PERFECT RECONSTRUCTION IN REDUCED REDUNDANCY WAVELET−BASED MULTIPLE DESCRIPTION CODING OF IMAGES (WedAmOR3)

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Abstract :

In this paper we consider frame expansions derived from biorthogonal wavelet bases for building multiple descriptions with low redundancy constraints. Such constraints rise the problem of perfect reconstruction of the associated decompositions in the absence of quantization or channel errors, which requires special attention and therefore will be detailed in this work. We will show that several schemes that yield perfect reconstruction are possible with the proposed strategy. Moreover, when the resulting coefficients are corrupted by quantization or channel errors, we employ a fast iterative algorithm based on projections onto convex sets in order to enhance the quality of the decoded images.

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