

## **Myanmar speech synthesis system by using phoneme concatenation method**

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For Myanmar language, there has been great effort in speech processing so that Myanmar text to speech (MTTS) is one of the interesting research topics for Myanmar natural language processing field. Generally, Myanmar language is the syllabic language and the combination of consonant and vowel phonemes can make syllable. In this paper, we proposed new phoneme concatenation algorithm for MTTS system. Consequently, firstly, we created phoneme speech database in which there are only 125 phoneme units that can speech out for any Myanmar texts. It is very suitable for resource limited devices, such as mobile phones. In our proposed system, firstly, the system accepts input Myanmar texts and then these texts are normalized for next processing. After that, the standized texts are converted into phoneme sequences by using proposed phonological rules that can get the high quality MTTS system. Detecting phrase boundary is also considered to assign pause duration for the purpose of getting more natural sounding MTTS. In the case of speech generation, we concatenate the phoneme speech units with our proposed algorithm. According to the experimental result, our proposed phoneme concatenation algorithm achieves the acceptable level of intelligibility and naturalness for Myanmar speech output.