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.