

Abstract:

In this paper we consider the optimum ML (Maximum-Likelihood) detection for OFDM signals (Orthogonal Frequency Division Multiplexing) with iterative clipping and filtering. It is shown that the nonlinear distortion does not necessarily mean significant performance degradation and, in fact, the optimum performance could even be better than the performance with ideal, linear transmitters. We also present sub-optimum receivers that allow remarkable performance improvements, being able to reduce significantly the gap between the optimum performance and the performance of typical OFDM receivers.

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