

IMAGE COMPRESSION ALGORITHM USING DISCRETE COSINE TRANSFORM

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Abstract

Image compression is the application of data compression on digital images. An image compression system is composed of two distinct functional components: an encoder and a decoder. The encoder performs compression and the decoder performs the complementary operation of decompression. The Discrete Cosine Transform (DCT) is a mathematical function that transforms the digital image data from the spatial domain to frequency domain. The DCT is a technique for converting a signal into elementary frequency components. DCT is widely used in image compression. In this paper, we have presented the mathematical equations of the DCT and its properties. We have proposed image compression algorithm using DCT. MATLAB program is used to implement the algorithm.

Key Words : *Image compression, Discrete Fourier Transform, Discrete Cosine Transform, Quantization, Coding.*