Abstract
In the present paper performance analysis and a comparative study is reported for channels using receive diversity (1X2), transmit diversity (2X1) and transmit-receive diversity (2X2) with maximum Likelihood detection technique. The channel is assumed to be flat Rayleigh fading channel and noise samples are independent with zero mean complex Gaussian random variable. The Alamouti Space Time Block codes with modulation techniques BPSK, QPSK 8-PSK and 16-QAM are used to obtain the bit error rate performance under different SNR scenarios. The results reported in this paper suggest substantial improvement in the system
Bit Error Rate Performance of MIMO Channels for various Modulation Schemes using Maximum Likelihood Detection Technique

performance by incorporating multiple input multiple output techniques in order to improve the link quality.

Reference

2. Hamid Jafarkhani "Space-Time Coding Theory And Practice ", university Of California, Irvine
8. Vibhav Kumar Sachan, Ankur Gupta, Dr. Avinash Kumar, “Performance analysis of MIMO space diversity technique for wireless communications “ Krishna Institute of Engineering & Technology, Ghaziabad, INDIA 978-1-4244-3328-5/08/$25.00 ©2008 IEEE.

Index Terms

Computer Science
Communications
Key words

Channel state information (CSI)
Phase Shift Keying (PSK)
Bit Error Rate (BER)

Signal-to-Noise Ratio (SNR)

Space Time Block codes (STBC)

Quadrature Amplitude Modulation (QAM)