ABSTRACT

Compression is a process of dividing a group of data into a code form to economize repository requirement and time for data transmission. The basic problem for compression environment is we can't find the most optimal method of compression for various file type. Many used method to conduct this compression technique, such as Huffman, Lz77 and its variant (Lz78, LZW, Gzip), Dynamic Markov Compression (DMC), Block-Sorting Loseless, Run-Length, Shannon Fano, Burrows-Wheeler Block Shorting, and Half Byte. In this final project, implemented three form of compression method, that is Huffman, LZW, and DMC alghorithm which is represent one code of compression technique. Where Huffman represent simbolwise method, LZW represent dictionary method, and DMC represent predictive method. This third method is tested for compress a various type and size of file, then conducted a statistical analisys to compare the performance of each method pursuant to two factor, that is ratio or comparison size of file of compression result to original file and the compression speed, so we can find the optimal algorithm for the specific file type. And after several test I've got a conclusion that the DMC algorithm had the best perpormance for compression rasio, the second one is Huffman and the third one is LZW.

Keywords: Data Compression, Huffman Alghorithm, LZW Alghorithm, DMC Algorithm.