's Romanization scheme which is fully reversible. Appen Butler Hill's Romanization schemes are being used for this project. These schemes are designed to be as similar in form as possible, but cannot be identical due to the different writing systems and spelling conventions in each language.

### 5.1. Assamese Romanization Scheme

Bengali script is used for Assamese.

| UNICODE | ASSAMESE | ROMAN | DESCRIPTION |
| :---: | :---: | :---: | :---: |
| 0x981 | \% | M | BENGALI SIGN CANDRABINDU |
| 0x982 | ○ | W | BENGALI SIGN ANUSVARA |
| 0x983 | \% | 9 | BENGALI SIGN VISARGA |
| 0x985 | অ | a | BENGALI LETTER A |
| 0x986 | আ | A | BENGALI LETTER AA |
| 0x987 | 亏 | I | BENGALI LETTER I |
| 0x988 | \% | i | BENGALI LETTER II |
| 0x989 | উ | U | BENGALI LETTER U |
| 0x98a | ঊ | u | BENGALI LETTER UU |
| 0x98b | ঋ | r [ | BENGALI LETTER VOCALIC R. |
| 0x98f | ๑ | e | BENGALI LETTER E |

| UNICODE | ASSAMESE | ROMAN | DESCRIPTION |
| :---: | :---: | :---: | :---: |
| $0 \times 990$ | ঐ | e3 | BENGALI LETTER AI |
| $0 \times 993$ | 3 | $\bigcirc$ | BENGALI LETTER O |
| 0x994 | $ঔ$ | $\bigcirc 3$ | BENGALI LETTER AU |
| 0x995 | ক | k | BENGALI LETTER KA |
| $0 \times 996$ | $\vartheta$ | K | BENGALI LETTER KHA |
| 0x997 | গ | g | BENGALI LETTER GA |
| 0x998 | घ | G | BENGALI LETTER GHA |
| 0x999 | ৬ | N | BENGALI LETTER NGA |
| $0 \times 99 a$ | চ | C | BENGALI LETTER CA |
| 0x99b | ছ | C | BENGALI LETTER CHA |
| 0x99c | G | j | BENGALI LETTER JA |
| 0x99d | ঝ | Z | BENGALI LETTER JHA |
| $0 \times 99 \mathrm{e}$ | $\bigcirc$ | J | BENGALI LETTER NYA |
| 0x99f | ל | t` | BENGALI LETTER TTA |
| $0 \times 9 \mathrm{a} 0$ | $\delta$ | T ${ }^{\prime}$ | BENGALI LETTER TTHA |
| $0 \times 9 \mathrm{a} 1$ | ড | d | BENGALI LETTER DDA |
| $0 \times 9 \mathrm{a} 2$ | $\zeta$ | D | BENGALI LETTER DDHA |
| $0 \times 9 \mathrm{a} 3$ | ণ | n | BENGALI LETTER NNA |
| $0 \times 9 \mathrm{a} 4$ | $\bar{\sigma}$ | t | BENGALI LETTER TA |
| $0 \times 9 \mathrm{a}$ | $V$ | T | BENGALI LETTER THA |
| $0 \times 9 a 6$ | $\bar{\square}$ | d | BENGALI LETTER DA |

| UNICODE | ASSAMESE | ROMAN | DESCRIPTION |
| :---: | :---: | :---: | :---: |
| $0 \times 9 \mathrm{a} 7$ | \& | D | BENGALI LETTER DHA |
| $0 \times 9 \mathrm{a}$ | ন | n | BENGALI LETTER NA |
| $0 \times 9 a \mathrm{a}$ | 勺 | p | BENGALI LETTER PA |
| $0 \times 9 \mathrm{ab}$ | ফ | P | BENGALI LETTER PHA |
| $0 \times 9 \mathrm{ac}$ | ব | b | BENGALI LETTER BA |
| $0 x 9 a d$ | ए | B | BENGALI LETTER BHA |
| $0 \times 9 \mathrm{ae}$ | ম | m | BENGALI LETTER MA |
| 0x9af | য | Y | BENGALI LETTER YA |
| $0 \times 9 \mathrm{~b} 2$ | ল | 1 | BENGALI LETTER LA |
| 0x9b6 | শ | S | BENGALI LETTER SHA |
| $0 \times 9 \mathrm{~b} 7$ | ষ | s | BENGALI LETTER SSA |
| $0 \times 9 \mathrm{~b} 8$ | স | s | BENGALI LETTER SA |
| $0 \times 9 \mathrm{~b} 9$ | र | h | BENGALI LETTER HA |
| $0 \times 9 \mathrm{be}$ | \% $\dagger$ | A2 | BENGALI VOWEL SIGN AA |
| 0x9bf | $\bigcirc$ | I2 | BENGALI VOWEL SIGN I |
| $0 \times 9 \mathrm{c} 0$ | ¢ | i2 | BENGALI VOWEL SIGN II |
| $0 \times 9 \mathrm{c} 1$ | $\because$ | U2 | BENGALI VOWEL SIGN U |
| $0 \times 9 \mathrm{c} 2$ | $\because$ | u2 | BENGALI VOWEL SIGN UU |
| $0 \times 9 \mathrm{c} 3$ | $\because$ | r2 | BENGALI VOWEL SIGN VOCALIC R |
| $0 \times 9 \mathrm{c} 7$ | 6 | e2 | BENGALI VOWEL SIGN E |
| 0x9c8 | $\zeta$ | e4 | BENGALI VOWEL SIGN AI |


