ABSTRACT

The development of information technology today can represent a data in digital format. Data with the digital format is more easily disseminated using computers and the internet. In addition, digital data is also easy to modify. Problems arise when the digital data is data that must be protected such as medical data, especially medical images. In the medical world required verification on the medical image to know the authenticity of the image. A medical image needs to be protected to avoid the risk of inappropriate medical imaging. Therefore, it takes a system that can prove the authenticity of a digital data as well as improve the modified digital image.Watermarking is a technique of inserting or concealing watermark information into media such as text, images, sound, and video. Inserted information may be images, sounds, video, or text which in this case may be evidence of ownership of a person's data.

In this research will be analyzed the watermarking medical image by using Huffman coding and Compressive Sensing (CS). In Huffman coding any incoming linear data in arithmetic probability/value of its occurrence frequency. Compressive Sensing is a sampling method in which the acquisition and compression of signals are performed at a time. The process of analysis and implementation of steganographic medical image data is done on the part before embedding using Matlab application.From this final project is expected to get the best result of the watermarking medical image. The parameters measured were BER, PSNR, and SSIM.

In this Final Project has BER's value 0, SSIM's value 1 and PSNR's inf value without using compressive sensing without using attack. While using compressive sensing has BER's value between 0.0154-0.0913, SSIM's value 1 and PSNR's value between 42,9311-56,7416.

Keywords: Watermarking, Huffman Coding, Compressive Sensing.