

## ABSTRACT

Development of information technology can represent digital format in a data. Data with digital format more easily distributed using computers and the internet. In addition, digital data was also easy to be modified. Problems arise when digital data is data that should be protected as medical data especially medical image. In the world of medical needs verification in medical image to know the authentic of medical image. As medical image need to be protected to avoid risk the use image medical that was not as well as they should, we need a system that can authenticate a digital data also can recovery digital image that is modified.

Digital Watermarking using Absolute Moment block Truncation Coding (AMBTC) and Discrete Cosine Transform (DCT) offered as solution of problems. Results from the AMBTC will be inserted into the original image which had previously been transformation process done using transformasi DCT. By using AMBTC, the image can be detected and recovered. Performance parameters that are used to measure image quality is Peak Signal to Noise Ratio (PSNR), and error rate.

Based on test result, it can be concluded that system can produce the watermarked image and can detect the modification with embedding watermark at 3 bit frequency among coefficient DCT at bit to-16, 17, and 18. Assessment is using PSNR and error rate. In addition, system can also recovers in some attack that was given.

Key words: medical image, digital watermarking, detection, modification, *recovery* image, AMBTC, Discrete Cosine Transform, PSNR, Error Rate