IT-3 Transliteration

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Introduction

- ITRANS – Indian Transliteration Scheme
- 7-bit ASCII values (English alphabets) are used to represent Indian Language Characters
- Each and every Indian Languages has its own ITRANS mapping table
- We follow IT-3 as internal / phonogramic representation
Nature of Input to TTS

- Input comes to Text-to-Speech system either through typing in or from some other application.
- Sometime input may not be processed/formatted (say if it comes from a search engine).
- So the notation should be same across applications for further processing.
Issues in IT-3 Notations

- Some representations have variants
- Special symbols mixed
- More key combinations for representations
- Many letters for a representation
- Computational complexity
- Readability
- Clear and distinguished representations across languages
Missing Orthographic representations

Missing Orthographic representations
Variants of Representations

- Most of the representations have its variants like aa/A, ii/I, ei/ae, v/w, etc
  - Increases computational complexity
  - Confusing the users
Special Symbols mixed

- Some representations use special symbols like: ng~, R^, t:, d- etc
  - Ambiguity between the actual punctuation mark and letter combinations
  - Creating problem while processing (some symbols are reserved under some framework like Festival)
More key combinations

• Minimum key combinations (one or two keys) will be efficient while typing the input
  
  - Avoid capital letters (Dh = shift + key + etc)
  - Avoid special characters (t:h = shift + key + etc)
Many letter combinations

- Minimum letter combinations would be efficient like: ‘x’ instead of ‘kshh’
  - Reduces computational complexity
  - Reduces typing effort
In the ‘Phonification/Syllabification’ process, each and every letter has to be processed. So minimum letter combinations will reduce the computational complexity – For huge data conversion it will take a lot of system time – Process speed decreases
Readability

- Representation in lower case give more readability than upper case mixed

Ex: neitraalayaa vs nEtrAlayA
Clear and Distinguished Representations

- Representations should be clear and understandable even for a naive user
  - ng, nj, nd, n (clear)
  - N, n, n~, .n (not clear)
  - p, ph, b, bh (clear)
  - t’, t’h, d’, d’h (not clear)
Thank You!!