Siriwat Hasajitto 2010: Adaptive MAP Source – Controlled Channel Decoding for MPEG – 4 Imagery Transmission Systems. Master of Engineering (Electrical Engineering), Major Field: Electrical Engineering, Department of Electrical Engineering. Thesis Advisor: Assistant Professor Srijidtra Charoenlarpnopparut, Ph.D. 73 pages.

This research shows the method to compute the Residual redundancy of MPEG-4 image transmission systems. The efficient evaluation of the residual redundancy for the zerotree symbol sequences is crucial and intensively discussed. The first order Markov model is employed for the zerotree symbol sequences of the "Lena" the "Barbara" and "Pancake" images. The system performance is summarized by considering the slow flat Rician fading channels and also block-fading Rician fading channels. The simulation results show some improvement between two images with different residual redundancies.

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