Multidimensional Image Compression through Discrete Wavelet Transform in Matlab using Daubechies Wavelet

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 178

Number 8

Year of Publication: 2019

Authors:

Nazir Jan, Nasruminallah, Rehmatullah

10.5120/ijca2019918778

Abstract

This research paper unveils the most powerful and latest tool for image compression; called Wavelet Transform (WT). WT avoids the blocking artifact of conventional DCT Transform. Fourier Transform is the famous transform but this transform always lost time information and preserves only frequency information. Wavelet Transform reserves the information of both time and frequency domains. WT is based on Function approximation or mathematical polynomials instead of blocks like DCT. Matlab simulations, in this research paper, shows much satisfying results and excellent compression ratio when applied on a multidimensional image using multiband Wavelet transform. Daubechies wavelet has been selected in the proposed research paper as analyzing signal.

References


Index Terms

Computer Science Image Processing

Keywords

Daubechies Wavelet, Multiband multidimensional image compression, multimedia data, Wavelet Transform