



Image Transmission through OFDM System using Alamouti-STBC under AWGN, Nakagami and Rayleigh Channels

Manu Upadhyay
M. Tech. Scholar
Electrical Department
V.J.T.I. College, Mumbai
manu.upadhyay93@gmail.com

Project Guide
Dr. D. P. Rathod
Professor
V.J.T.I. College, Mumbai
dprathod@el.vjti.ac.in

Abstract – Recent communication world is facing drastic changes in the format related to OFDM system. An OFDM system deals with multiple channels over which information are sent at different frequencies to boost up bandwidth efficiency. These techniques were used for audio or video signals in OFDM but in this paper it has been done for image processing to recover original image. Along with this IFFT and FFT filters are used at the transmitter and at the receiving end of OFDM system. During communication, an extra unwanted noise signals come across with real signal due to any reason. This paper deals with these noise called AWGN, Rayleigh and Nakagami. At the receiver side, bit error rate is improved to recover real image which is transmitted from transmitter to receiver. In order to achieve this, the methodology has gone through BPSK modulation technique and Alamouti space time block codes. This system was implemented using MATLAB, in order to simulate these functionalities and to obtain results in the form of BER and SNR to evaluate these performances.

Keywords – AWGN, BER, BPSK, OFDM, Nakagami, Rayleigh, SNR.