ABSTRACT

Uncompressed multimedia (graphics, audio and video) data requires considerable storage capacity and transmission bandwidth.Despite rapid progress in mass-storage density, processor speeds, and digital communication system performance, demand for data storage capacity and data-transmission bandwidth continues to outstrip the capabilities of available technologies. The only solution is to compress multimedia data before its storage and transmission, and decompress it at the receiver for play back.

The Embedded Zerotree Wavelet (EZW) algorithm is a simple, yet remarkably effective, image compression algorithm, having the property that the bits in the bit stream are generated in order of importance, yielding a fully embedded code.

Set Partitioning in Hierarchical Trees (SPIHT) is a wavelet based compression algorithm that offers good compression ratios, a fully progressive bit-stream, and good image quality.

Both this algorithm enable conducting of transmission progressively. At progressively transmission, reconstruction image can be obtained with different quality depended from amount of accepted bit.

This Final Project has compared performance of both algorithm to compress image either from objective assessment criterion (PSNR, MSE) and subjektive (MOS). From the simulation, for the same wavelet filter and decomposition level, SPIHT superior then EZW either from objective and subjective assessment.