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*