Abstract

LTE (Long Term Evolution) is a 3GPP (Third Generation Partnership Project) wireless standards that gives us wideband CDMA (Code Division Multiple Access) and HSPA (High Speed Packet Access) a third generation connectivity. LTE is the fourth generation (4G) of wireless communication technologies that brings the standard OFDMA (Orthogonal Frequency Division Multiple Access) modulation, MU-MIMO (Multiuser Multiple Input Multiple Output) technology and different multipath fading model EVA (Extended Vehicular a), ETU (Extended Typical Urban) and EPA (Extended Pedestrian A) which allows the operator to use spectrum more efficiently to deliver high speed data. This paper characterizes the downlink performance of LTE. There are many metric to characterize the performance, but one of the most convenient and informative metric is the BER (Bit Error Rate). So the performance is characterized in terms of BER. In this paper the LTE system is modeled and simulated using MATLAB and the BER for 2×2 and 4×4 MIMO using QPSK and 16QAM modulation is obtained against different SNR values.
References


Index Terms

Computer Science          Signal Processing

Keywords

3GPP, LTE, MIMO, PHY