

PROJECT / ROBUST JOINT SOURCE/CHANNEL CODING FOR MULTIMEDIA COMMUNICATIONS

PICS

Main Objective:

The MDC makes it possible to control easily the amount of redundancy introduced in the transmitted signal while maintaining good quality decoding whatever the state of the channel. However, in the case of non stationary noisy channel, few works have been dedicated to the tuning of the redundancy according to the noise level. The goal of this project is to design a MDC that controls automatically this redundancy between the descriptors according to the channel state. Furthermore, in case of embedded devices we also propose to introduce distributed coding to move the complexity from the coder to the decoder. The proposed framework includes a wavelet transform and an optimal bit allocation process of the binary resource across the different descriptors and the different wavelet subbands. Our model will take into account both the knowledge of the channels characteristics (heterogeneity, non stationarity, ...) and the propagation conditions encountered in a real environment.

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