

An Efficient Blind Pseudo Turbo Equalizer with CMA and SAGMCMA for Single-Carrier System

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Abstract— Basically, conventional single-carrier system has an advantage in limited power communication systems. However, the performance of conventional single-carrier system is seriously degraded by ISI (inter-symbol interference). In order to overcome the ISI, communication systems are commonly used an equalizer. Turbo equalization technique was proposed to maximize system performance over ISI channel. Turbo equalizer can achieve impressive performance gains over ISI channel. Turbo equalizer performs iterative feedback from decoder to equalizer in receiver. Because of iterative feedback, turbo equalizer gets better system performance according to the iteration number. In this paper, we propose a novel turbo equalizer for compensating ISI, which is called as blind pseudo turbo equalizer. Blind means that the equalizer is used without any kinds of training sequence. And Pseudo turbo equalizer means modified structure of turbo equalizer. Pseudo turbo equalizer is included with feed-forward filter and feedback filter. Therefore, we evaluate the BER performance of blind pseudo turbo equalizer by computer simulation.

Keyword— single-carrier system, ISI, blind pseudo turbo equalizer, iterative feedback



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