Abstract

An image compression method using the wavelet transform, zero tree coding and adaptive arithmetic coding has been proposed. Here a novel static zeroth order adaptive arithmetic coder is being explored to improve the compression ratio. The proposed method decomposes an image into several subband images using the discrete wavelet transform, decorrelated coefficients quantized by Shapiro's embedded zerotree wavelet algorithm and encoded using static zeroth order adaptive arithmetic coder. The proposed static coder gives a better compression ratio while decreasing the coding time as compared to context based dynamic counterpart. The results obtained were comparable to those obtained by context modeling approach.

Reference

Image Compression with Adaptive Arithmetic Coding


**Index Terms**

Computer Science Computing

Methodologies

**Key words**

Image compression

wavelet transform

arithmetic coding

embedded zero tree wavelets