Abstract

Image compression minimizes the problem that we face in storing and transmitting large amount of data. It reduces the size of data required to represent a digital image. In this procedure, DCT plays an important role. It separates information by using different frequencies. In Discrete Cosine Transformation (DCT), Quantization and encoding are the steps involved in the compression of the JPEG image. In this whole work, while using DCT, we have used Stassen's matrix multiplication algorithm for reducing the complex matrix multiplication problems. As per the result obtained from experiment, the performance of DCT is improved by using Stassen's matrix multiplication algorithm. The performance analysis is carried out through Peak signal to noise ratio (PSNR), and the different compression ratio (CR) for the different images.

References

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Index Terms

Computer Science

Algorithms

Keywords

compression, strassen's matrix multiplication, CR, DCT, JPEG, PSNR