

ABSTRACT

Data compression is rapidly becoming the dominant technology of the information age. Storing and transmitting the digital image component of multimedia systems is a major problem. The amount of data required to present images at an acceptable level of quality is extremely large, so that need existence of an algorithm capable to compress digital image in simple format with distortion value as small as possible and with minimum bit rate.

Digital image lapped over from bit – bit with very big so that make number of the data that transmit is very big and have high bit rate so that need existence of algorithm capable to compress digital image in a simple format with distortion value as small as possible and with minimum bit rate.

At this Final Assignment will be studied one of method of digital image compression that is Vector Quantization (VQ). Principle of this algorithm is input of image divided to become minimize block- block the called Training Vector . Training Vector earn reconstructed from applying of function transfer to a specific district at image of itself, called with Codebook . Thereby only with arrage transfer function , owning slimmer data compared to our image earn to reconstruct that input image retur . Afterwards Training Vector will be compared to Codebook . The result position index with value of minimum distortion so that be got by byte rate minimize to get an amount of image with high quality .

From implementation of digital image compression using Vector Quantization will be analysed result of performance of compression system that is objective and subjective criteria and we got from experiment that compression ratio value tired 29,77 times with biggest value PSNR equal to 87.2531 dB and smallest MSE equal to 9.70E-04 and assess best threshold equal to 0,001 and get smallest bit rate until 0,268 bpp .