

***EFFECT OF PARTITION LENGTH VARIABILITY ON THE
PERFORMANCE OF ADJACENT PARTITIONING PTS IN PAPR
REDUCTION OF OFDM SYSTEMS***

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Abstract:

Peak-to-Average Power Ratio (PAPR) reduction is an attractive research topic among the OFDM transmission research communities. Partial Transmit Sequence (PTS) has been a promising candidate out of the proposed PAPR reduction techniques without any distortion. In any PTS system, partitioning of the OFDM frame into disjoint sub-blocks is a crucial step. Adjacent partitioning (AP) is a rather simple partitioning scheme achieving attractive PAPR reduction performance. In this paper, we investigate effects of the length variability of disjoint sub-blocks on AP based PTS systems. In order to compare performance of variable length adjacent partitioning with the ordinary PTS scheme, we simulated other partitioning schemes, namely, interleaved, pseudorandom and fixed length adjacent partitioning for various types of modulation. Simulation results showed that the variable length adjacent partitioning is better than interleaved partitioning. However, it has worse PAPR reduction performance compared to the traditional adjacent and pseudorandom techniques.