A Superior Algorithm for Resizing Images by using the Subband DCT

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Abstract

Image resizing is widely demanding in various applications such as image transmissions in the computer network and image display for the different resolution of display devices.　The subband DCT (discrete cosine transforms) is a multiple-resolution structure in which the signal is decomposed into low-frequency and high-frequency subband signals to improve the computational complexity and efficiency of DCT.　In practice, the DCT coefficients of the most of signals encountered can be approximated by its subband DCT coefficients.　The relationship between the DCT and subband DCT coefficients is found in this paper, and applied in the image resizing with the good performance

Keyword：image resizing, discrete cosine transforms (DCT), subband DCT