IJDACR
ISSN: 2319-4863

IJDACR
International Journal Of Digital Application & Contemporary Research

International Journal of Digital Application & Contemporary research
Website: www.ijdacr.com (Volume 3, Issue 3, October 2014)

Channel Capacity Estimation in MIMO-OFDM System for different Fading Channels Using Water Filling Algorithm

Lokesh Ameta
M. Tech. Scholar, ECE Department,
Shrinathji Institute of Technology & Engineering, Rajasthan, India
lokeshameta16@gmail.com

Dr. Mahesh Kumar Porwal
Professor, ECE Department,
Shrinathji Institute of Technology & Engineering, Rajasthan, India
porwal5@yahoo.com

Abstract—**With the rapid enhancement in wireless communication systems, spectrum utilizations is a measure problem. The capacity of a communication system can be enhanced using Multiple Input-Multiple Output (MIMO) system and orthogonal frequency division multiplexing (OFDM) system. This paper is focused on further enhancing the channel capacity of a MIMO-OFDM system using iterative Water-filling algorithm. The simulation has been carried out on MATLAB 2010a using different antenna arrangements over Rayleigh, Rician and Nakagami fading channels. Moreover, the bit error rate (BER) performance of MIMO-OFDM system has been compared over different modulation schemes.**

Keywords- **BER, MIMO, Nakagami, OFDM, Rayleigh, Rician.**