Real Time Implementation of Ancient Vedic Algorithm in Image Processing Applications

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ABSTRACT

Digital multipliers are indispensable in the hardware implementation of many important functions such as DCT, IDCT, FFT etc. The DCT (Discrete Cosine Transform) and IDCT (Inverse DCT) performs spatial Compression and decompression of the data and these functions are performed using Vedic algorithms. The proposed Vedic multiplier significantly improves the computational speed involved in multiplication operations of the image processing. The other advantage of Vedic algorithm stems from the fact that it can be easily realized in Hardware. In multipliers based on the Vedic algorithm, there is no visible difference between images reconstructed using Vedic multipliers and images reconstructed using standard multipliers.