International J. of Math. Sci. & Engg. Appls. (IJMSEA) ISSN 0973-9424, Vol. 8 No. III (May, 2014), pp. 107-117

## DISCRETE COSINE TRANSFORM AND ITS APPLICATION USING VEDIC ALGORITHM

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## Abstract

The Discrete Cosine Transform (DCT) is a technique of converting a signal into elementary frequency components. The computation of DCT is a computationally intensive problem in a number of signal processing applications, for example in image and video coding. This paper reviews the computation of the DCT. We have proposed the two-dimensional DCT algorithm which is applied to the Vedic multiplier based on Vedic multiplication sutra called Urdhva-Tiryakbhyam Sutra with MATLAB. The proposed algorithm is compared with conventional algorithm. The DCT computation using Vedic multiplier gives a significant performance as compared to the DCT using conventional method.

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Key Words: Discrete Cosine Transform, Discrete Fourier Transform, Image compression, Quantization, Coding, Vedic multiplier, Urdhva-Tiryakbhyam sutra.

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