ABSTRACT

Theft of copyright that includes data in the form of audio or images is one of the problems encountered in this era. One way to prevent theft of this copyright is the use of watermarking techniques on a work in the form audio and images.

Watermarking is a technique to hide information on a media without being noticed by others. The watermarking technique will insert a digital information called Watermark into a digital data called a carrier or medium. Inserted watermarks can be plain text, audio, image or video depending on the capabilities of the media they are on. Watermarking is usually done for copyright protection against a digital data in accordance with ITU-T standards. In this final project will analyze the watermarking medical image by using Two Dimensional Discrete Cosine Transform (2DDCT) and Compressive Sensing (CS) method by giving various attacks that will be tested to produce the best watermarking medical image. This quality is reviewed from three parameters, namely BER, PSNR, and SSIM.

The final result of this final project is watermarking application on MATLAB without using Compressive Sensing (CS) having stable BER value 0, PSNR inf and SSIM 1 without attack, while using CS has BER value approaches 0 (0.1426-0.1851), PSNR value (26.5672-34.1635dB) and SSIM is 1 without attack.

Keywords: Watermarking, Compressive Sensing, Two Dimensional Discrete Cosine Transform, BER, PSNR, SSIM.