

**Amplifier-Coupled Tone
Reservation for Minimization of
OFDM Nonlinear Distortion**

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ABSTRACT

- This paper proposes an Amplifier-Coupled Tone Reservation algorithm for the reduction of nonlinear distortion power, utilizing knowledge on the pre distorted PA characteristic.
- The optimization problem is defined. Its convexity is proved.
- A computationally-efficient solution is presented. Finally, its performance is compared against two state-of-the-art TR algorithms by means of simulations and measurements.

EXISTING SYSTEM

- Nonlinear distortion of an OFDM signal is a serious problem when it comes to energy-efficient Power Amplifier utilization.
- Typically, Peak-to-Average Power Ratio reduction algorithms and digital pre distortion algorithms are used independently to fight the same phenomenon.

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PROPOSED SYSTEM

- The utilization of the knowledge on effective PA characteristics obtained by digital pre distortion methods can significantly improve TR algorithm efficiency in terms of the resultant SDR.
- The proposed AC-TR algorithm provides the highest SDR in comparison to two other state-of-the-art TR algorithms, at a typically lower number of operations required.

HARDWARE REQUIREMENTS

- Processor - Intel core i3
- RAM - 2B
- Hard Disk - 20 GB

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SOFTWARE REQUIREMENTS

- Operating System : LINUX
- Tool : Network Simulator-2
- Front End : OTCL (Object Oriented Tool Command Language)

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REFERENCE

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