EDGE ADAPTED WAVELET TRANSFORM FOR IMAGE COMPRESSION (WedAmOR3)

Author(s) :

Fikri Goksu (University of Minnesota, United States)
Ahmed H. Tewfik (University of Minnesota, United States)

Abstract :

Several approaches have been proposed to improve the compaction performance of the wavelet transform by taking into account the singularities present in the image and their 2D directionalities. This improvement is valid both for compression and de−noising applications. Here, we investigate an edge adaptive wavelet transform which has a better rate−distortion characteristic than the classical wavelet transform. The proposed approach can be viewed roughly as a combination of image segmentation and shape adaptive wavelet transform. The algorithm consists of two steps. In the first step we locate edges by using a sigma filter. In the second step we apply the modified wavelet transform on the separated parts of the image. We provide performance re−sults in terms of rate−distortion curves for both 1D and rela−tively simple 2D signals.

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