ABSTRACT

Today's traditional musical instruments are an attraction in foreign and local tourism, one of which is Angklung. Angklung is a traditional musical instrument from West Java made of bamboo. Angklung is widely used in various art performances. Many tourists record audio Angklung because of its uniqueness, but often the audio recordings have a fairly large file size. Therefore we need a way to reduce audio capabilities without reducing the quality of the audio files so that the transmission process becomes faster. To produce good audio compression can be done with one of the compression techniques namely Compressive Sensing.

This study was conducted using an audio angklung which was acquired using Fruity Loops 12 software as many as 5 songs with a duration of 10 seconds. This study also uses Compressive Sensing as a compression system. Angklung audio signal obtained by using Fruity Loops 12 software and stored in the .wav format is then converted into sparse signal using the Discrete Sine Transform (DST) method which is then reconstructed using the Orthonal Matching Pursuit (OMP) method.

The performance of the Compress Sensing system in this final assignment was obtained by testing to obtain several parameters such as the level of sparsity, SNR, MSE, computation time and MOS. The best results obtained by the system are the maximum sparsity level of 57 % and the maximum SNR reaches 27.94 dB.

Keywords: *Compressive Sensing*, *Discrete Sine Transform*, *Orthogonal Matching Pursuit*