Abstract

An equalization technique based on nonlinear Hammerstein type filters to combat the inter symbol interference (ISI) effect is proposed. This technique is nothing but nonlinear generalization of the linear equalizer. Linear frequency selective fading channels in presence of additive white Gaussian noise is considered using DPSK and QAM modulation techniques in this work. Simulation results shows that the proposed technique is found superior compared to when linear equalizer is used. Better BER performance at moderate and higher SNRs is achieved for M-QAM modulation. Results also show better MSE performance than the linear structure.
References


Index Terms

Computer Science

Networks
Keywords
Channel Equalization  Frequency Selective Fading Channels  Hammerstein Filter
QAM
DPSK