ABSTRACT

One of the traditional musical instruments that are often found in west java is angklung. Angklung itself is a musical instrument made of bamboo tubes. Sound or tone is produced from the effects of collision of bamboo tubes in a way that is shaken or vibrated. The sound produced is in the form of tones like do, re, mi, fa, sol, la, si, and do high. The way to play it is very easy, but for beginners, usually only can hear the sound produced and do not know the tone. So that in this final project a system will be created that can be helpful for beginners and can be an alternative helper in music schools to identify the notes on angklung.

*The system used in this final project uses a harmonic product spectrum method which functions to see the basic frequency contained in the input signal. This system goes through two stages, namely the recording process and the tone recognition process. In the recording process is done to make a reference or sample tone that will be a reference to recognize the tone played by recording the angklung tone and saving the file in the form of * .wav. While the tone recognition process is a process directly on inputting data that will go through prepocessing, harmonic product spectrum and KNN classification so that it can detect and recognize the tones being played. The input signal is derived from the sound produced by the angklung and then converted into frequency and processed so that it can get a recognized basic frequency.*

From the test results showed the best accuracy in the combination of two first-order statistical characteristics of variance-skewness, and the type of KNN used was euclidean with the number K = 1 with an accuracy of 88.78%. In other words, the angklung musical instrument detection system using the harmonic product spectrum method has optimal results.

Keywords: *Angklung, Prepocessing, Harmonic Product Spectrum*