

Abstract

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Coded 4-PAM OFDM for high rate data links

Orthogonal Frequency Division Multiplexing (OFDM) is one of the best solutions for wideband communication applications. M-ary PAM – OFDM achieves comparable power and bandwidth efficiencies with less system complexity to ordinary OFDM systems that use M-ary QAM or M-ary PSK. Basically, OFDM is sensitive to Carrier Frequency Offset (CFO) and to phase noise. Performance evaluation of M-ary PAM OFDM over AWGN impaired with CFO and white phase noise is investigated in this paper with simulation. Also, the coded 4-PAM OFDM is proposed and its performance is evaluated over AWGN impaired with CFO and phase noise with simulation in comparison with un-coded 4-PAM OFDM.