Abstract

In wireless communication, Multiple-Input Multiple-Output (MIMO) is the most propitious technology that enhances the system capacity and data rate by using multiple antennas at the receiver and at the transmitter. Efficient signal detection at the receiver is a complex task in MIMO systems. The computational complexity of equalization based linear detection algorithms such as Minimum Mean Square Error (MMSE) and Zero Forcing (ZF) is less than that of algorithmic schemes. The simulated results presented in this paper are using various MIMO system configurations from 2x2 to 8x8. The results are compared and analyzed on the basis of Bit Error Rate (BER) for M-QAM modulation techniques using MMSE, ZF reduced complexity algorithms under Rayleigh fading channel. Simulations results reveal that the MMSE detection offers better performance over ZF detection however for 64-QAM modulation both linear detection shows same performance.
- Introduction to MIMO Systems by Rohde & Schwarz Authored on: Sep 7, 2007 by S. Schindler.

Index Terms

Computer Science Information Sciences

Keywords

MIMO ZF MMSE BER M-QAM Modulation.