

Abstract

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Efficient Uncompressed Video Communications using Multicarrier, Redundancy Exploitation and Low Density Error Correction Techniques

In this paper, we present an efficient system for transmitting uncompressed image (HD) over wireless noisy channel. With the advances in RF technology and the huge bandwidth available worldwide in the 57-66 GHz millimeter-wave unlicensed spectrum, WPANs that can support multigigabit transmission are being developed. However, retransmissions due to error in packets may be unsuitable for uncompressed video streaming. In this paper we develop, simulate and evaluate an efficient system for reliable transmission of uncompressed image over wireless channel. The system uses image partitioning for redundancy exploitation, LDPC (low density parity check code) for channel coding and OFDM to recover the fading problem. Simulation using MATLAB indicates that with small SNR, we can achieve small image symbol error rate and high PSNR.