Abstract

Image processing is one of the trending issues in the world of big data. The discovery of data from an image is a complex task in everyone's day to day life. In this paper, the texture synthesis is done with the help of energy compaction property of various transforms. The images are subjected to various combinations of transformations like DCT, DWT and Daubechies. The energy compaction of these transforms is explained in this paper. This property is used for restoring the images which are blurred due to atmospheric turbulence, motion blur and the images which are affected due to noise present in the channel. From the experiments, the DCT is having good energy compaction, but instead of using two-dimensional transform, three-dimensional transform (2D + 1D) will give the better results when compared to the 2D transform for synthesizing the textures.

References

Texture Synthesis using Energy Compaction Property of Different Transforms

signal processing vol.14, no.2, pp.24-41, Mar 1997
7. A. Foi, V. Katkovnik, and K. Egiazarian, “Pointwise shape-adaptive DCT for high-quality denoising and deblurring of grayscale and color images,”

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Computer Science Image Processing

Keywords

Texture synthesis, Energy Compaction, Transform.