ABSTRACT

Deaf is a condition which people lost their ability to listen other people speech. They also cant speech as well as normal hearing people. Deaf people is not someone who cant speak because of his/her physical disability, but they cant speak because they cant hear anything so that they learn nothing to speak. This condition affects voice production, so their speech sounds raucous and hard to understand. Voice signal of deaf people is different from normal voice signal. Rentang of frequency of their voice signal is restricted in certain areas.

Because of that signal condition, we use band pass filter mechanism in order to filter the signal at a specific frequency range (600-1800Hz). Then, fast fourier transform is used to transform time domain voice signal into frequency domain and generate the vector features. Feature vector is processed by adapting the concept of frame blocking and sine multiplication to obtain characteristic value of each frame. The result is an input for the backpropagation neural network. And output of this system is text (speech to text).

The accuracy result is 83,8384% for trained data and 36,3635 for untrained data.

Keywords : deaf, speech to text, band pass filter, fast fourier transform, backpropagation.