

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 3, May 2022

Performance Evaluation of 256 PSK Modulation over Various Channels for MIMO –OFDM Wireless System using Receive Beamforming

Prof. Praveen P. Likhitkar

Assistant Professor, Department of Electronics & Telecommunication, Dr. Rajendra Gode Institute of Technology and Research, Amravati, Maharashtra, India praveen_likhitkar@rediffmail.com

Abstract: The smart antennas are widely used for wireless communication, because it has a ability to increase the coverage and capacity of a communication system. Smart antenna performs two main functions such as direction of arrival estimation (DOA) and beam forming. Using beam forming algorithm smart antenna is able to form main beam towards desired user and null in the direction of interfering signals. In this project Direction of arrival (DOA) is estimated by using MUSIC algorithm. Receive Beam forming is performed by using LMS and LLMS algorithm .In this Paper, in order to perform secure transmission of signal over wireless communication we have used chaotic sequences. This paper evaluates the performance 256PSK over Different channels for MIMO-OFDM wireless system using beam forming with and without LMS and LLMS algorithm. The simulations are carried out using MATLAB.

Keywords: OFDM, MIMO, MUSIC, LMS, LLMS, 256PSK, Beamforming

REFERENCES

- [1]. J Armstrong, Analysis of New and Existing Methods of Reducing Inter carrier Interference Due to Carrier Frequency Offset in OFDM, *IEEE Transactions on Communications*, **1999**, 47 (3),365 369.
- [2]. Y Fu, SG Kang and CC Ko, A New Scheme for PAPR Reduction in OFDM Systems with ICI Self- Cancellation, *IEEE 56th Vehicular Technology Conf.*, 2002, 3, 1418–1421.
- [3]. Y Zhao and S Häggman, Inter carrier Interference Self- Cancellation Scheme for OFDM Mobile Communication Systems, *IEEE Transactions on Communications*, 2001, 49 (7), 1185 1191.
- [4]. WG Jeon, KH Chang and YS Cho, An Equalization Technique for Orthogonal Frequency-Division Multiplexing Systems in Time-Variant Multipath Channels, *IEEE Trans on Commun.*, **1999**, 47 (1), 27–32.
- [5]. A Stamoulis, SN Diggavi and N Al-Dhahir, Intercarrier Interference in MIMO OFDM, *IEEE Trans. Signal Process.*, 2002, 50 (10), 2451–2464.
- [6]. CheolJin Park and Gi-Hong Im, Efficient DMT/OFDM Transmission with Insufficient Cyclic Prefix, *IEEE Communications Letters*, 2004, 8(9).
- [7]. D Sriram Kumar and G Gopi Krishna Varma, Smart Antennas for MIMO-SDMA- An Overview and Modelling, *IEEE Conference on Recent Advances in Microwave Theory and Applications*, **2008**.
- [8]. Praveen P Likhitkar and Chandrasekhar N Deshmukh, Beamforming for MIMO-OFDM Wireless Systems European Journal of Advances in Engineering and Technology, 2015, 2(6): 14-19 ISSN: 2394 658X