ABSTRACT

The absence of a simulation module on watermarking on multimedia learning makes it difficult for students to understand the material well, the simulation module of watermarking in the image is a simulation-based learning module in MATLAB. Where watermarking or watermarking is introduced is simple to facilitate a simulated understanding of watermarking.

The watermarking module in this digital image uses Discrete Wavelet Transform (DWT) and Discrete Cosine Transform (DCT) methods. In this final project used colorful image host 255 x 255 and water marks measuring 50 x50, 75 x 75, 100 x 100, 125 x 125, and 150 x 150.

The watermarking results of the image on the DWT method yielded an average value of MSE 1.3336838 and the mean value on PSNR of 47.5548 whereas on DCT method yielded mean values on MSE 1,8629454 and PSNR 46,44942. The results show that the DWT method produces a watermark that resembles its host image compared to the DCT method. From the results of MOS testing obtained the highest value of 3.75 states help the understanding of respondents to the watermarking module of this digital image. And 3.63 makes it quite helpful to understand the respondent's understanding of watermarking module digital image. And get the average value of MOS 3.68.

Keywords: Watermarking, DWT, DCT