

Abstract

The advancement of technology makes digital data exchange like text, video, and image easier. As data exchange gets easier, the probability of data modification gets higher. One type of data that is vulnerable from data modification is medical image. Medical image contain information about human body organs, the originality of this image will lost if modified.

Watermarking technique give solution to proof the originality of digital image. With the insertion of watermark which is the important characteristic of the image, watermarking technique can detect modified image and repair the image. Fragile watermarking is one kind of watermarking to proof the originality of the image, with this watermarking technique system can detect kind of attack to the image.

Therefore, in this Final Assignment will use combined method to produce extract characteristic from image so that it can be detected and repaired. Absolute Moment Block Truncation Coding (AMBTC) will produce important characteristic and the extraction result of the image which transformed with Discrete Wavelet Transform (DWT) before.

Attack that happened to medical image is noise and sharpening can be detected and repaired by the system. The performance quality of the final image that have been detected and repaired can be measured using Peak Signal to Noise Ratio (PSNR) and Error Rate.

Keywords : medical image, watermarking, AMBTC, DWT, PSNR, Error Rate