

ABSTRACT

The development of information technology nowadays, making internet as one of digital information sharing's need. For the example is at Telemedicine field. Telemedicine is using the development of telecommunication technology for information exchanging and serving within time and location limit. In Telemedicion concept, all medical image data from diagnosis result and all patient data are using internet to medical information transmittion.

In this research, an analysis of the effect of the type of layer used in DCT, DCT block, and SVD scale factor value on watermarking performance will be analyzed. The parameters used are Peak Signal to Noise Ratio (PSNR), Mean Square Error (MSE), Bit Error Rate (BER). The test scenario includes the interference scheme in the form of Salt and Paper, Gaussian Blur and Rescaling. Based on the IEEE paper entitled A Study of DWT and SVD based Watermarking Algorithm for Patient Privacy in Medical Images (2013), the paper uses DWT method which has advantages in computation time and imperceptibility while SVD has advantages in robustness and capacity of inserted data. While in this final project, I want to explain that DCT has advantages that DWT might not have.

From this research we can know that producing best watermarked image is using green image layer with SVD scaling factor is 0.1 because of images are easy to break at low frequency, while at high frequency watermark can be disappear by quantitation process.

Keyword: non-blind watermarking, discrete cosine transform, singular value decomposition, RSA