Performance Study of PAPR Reduction Techniques in OFDM

Praveen¹, Satyavathi² and Dr. Narasigh Yadav³

¹PG Student, ²Professor,
³Department of Electronics & Communication Engineering,
¹²Malla Reddy Institute Engineering and Technology, Hyderabad, Telangana, India.
¹praveen43ece@gmail.com, ²satyanarayana.ah@gmail.com, ³narasigh.mriet@gmail.com

ABSTRACT

Orthogonal Frequency Division Multiplexing (OFDM) is considered to be a promising technique against the multipath fading channel for wireless communications. However, OFDM faces the Peak-to-Average Power Ratio (PAPR) problem that is a major drawback of multicarrier transmission system which leads to power inefficiency in RF section of the transmitter. This paper present different PAPR reduction techniques and conclude an overall comparison of these techniques. We also simulate the selected mapping technique (SLM) for different route number which is most efficient technique for PAPR reduction when the number of subcarrier is large. Simulation shows that the PAPR problem reduced as the route number increases.

Keywords: Orthogonal Frequency Division Multiplexing (OFDM), Peak-to-Average Power Ratio (PAPR), Power Amplifiers (PAs), Selected Mapping (SLM), Complementary Cumulative Distribution Function (CCDF).