ABSTRACT

In social life, by the increases of camera resolution on smartphone most of people never forget to capture their moments and share to each other. In case how easy it is to send by internet but the internet quota offered by provider is limited, image compression to reduce the amount of quota is needed. It has encouraged the author to create this thesis.

In this thesis, designed a system to compress and decompress digital images on Android platform, named Image Compressor. Wavelet transform method is chosen in this system as one of method that can be used for compression of digital images. Type of wavelet used is famous, it's two dimension Discrete Wavelet Transform (DWT) with first level of decomposition. Then it applied using Eclipse as programming device to analyze the effects toward the quality of reconstruction images. Program will be running on Android.

Image Compressor system has been able to do compression and decompression process. The success level reached 86,33% with 48,27% compression ratio. The values of MOS, MSE and PSNR are 4,19; 13,83 and 36,72 dB with average compression time 76 seconds and average decompression time 18 seconds.

Keywords: digital image compression, Discrete Wavelet Transform, Android.