Abstract

In this paper, analysis of symbol error probability (SEP) is carried over frequency non-selective slowly Rician fading channel with N branch receiver diversity using maximal ratio combining (MRC) technique. We assume that channel side information is known to the receiver. Symbol error rate expression of coherent M-ary phase shift keying (MPSK) and non coherent M-ary frequency shift keying (MFSK) are obtained through numerical computation based on moment generating function (MGF) approach in order to avoid complex numerical calculation. Error performance plots of these two modulation techniques has been drawn and compared for different values of Rician factor K, diversity order N and modulation order M.

References

Performance Comparison between MPSK and MFSK in Rician Fading Channel based on MGF Method

- J. Sun and I. Reed, ”Mobile radio link analysis for wireless communication,” IEEE 1996.

Index Terms

Computer Science  
Signal Processing

Keywords

Mpsk (m-ary Phase Shift Keying)  
Mfsk (m-ary Frequency Shift Keying)  
Mrc (maximal Ratio Combining)  
Mgf (moment Generating Function)  
Sep (symbol Error Probability)