Abstract

Recently data are not limited only by text but it has enhanced into audio data and visual data. One of visual data is image. Different than text, the storing and searching of image need a different method. It caused that image has a relatively bigger measure than text and it is difficult to be interpretated .

This thesis tells about a method to store images using index and also image retrieval by searching. Index is formed by a group of index keys from competitive neural network learning where the input are DCT (Discrete Cosine Transform) coeffisients from an image.

These DCT coeffisients are resulted from DCT transform of an image by divide the image into 8x8 block. The image will be transformed to biner form first. The image retrieval can be done by using an image as an input and compare the key index from the input image with the indexs which stored in index file.

The result of the testing from the implementation indicates that the key index is based on the value of the learning rate. For learning rate whose value is not updated results the key index which has the accuracy between 50-60% on the image query, but almost all the picture will be recognized as a same image by the system. And for learning rate whose value is not updated results the key index which has the accuracy between 40-45% on the image query with the similar image can be recognized as different image by the system.

Keywords: *DCT, index, index key, image,image retrieval, JST, JPEG, learning rate.*