| UNICODE | ASSAMESE | ROMAN | DESCRIPTION |
| :---: | :---: | :---: | :---: |
| $0 \times 9 \mathrm{cb}$ | $\bigcirc \bigcirc$ | -2 | BENGALI VOWEL SIGN O |
| 0x9cc | 6 | $\bigcirc 4$ | BENGALI VOWEL SIGN AU |
| 0x9cd | $\because$ | + | BENGALI SIGN VIRAMA |
| $0 \times 9$ ce | $\varrho$ | t2 | BENGALI LETTER KHANDA TA |
| $0 \times 9 \mathrm{dc}$ | ড | R | BENGALI LETTER RRA |
| $0 x 9 d d$ | ঢ | r | BENGALI LETTER RHA |
| $0 x 9 \mathrm{df}$ | য় | Y | BENGALI LETTER YYA |
| 0x9f0 | ব | r | BENGALI LETTER RA WITH MIDDLE DIAGONAL |
| 0x9f1 | র | w | BENGALI LETTER RA WITH LOWER DIAGONAL |
| $0 \times 027$ |  | , | APOSTROPHE |

## 6. Description of method for word boundary detection

Word boundaries in the orthography are determined by localization of white spaces (blank, tab, etc).
In terms of word boundary issues, words in Assamese (such as compound words and stems with grammatical endings) often combine together to form one word. In such cases, words will be spelled without white spaces and will use the traditional spelling alterations associated with this phenomenon. Note however, that in some cases those words will appear next to each other with white space (this carries a different meaning).
Spelling of words as either a compound (without white spaces) or as separate words is checked and standardized throughout the transcription project by identifying and reviewing words which have been spelled both together and apart. Occurrences of words both with and without white spaces typically carry different meanings.

Hyphens are used in compounds to join components together when any of the components do not carry meanings on their own.

## 7. All phonemes in the stipulated notation

The phonemic transcription of the words in this database uses X-SAMPA symbols, which can be found at http://www.phon.ucl.ac.uk/home/sampa/x-sampa.htm. The total number of phones is 48 . There are 30 consonants, 9 vowels ( 7 monophthongs and 2 diphthongs) and 9 nasal vowels ( 7 monophthongs and 2 diphthongs). 7 of these are foreign phones (/f, $\mathrm{v}, \mathrm{tS}, \mathrm{dZ}, \mathrm{Z}, \mathrm{S}, \mathrm{j} /$ ) which are not part of the native Assamese sound system but are commonly heard in English words. These phones are represented as being in allophonic variation with their equivalent pronunciations for a
native speaker of the loan words. The orthography for these foreign phones would be the same as that given for the native equivalent phonemes.

