Abstract

This thesis proposes a new method to automatically generate keyword models for Multi-domain Keyword Spotting System (KWS). The new method generates a keyword model that is formed by combining the phoneme-based HMM (Hidden Markov Model) from text file. It has benefits in two points i.e. no need for re-training and ease in maintenance. When the user adds a new keyword to the system, the word is used as index and then be searched in the domain-dependent lexicon database for its phoneme sequences. The new keyword model is formed by combining the tied-phone of phoneme-based HMM together and then be kept for the next spotting. In this thesis, three domains of continuous speech data are employed. The first domain is about course registration of Thammasat University's students. The second one is the hotel reservation. The last one is the LOTUS speech corpus created by National Electronics and Computer Technology Center. These speech data are divided into two groups for training and spotting. The experimental results reveal that the proposed method can improve the precision and recall with significance.