DCT AND SYSTOLIC ARRAY IN IMAGE COMPRESSION

EKTA AGRAWAL, KUMAR MANU, RUCHI VARSHNEY & ANUPAM YADAV

Department of Electronics & Communication Engineering, Moradabad Institute of Technology,

Moradabad, Uttar Pradesh, India

ABSTRACT

Systolic arrays are a family of parallel computer architectures capable of using a very large number of processors simultaneously for important computations in applications such as scientific computing and signal processing. A discrete cosine transform (DCT) expresses a sequence of finitely many data points in terms of a sum of cosine functions at different frequencies. DCT is a Fourier-related transform similar to the discrete Fourier transform (DFT), but using only real numbers. DCTs are equivalent to DFTs of roughly twice the length, operating on real data with even symmetry.

KEYWORDS: Discrete Cosine Transform (DCT), Discrete Fourier Transform (DFT), Systolic Array, VLSI