ABSTRACT

Image is big size of data. The standard of image format in the Microsoft Windows platform is Bitmap (bmp). Image in bmp format is better than image in other format. But the quality of image in bmp format reverse compared to file size. The file size of bmp image is relatively big. The limitation of data storage media is being consideration how it need to apply a compression method of image to reduze the image size but it still can represent the original image. Compression method of image, Neural Network with Backpropagation Learning is used in this Final Assignment. Backpropagation Neural Network can use to compress the image because of the ability in pattern recognition. Some parameters, like the value of learning rate and the number of hidden layer in Backpropagation Neural Network are changed to get some parameters that give maximum performance for compression. And then, those will be applied as compression method of image. Some parameters of lossy compression are gotten from the testing process of Backpropagation Neural Network, such as : Peak Signal to Noise Ratio (PSNR) and Mean Square Error (MSE). From the result of analysis in learning rate and hidden layer, the value of learning rate 0.2 and 3 hidden layers are used in testing for all compression, 4 : 1 and 16 : 1. It because they give the smallest value in MSE so can give an optimum performance of Backpropagation Neural Network for image compression

Key words : Image Compression, Backpropagation Neural Network, and Parameter of Performance