

FPGA implementation of novel peak-to-average power ratio reduction in orthogonal frequency division multiplexing systems

ABSTRACT

In this paper a new partial transmit sequence (PTS) scheme called enhanced PTS (EPTS) is introduced to reduce the peak-to-average power ratio (PAPR) in orthogonal frequency division multiplexing (OFDM) systems. This is followed with the implementation procedure in field programmable gate array (FPGA). The new phase sequence reduces complexity significantly due to a decrease in the number of searching to find the optimum phase sequence. Simulation results confirm comparable PAPR performance between simulation and implementation results.

Keyword: CCDF; ISI; OFDM; PAPR; PTS