ABSTRACT

Nowadays, there are many digital types of equipment which easy to modify

the data without leave any sign from the changing, so that the credibility of the

data is irresponsibleness. Furthermore, it is important to used data protection to

keep the original of data. There are many methods for data protection; one of them

is watermarking which focus for copyright protection.

The objects of the Final Project are developing the watermarking image

system with Singular Value Decomposition (SVD) based on Discrete Cosine

Transform (DCT). These combinations used to watermark embedding and

watermark extraction in hopes image watermark cannot be detect, the quality of

image extraction stay good, increase the safety of image watermark, and image

extraction is robust from many signal processing.

The important thing to be attention is trade-off between bit rate to hide and

robustness extraction image with the invisibility of image watermarking. If used

higher bit rate, image watermarking is more visible, but image extraction more

robust. To get the good invisibility, use scale factor ≤ 0.2 , but to get the good

robustness, use scale factor ≥ 0.2 . In this final project, the better place to

embedding are sub band 2 and sub band 3.

Keywords: watermarking, DCT, SVD, ekstraksi, embedding