ABSTRACT

Traditional music instrument is one of Indonesians commodity wich very valuable and tourist attraction for Indonesia. All of Indonesian region has its own traditional music instrument. Those music instrument has it own unique sound characteristic, by those we can classified them.

.In this final project the design of a system that could identified the music instrument through the sound of the instrument. The identification system consist of ekstraction and classification process. Using the ekstraction process we will know the characteristik of a music instrument. And from the classification process we will know the type of those instrument. The ekstraction method that used in this final project is Mel Frequency Cepstral Coefficient (MFCC). MFCC is an extraction method that adopt the response of the human auditory system from frequency of the signal. While Support Vector Machine (SVM) is used for classification method. SVM is a superviced classification method that plot the data into feature space and find the barrier named hyperlane. Hyperlane is the best barrier form choosen support vector. The result of this system is information about those music instrument.

The results of testing produce in highest level of accuracy in 92% with computing time average 3s/data. The test result were performed by using eight coefficient of MFCC, frame width 256, hamming window, and classification using SVM OAA (One Against All) with rbf kernel.

Key word : audio, traditional music instrument, Mel Frequency Cepstral Coefficient, Support Vector Machine