

Abstract

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BER performance of MRC/MC-CDMA systems for MSK scheme in independent and correlated nakagami-m and rician fading channels

In this paper we investigate the bit-error-rate (BER) performance of Multicarrier Code Division Multiple Access (MCCDMA) systems assuming Minimum Shift Keying (MSK) and Maximal Ratio Combining (MRC) in Fading Channels. We provide accurate closed-form BER formulas. The studied system is assumed to have synchronous users, and each user's data is assumed to be spread using long random spreading codes. The analysis includes independent and correlated Nakagami-m and Rician fading channels. Furthermore, the effect of frequency offset is also considered. Moreover, the derived expressions are verified via simulation, and as will be shown, the simulated results agree well with the theoretical expressions.