ABSTRACT

Brain is the center regulator from all activities that occur in the human body. Brain of human being function as the centre of activity management that occur in the body of human being. Nowadays, the brain become one of the research object which done by the neurologist and out for comprehend activity that occurs in human being body.

One of way that has to be done to detect the activity that occurs in human being body is analyze Electroencephalogram (EEG) signal. EEG signal is accumulate of many signals from thousand of neurons which residing in human being brain. EEG signal represents quantifying from a number of frequency bands with certain characteristic which has different value according to underway activity in human being body.

This Final Project extracts EEG signal using Wavelet Haar transformation. Wavelet transformation is used to analyze motoric signal in time domain and frequency domain, so when there is a motoric movement, it can be analyze in time domain and frequency domain. Through this method, it can be found the value of dominant frequency in motoric signal when there is a movement. Output is analyzed in mu signal domain where the movement of motoric hand occurs in range of frequency 9-11 Hz. Classification process using Bayesian algorithm and it reach 88.15 % for class 1 and 90.37 % for class 2 for its accuration.

Keywords : Electroencephalogram (EEG), Wavelet Haar, *mu* signal, Bayesian