Abstract

High data rates within the limited radio frequency (RF) spectrum is always desirable that leads to radios with capabilities beyond a single-input single-output (SISO) topology. Recently introduced wireless systems have adopted multiple-input multiple-output (MIMO) topologies that use two or more transmitters and two or more receivers to send data simultaneously over the same RF bandwidth. The performance of MIMO system can be improved by using multiple antennas at transmitter and receiver so as to provide spatial diversity. In this paper, the performance analysis of MIMO system over AWGN fading channel with ZF receiver is presented. The effects of the antenna selection can also be analyzed from the simulated results. The BER (Bit Error Rate) performance characteristics of Zero-Forcing (ZF) receiver is investigated for M-PSK modulation technique over the AWGN channel.

References


**Index Terms**

Computer Science

Communication Systems
Keywords
MIMO  AWGN  spatial diversity  BER  ZF  M-PSK  SNR  multi-path fading  STBC