Abstract

This paper presents an optimization of the Arabic database and a prototype for real-time speech synthesis. Statistical parametric speech synthesis is a relatively new approach to speech synthesis. Hidden Markov model based speech synthesis, the techniques in this approach, has been demonstrated to be very effective in synthesizing high quality, natural and expressive speech. This work modified the publicly available HTS to establish a complete architecture system, called HTS_ARAB_TALK, which provides us with a basis for further research for a future fully real-time speech synthesis system and we give an overview of the Arabic speech synthesis system using HMM. A brief description of the HTS_ARAB_TALK is presented with some emphasis on the feature that is relevant to the Arabic language. Finally, a mean opinion score for the synthesized speech is presented. These results were supported by subjective evaluation.

References


Index Terms

Computer Science  Algorithms

Keywords

HMM  Speech Synthesis  Text to Speech  Arabic Language  Statistical Parametric

Speech Synthesis
Hidden Markov Model