LOW−COMPLEXITY METHOD FOR PAPR REDUCTION IN OFDM BASED ON FRAME EXPANSION PARAMETER SELECTION (TueAmOR7)

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Abstract :

This paper proposes a low−complexity scheme for PAPR reduction in OFDM based on the Erasure Pattern Selection (EPS) method. EPS has been recently proposed [10] for BER and PAPR reduction by using frame expansion in combination with erasures in the OFDM framework. In this paper we discuss the selection of parameters in the EPS method that makes the erasure patterns tight subframes. Based on this selection we develop a low−complexity implementation of the reconstruction algorithm. We compare both complexity and PAPR performance of the proposed scheme with other probabilistic schemes like PTS and SLM. A key result presented in this paper is that the low−complexity EPS scheme can be effectively combined with existing probabilistic methods to provide improved performance. The combinations have the same complexity of the existing probabilistic methods, but simulation results show a significant improvement in PAPR reduction.

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