Reduction of Impulsive Noise in OFDM System using Adaptive Algorithm

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Abstract : The Orthogonal Frequency Division Multiplexing (OFDM) with high data rate, high spectral efficiency and its ability to mitigate the effects of multipath makes them most suitable in wireless application. Impulsive noise distorts the OFDM transmission and therefore methods must be investigated to suppress this noise. In this paper, a State Space Recursive Least Square (SSRLS) algorithm based adaptive impulsive noise suppressor for OFDM communication system is proposed. And a comparison with another adaptive algorithm is conducted. The state space model-dependent recursive parameters of proposed scheme enables to achieve steady state mean squared error (MSE), low bit error rate (BER), and faster convergence than that of some of existing algorithm.

Keywords : OFDM, impulsive noise, SSRLS, BER
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