EFFECTS OF RECOMBINING PROCESS FOR THE MULTIWAVELET FILTER BANK ON ZEROTREE IMAGE CODING

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Abstract

Wavelet-based image compression using zerotree structure has been shown to be a powerful algorithm. The coding scheme exploits the self-similarity of wa- velet coefficients across different scales in the image representation using the wavelet transform. In multiwavelet case, since multiwavelets have more than one scaling functions, the output from the analysis filter bank is a vector-valued sequence. Thus, to apply this coding scheme to multiwavelet filter bank, an additional step of recombining a vector sequence to a scalar sequence must be applied. In this paper, we use different recombining methods to multiwavelet filter bank and their effects on zerotree image compression are discussed.

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