ABSTRACT

Nowadays, the use of digital images has become a trend. It's because of their characteristics, like its simplicity to be spread, doesn't need big storage, and the repairing process can be done easily. However, when the aquisition process is being done, noise could get onto it and make any damage. If that happened, the image enhancement process that will be applied to the image will not give optimal result. That's way noise filtering process is needed to reduce the noise on it.

This final project is using Block SVD (Singular Value Decomposition) with DFT (Discrete Fourier Tarnform) to reduce noise on the image. The noise that is being generated for simulation are additive Gaussian noise and additive Laplacian noise. The technic is decomposing the matrices that represented the noisy image. So it can be seen which components of the image that contain noise. From the experiment result, it can be summarized that Block SVD with DFT can be used to reduce noise on digital image, and if the input parameters that we used is good, it will give better filtered-image quality than the Block SVD without DFT will.

Keywords *: digital image, Gaussian noise, Laplacian noise, noise filtering, block SVD, DFT.*