ABSTRACT

In telecommunication, limited bandwith is very important when digital image saved or transmited. To handle that problem, a new compression way was improved to decrease the number of bit from digital image. Decompression technic for digital image is used to get the compression image similarity to original image.

This final project use Singular Value Decomposition (SVD) method. SVD is a matrix decompossision process be 3 part matrix, left singular vector matrix, singular value matrix, and right singular vector matrix. Mix of this method make lossy compression. Parameters of image compression are PSNR and Compression Rasio, that use different block size, number of singular value, and imange format.

From all test result, color image compression system use SVD method with 4x4 block size, singular value 1-3 and use Luminance & Crominance image format have better performance in compression rasio (69,3057%-81.035%) , PSNR (33.7262 dB – 47.7387 dB) and image result reconstruction.

Key Word : *image compression, lossy compression, SVD, PSNR, compression rasio.*