Phoneme Concatenation method for Myanmar speech synthesis system

Chaw Su Hlaing
87chawsuhlaing@gmail.com
University of Computer Studies, Mandalay, UCSM

Aye Thida
ayethida.royal@gmail.com
University of Computer Studies, Mandalay, UCSM

This paper discusses the approach used to develop a Text-to-Speech (TTS) synthesis system for the Myanmar language. Concatenative method has been used to develop this TTS system using phoneme as the basic units for concatenation. In this proposed system, phoneme plays an important role so that Myanmar phoneme inventory is presented in detail. In Myanmar language, schwa is the only vowel that is allowed in a minor syllable or consonant that has half-sound of the original one. If these half sound can be handled, the TTS quality will be high. After analyzing the number of phoneme and half-sound consonant to be recorded, create the Myanmar phoneme speech database which contains total 157 phoneme speech sounds that can speech out for all Myanmar texts. These phonemes are fetched according to the result from the phonetic analysis modules and concatenated them by using proposed new phoneme concatenation algorithm. According to the experimental results, the system achieved the high level of intelligibility and acceptable level of naturalness. As the application area, it is intended for the resource limited device to use as language learning app and so on.