Computational Complexity and Peak-to-Average Power Ratio Reduction of OFDM Signals by PTS with Sub-optimum Grouping Phase Weighting Method

Abstract

Partial Transmit Sequence (PTS) is a promising technique to reduce Peak-to-average power ratio (PAPR) of orthogonal frequency division multiplexing (OFDM) signals. However optimum PTS (OPTS) needs exhaustive search over all combinations of allowed phase weighting factors. It results in high computational complexity. Grouping Phase Weighting (GPW) technique is a method which has reduced computational complexity while same PAPR reduction capability as compared to O-PTS. In this paper we propose a novel technique known as Sub-optimum Grouping Phase Weighting (S-GPW) Method which not only reduces the computational complexity but also have an advantage of increment in PAPR reduction performance as compared to Grouping Phase Weighting (GPW) method.

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