ABSTRACT

Nowadays the dissemation of data in the form of digital video over the internet has become a very common occurence. Such as film footage, video clips and videos of commercial products. This widely distributed video needs to be protected to avoid unwanted misuse such as copyright piracy. Video piracy is the activity of obtaining, copying, reproducing and selling or distributing video that already have copyright without the consent of copyright owner which is a criminal offense and a violation of law. Online video piracy has become a concern for film producers. Video watermarking is an insertion of watermark on the video as a copyright characteristic to mark the ownership of the video.

Based on the problems, in this final project designed a system using MATLAB software with Compressive Sensing (CS) and Discrete Wavelet Transform (DWT) as compression image watermark to reduces the file. And Lifting Wavelet Transform (LWT) method to change video host into several sub-band and Fast Fourier Transform (FFT) to change the signal to domain frequency in order to be resistant towards attacks and Quantization Index Modulation (QIM) as embedding method.

The results of testing in this final project used CS Measurement Rate for 80% and produce the value of BER with average of 0,234 from testing towards sample video which has a good imprecentibility, capacity and robustness. MOS testing get the highest score in scenario 1 good 45%, scenario 2 very good 30%, scenario 3 very good 45%, scenario 4 good 50%, scenario 5 enough 40%, scenario 6 enough 40%.

Keywords: Video watermarking, Compressive Sensing, DWT, LWT, FFT