ABSTRACT

Today Indonesia entered the era of globalization, this has resulted in progress in various fields, including the field of Internet technology. With the start of the rapid advancement of this technology, allows people to exchange information, either in the form of images, audio, video and text. However the rapid advancement of the development of today's Internet technology is not accompanied by the development of internet technology security. This resulted in many activities of hacking or plow plowing author's work. Because many of the problems arise then comes a technique or method for protecting the authenticity of copyrighted digital data. One technique for protecting the copyright is originality watermarking technique.

Audio watermarking has many types and combination of several methods, which in the final project this time will be tested using the method of Lifting Wavelet Transform (LWT) combined with Cepstrum and Histogram. LWT method is the development of methods of Discrete Wavelet Transform (DWT). Where this method has the better speed than the DWT. Host audio will be processed by LWT and Cepstrum, and will be in embedding the histogram and SMM method. Previous logo will be CS then be in sync bits then diembedding with a host of audio to be in the watermark.

The result of this Final Project is indicated that the use synchronization bits has an effect on the robustness of an audio watermarking. The function of use synchronization bits is to determine the exact position of the insertion place. The optimal parameter slightly raises the average BER result but increase the audio quality obtained in the audio watermarking process. The value of BER is 0,1784, the average of SNR without attack is 31,9446 and the average of ODG without attack is -2,9534

Keyword : Lifting Wavelet Transform, Discrete Wavelet Transform, Cepstrum, Histogram