Abstract

Predicted global IP traffic will reach 80.5 exabytes per month in 2015, increasing three times from the average use per month in 2010. While the global mobile Internet data traffic will increase 26 times in the period 2010-2015, reaching 6.3 exabytes per month. The impact is the increasing of multimedia data transaction, including digital image. Multimedia data has a high sensitivity to measure, to ensure the good quality large data size is a consequence.

Digital image compression is one of the methods in the processing of image data that serves to reduce the size of the input image data by reducing the information (lossy) or keep it (lossless). Improved huffman coding is an extension of the static huffman coding algorithm. It is hoped that this algorithm is able to provide the results of compression with better compression ratio and also have more efficient processes from the perspective of time and computation.

More chunk able to produce more efficient output and in less time. In the case of 24-bit test, this algorithm reaches an average compression ratio of 89.22414% for the scenario with no chunk. 88.77828% for the scenario using two chunk. 91.71617% for scenarios using 4 chunk, and 96.17751% for the scenario using 8 chunk. In the case of 8-bit test, the compression ratio of the algorithm is to reach an average of 46.43278% for the scenario with no chunk. 44.16936% for the scenario using two chunk. 43.53774% for scenarios using 4 chunk, and 43.5478% for the scenario using 8 chunk.

Key words: *lossy, lossless, digital image compression, chunk, impoved huffman coding*