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Research on PAPR Reduction of OFDM Signals Using Carrier Interferometry Codes and Iterative Processing: Low Complexity and Applicable Design

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The success of peak-to-average power ratio (PAPR) reduction of OFDM signals using carrier interferometry (CI) combined with iterative processing (IP) or simply called CI/IP as presented in [1] and Fig. 1 led me to improve the performance of OFDM without BER degradation and low complexity.

![Fig. 1](image1.png)

(a) PAPR performance with the proposed CI/IP technique, (b) BER performance with the proposed CI/IP


We proposed a simplified design of Carrier Interferometry OFDM (CI/OFDM) which has 3 advantages: (a) PAPR Reductions, (b) Frequency Diversity, (c) Complexity Reduction, as presented in [2]-[4] and Fig. 2. In [5]-[7], we did a further improvement and complexity reduction for the clipping-filtering and MMSE combiner of CI/OFDM

![Fig. 2](image2.png)

(a) BER performance in COST-207 Fading model, (b) Significant complexity reduction by CIFFT

Results (also as References)