Assamese Phone Chart

| TYPICAL ASSAMESE |
| :--- |
| CORRESPONDENCE |


| UNICODE | ROMAN | IPA | SAMPA |
| :--- | :--- | :--- | :--- |

CONSONANTS

| CONSONANTS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 夕 | 0x9aa | p | p | p |  |
|  |  |  | $\mathrm{p}^{\text {h }}$ | p_h |  |
| ফ | 0x9ab | P | f | f | allophone of/p_h/, mainly occurring in English words e.g. "phone, final" |
| ব | 0x9ac | b | b | b |  |
|  |  |  | $\mathrm{b}^{\text {h }}$ | b_h |  |
| ভ | 0x9ad | B | v | v | allophone of/b_h/, mainly occurring in English words e.g. "video, very". |
| $\bar{\sigma}$ | 0x9a4 | t |  |  |  |
| 它 | 0x99f | t | t | t |  |
| ¢ | 0x9ce | t2 |  |  |  |
| V | 0x9a5 | T |  |  |  |
| $\delta$ | 0x9a0 | T ${ }^{\text { }}$ | t |  |  |
| $\square$ | 0x9a6 | d |  |  |  |
| ড | 0x9a1 | d |  |  |  |
| $\%$ | 0x9a7 | D |  |  |  |
| $\checkmark$ | 0x9a2 | D |  |  |  |
| ক | 0x995 | k | k | k |  |
| $\vartheta$ | 0x996 | K | $k^{\text {n }}$ | k_h |  |
| গ | 0x997 | 9 | g | 9 |  |
| ঘ | 0x998 | G | $\mathrm{g}^{\text {h }}$ | g_h |  |
| চ | 0x99a | c |  |  |  |
| ছ | 0x99b | c | t | tS | allophone of /s/ in some English words, e.g. "speech" |

| TYPICAL ASSAMESE CORRESPONDENCE | UNICODE | ROMAN | IPA | SAMPA | COMMENTS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F | 0x99c | j | z | z |  |
|  |  |  |  |  |  |
|  |  |  | 3 | Z | allophone of /z/ in some English words, e.g. "measure, vision" |
|  |  |  | d3 | dz | allophone of $/ \mathrm{z} /$ in some other English words, e.g. "judge" |
| য | 0x9af | Y | j | j |  |
| ঝ | 0x99d | z | $j^{\text {h }}$ | $j \backslash$ h |  |
| म | 0x9ae | m | m | m |  |
| ন | 0x9a8 | n | n | n |  |
| ๆ | 0x9a3 | n |  |  |  |
| $๙$ | 0x99e | J |  |  |  |
| ঙ | 0x999 | N | $\eta$ | N |  |
| ○ | 0x982 | W |  |  |  |
| শ | 0x9b6 | S | X | x |  |
| ষ | 0x9b7 | s` |  |  |  |
| স | 0x9b8 | s | J | S | allophone of /x/ in some English words such as "sheet" |
| र | 0x9b9 | h | h | h |  |
| ब | 0x9f0 | r | r, r | r |  |
| ড় | 0x9dc | R | ¢ | r ${ }^{\prime}$ |  |
| ঢ̣ | 0x9dd | r |  |  |  |
| ল | 0x9b2 | 1 | 1 | 1 |  |
| র | 0x9f1 | w | w | w |  |
| য় | 0x9df | y | j | j | occurs in English words, such as "unite, yes". May be substituted with native vowel /i/ or /e/ |

| TYPICAL ASSAMESE CORRESPONDENCE | UNICODE | ROMAN | IPA | SAMPA | COMMENTS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ORAL VOWELS |  |  |  |  |  |
| অ | 0x985 | a | $\bigcirc$ | 0 | may be pronounced／o／in some environments；see notes below |
| আ | 0x986 | A | a | a |  |
| $\cdots \dagger$ | 0x9be | A2 |  |  |  |
| रे | 0x987 | I | i | i |  |
| $\bigcirc$ | 0x9bf | I2 |  |  |  |
| 玄 | 0x988 | i |  |  |  |
| $\bigcirc$ | 0x9c0 | i2 |  |  |  |
| ৬ | 0x989 | U | u | u |  |
| $\because$ | 0x9c1 | U2 |  |  |  |
| ひ | 0x98a | u |  |  |  |
| $\because$ | 0x9c2 | u2 |  |  |  |
| ๑ | 0x98f | e | e | e |  |
| 6 | 0x9c7 | e2 |  |  |  |
| $\checkmark$ | 0x98f | e | $\varepsilon$ | E | may be pronounced／e／in some environments；see notes below |
| 6 | 0x9c7 | e2 |  |  |  |
| য়া | 0x9df 0x9be | yA2 |  |  |  |
| 3 | 0x993 | $\bigcirc$ | v | U |  |
| $6{ }_{6}$ | 0x9cb | $\bigcirc 2$ |  |  |  |
| ঐ | 0x990 | e3 | Oi | oi |  |
| $\zeta$ | 0x9c8 | e4 |  |  |  |
| ঔ | 0x994 | $\bigcirc 3$ | OU | ou |  |
| $\bigcirc \dagger$ | 0x9cc | $\bigcirc 4$ |  |  |  |
| NASAL VOWELS |  |  |  |  |  |
| おँ | 0x985 0x981 | aM | วั | O～ |  |


