

Error-Resilient Transmission of Compressed Images over Very Noisy Channels Using Soft-Input Source Decoding

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ABSTRACT

In this contribution we utilize an optimal estimation approach for error-resilient transmission of compressed images over AWGN channels. In contrast to other methods, we mainly rely on the implicit residual redundancy inherent in the subband images and the bit-reliability information at the channel output for error protection. It is shown that by including a-priori knowledge about the spatial correlations in the subband images, we obtain a highly increased quality of the reconstructed image. This holds especially for very noisy channels and a mean-square estimation of the subband source coefficients.