

Peak-to-average power ratio reduction based on cross-correlation in OFDM systems

ABSTRACT

Two of the most important techniques of Peak-to-average power ratio (PAPR) reduction in orthogonal frequency division multiplexing (OFDM) systems are Partial Transmit Sequence PAPR (PTS-PAPR) and Cross-Correlation-PTS. This paper investigates a complete analysis on these two techniques providing simulation and discussion of their performance on PAPR reduction and bit error rate (BER). Moreover the comparison of these methods by using Saleh model amplifier in an OFDM system is provided. The results show that PTS-PAPR outperforms the Cross-Correlation-PTS in terms of PAPR performance while Cross-Correlation-PTS method is more efficient in BER reduction.

Keyword: OFDM; PAPR; BER; PTS