

ABSTRACT

Discontinuous Transmission (DTX) is a transmission method which will work only transmit a few bits of silent or noise background condition in order to coding efficiency. Supporting Discontinuous Transmission (DTX), it will use Voice Activity Detection that it is identification process of voice or silent condition of speech signal. If VAD method has more efficient bit rate transmission. Backpropagation neural network is used to VAD method of this final project.

Purpose of this final project is analyzing performance of Voice Activity Detection using Backpropagation Neural Network with vehicle noise and babble noise background and proof that Backpropagation Neural Network can be used one of VAD method.

VAD accuracy of identification voice or silent condition is depend on making the algorithm. System will make two extractions from mixed between speech and noise of signal which have different SNR. Two of extractions are full band energy and low band energy. This parameter will be input of Backpropagation Neural Network and it hopes can give a good SDER, NDER, and OVER performance from the output.

VAD using Backpropagation Neural Network simulation has 0% SDER, NDER, and OVER performance and it can conclude that Backpropagation Neural Network can be use one of VAD method because it has good performance compare the other system has not use Backpropagation Neural Network. It has more than 50% NDER and OVER performance.

Keyword :DTX, Voice Activity Detection, Backpropagation Neural Network, SDER, NDER, OVER.