Thesis Title   Independent Speaker Thai words speech Recognition

using Neural Networks

Student   Mr. Seri Pansang.

Thesis Advisor   Assoc. Prof. Chom Kimpan. D.Eng.

Level of Study   Master of Engineering in Electrical Engineering

King Mongkut's Institute of Technology Ladkrabang

Year   .   1997

Abstract

This thesis was aimed at studing behaviour and finding speech recognition rate of Thai words in isolation of independent speaker by using Back Propagation Neural Network. In pre-processing unit to find voices pattern in harmonic frequency domain by using Fast Fourier Transform and find characteristic relation of voices by correlation from the level of relationship between test pattern spectrogram and all of the reference spectrum. All of voice characteristic relation are using for training and testing process in neural network

· this purposed method results independent voice recognition rate :

73.89 % which 20 Thai words by 20 training and 12 testing persons

80.05 % which 11 Thai words by 20 training and 12 testing persons

and

92.42 % which 11 Thai words by 10 training and 10 testing persons for dependent group.

The results of experiment showing that recognition rate is inverse which number of testing word and number of persons. This method could not use for many testing word and speaker.