ABSTRACT

Telecommunications technology in this era is growing very rapidly. One of the technologies is a technology that can change the authenticity of other people's data and the cause can harm the data owner. To overcome this by using watermarking techniques, the watermarking technique is the technique of inserting the code and code in the form of images, text, sound, video without anyone else other than the owner of the data.

In this final project, a watermarking system will be formed by inserting a Secret Message (Image) with the methods of the Least Significant Bit (LSB) and Wavelet Dual-Tree Complex Transformation for the frame selection. The first step is the acquisition of video host and Secret Message (image). The image will be converted to a binary image and will be inserted into the selected frame in the video host. The output obtained from this process is Video Watermarking.

The results of this study in this final project Video Watermarking in the Matlab application, the value of the test parameters obtained from the acquisition of videos with a size of 240p and 480p images of 32x32 and 64x64 size is very good. MSE values obtained ranged from 0.0001 to 0.03 and PSNR values obtained ranged from 62 to 86. Besides the BER values obtained were between 0 to 0.4. As for attacks, very good video watermarking was found in Noise Gaussian blur attacks and attacks that were bad in the Noise Salt and Pepper attack.

Keywords: *Watermarking, Least Significant Bit, Dual-Tree Complex Wavelet Transformation*.