

International Journal Of Digital Application & Contemporary Research

## International Journal of Digital Application & Contemporary research Website: www.ijdacr.com (Volume 2, Issue 7, February 2014)

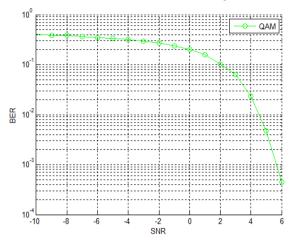


Figure 8: BER performance of WiMAX in QAM modulation for Turbo coding

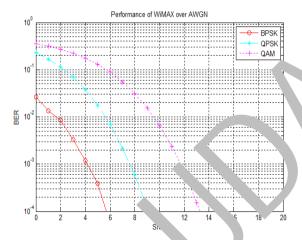


Figure 9: Comparative result for differe mode' .on schemes for Convolution codin<sub>e</sub>

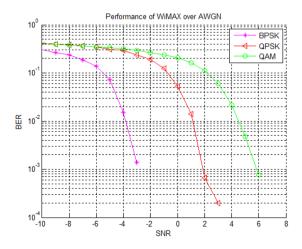


Figure 10: Comparative result for different modulation schemes for Turbo coding

## V. CONCLUSION

This research work firstly discusses the WiMAX IEEE 802.16.e-2005 system, then the implementation of IEEE 802.16.e model is presented with the analysis of the capabilities of WiMAX in AWGN channel. The simulation uses MATLAB and the effect of different modulation schemes has been evaluated over OFDM system.

On comparing the variations of the BER for different SNR in the MATLAB simulation, it is observed that the BER performance of BPSK is better than QPSK and 8-QAM modulation schemes. It is also found that the turbo coding gives better results as compared to convolution coding in terms BER.

## REFERE TES

- 7. S. k. .port, w. .s Communications, Principles and Practic New Jersey: Prentice Hall, 1996.
- [2] WiMAX For "Mobile WiMAX Part 1: ATechnical Overview and P. Tormance Evaluation", August 2006.
- 3] Johnston D., Walker J., "Overview of IEEE 802.16Se rity", IEEE Computer Society, 2004.
- [4] "mall Jansal, Maninder Kaur, Mohinder Pal Joshi, "Implementation of Wimax Simulator in Simulink", IOSR Journal of Engineering (IOSRJEN), ISSN: 2250-021, Vol. 2, Issue 8, PP 102-106, August 2012.
- [5] "WiMAX QoS Classes", Whitepaper, Tranzeo Wireless Technologies Inc., 2010.
- [6] Rajinder Kumar, Kaushik Adhikary, Rohit Vaid, "WiMAX Propagations", IJCSET, ISSN: 2231-0711, Vol. 1, Issue 8, pp. 480-483, September 2011.
- [7] "Mobile WiMAX Base Station", The Mobile World Congress, Japan Radio Co. LTD, Japan 2008.
- [8] Ruby Verma, Pankaj Garg, "Interpretation of IEEE 802.16e (Wimax)", Global Journal of Computer Science and Technology Network, Web & Security, Vol. 13, Issue 10, 2013.
- [9] L. J. Cimini Jr, Ye, L., "Orthogonal Frequency DivisionMultiplexing for Wireless Channels", in IEEE Global Telecommunications Conference GLOBECOM, pp. 82, Sydney, Australia, 1998.
- [10] Philip Koopman, Tridib Chakravarty, "Cyclic Redundancy Code (CRC) Polynomial Selection for Embedded Networks", the International Conference on Dependable Systems and Networks, DSN-2004.