Abstract:

In this paper we consider the use of optimum-based reception for OFDM (Orthogonal Frequency Division Multiplexing) signals with M-QAM constellations that are subjected to a clipping operation in their transmission chain. It is shown that the nonlinear distortion that comes from that operation does not lead to performance losses and can even lead to performance improvements relative to the linear transmission. It is also presented a sub-optimum receiver that reduces drastically the complexity relative to the optimum receiver and achieves remarkable gains when compared to the typical OFDM receivers.

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