| TYPICAL ASSAMESE CORRESPONDENCE | UNICODE | ROMAN | IPA | SAMPA | COMMENTS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| আए | 0x986 0x981 | AM | ã | a～ |  |
| おँ | 0x987 0x981 | IM |  |  |  |
| $\stackrel{4}{3}$ | 0x988 0x981 | iM | 1 |  |  |
| Ч | 0x989 0x981 | UM |  |  |  |
| せ | 0x98a 0x981 | uM | U | u～ |  |
| ดั | 0x98f 0x981 | eM | ẽ | e～ |  |
| ๑゙ | 0x98f 0x981 | eM | $\tilde{\varepsilon}$ | E～ | may be rarer than other nasal vowels |
| ઉ゙ | 0x993 0x981 | OM | ข̃ | U～ |  |
| ঔ | 0x990 0x981 | e3m | OĨ | ○i～ | may be rarer than other nasal vowels |
| ॐ | 0x994 0x981 | －3M | Oũ | ou～ |  |

## Notes

－Note that unlike in closely related Bengali，the Assamese consonants／t，d，t＿h，d＿h，n，l／ are alveolar，as indicated by the IPA symbols used above．Assamese has lost the distinction between dental and palatal consonants；both have merged to an alveolar place of articulation．
－The nasalised vowels are quite rare，but do occur in certain words and have phonemic status in Assamese．This phone set allows for a nasalised counterpart for all of the native vowels．
－The inherent vowel may be pronounced as／O／or／o／．The two have a near－systematic pattern of distribution in Assamese（there are some exceptions）．／O／is pronounced as／o／ if there is a following $/ \mathrm{i} /$ or $/ \mathrm{u} /$ ．The same pattern of distribution applies to $/ \mathrm{E} /$ and $/ \mathrm{e} /$ ．
－$\quad / \mathrm{p} /$ and $/ \mathrm{b} /$ could be pronounced in their allophonic forms（IPA）［ $\phi$ ］and［ $\beta$ ］between vowels and in word final positions．Depending on the variety spoken，however，this may not be a systematic occurrence．

## 8．Complete list of all rare phonemes

## 8．1．List of rare phonemes

We expect the following phonemes to be rare in the database：

| ou |
| :--- |
| O～ |
| a～ |
| i～ |
| u～ |
| e～ |


| E~ |
| :--- |
| O~ |
| oi~ |
| ou~ |

### 8.2. List of foreign phonemes

The following phonemes are foreign (English):

| $j$ |
| :--- |
| $v$ |
| $f$ |
| $t S$ |
| $d Z$ |
| $Z$ |
| $s$ |

## 9. Other language specific items

### 9.1. Table of digits

| Digit | Digit Assamese | Assamese | Romanization |
| :---: | :---: | :---: | :---: |
| 0 | $\bigcirc$ | শূন্য | Su2n+Y |
| 1 | ১ | এক | ek |
| 2 | ২ | দুই | dU2 I |
| 3 | $\bigcirc$ | তিনি | tI2nI2 |
| 4 | 8 | চাबি | cA2rI2 |
| 5 | ® | গাঁচ | pA2Mc |
| 6 | ৬ | ছ़় | Cy |
| 7 | 9 | সাত | sA2t |
| 8 | Ъ | আঠ | AT ${ }^{\text { }}$ |
| 9 | จ | ন | n |

9.2. Other Numbers

| Number | Number Assamese | Assamese | Romanization |
| :---: | :---: | :--- | :--- |
| 100 | ১০০ | এশ | eS |
| 10,000 | ১০,০০০ | দर হাজাब | dh hA2jA2r |


| Number | Number Assamese | Assamese | Romanization |
| :---: | :---: | :--- | :--- |
| 100,000 | $১, ০ ০, ০ 00$ | এক লাথ | ek lA2K |
| 10 million | $১, ০ ০, ০ ০, ০ ০ ০$ | এক কৌটি, <br> এক কোটি | ek ko4t`I2, \\ ek ko2t`I2 |

## 10. References

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