Abstract

It is a method of adaptive multi-modulus equalization for an equalizer. A cost from a cost function is calculated according to a constant modulus algorithm (CMA). Equalizer coefficients are updated according to the cost, and modulus of each region is determined for a multi-modulus algorithm (MMA). The equalizer is switched to use the MMA when the cost reaches a first threshold. The MMA comprises several stages determined by thresholds, and the number of regions increases in every stage. The cost is calculated according to the MMA and modulus of each region. The equalizer coefficients are updated according to the cost, and modulus of each region is determined for the subsequent stage of the MMA. The equalizer is switched to the subsequent stage of the MMA when the MMA cost function output reaches the threshold corresponding to the current stage. The steps are repeated until the cost reaches a preset value. Then, the number of regions and equalizer coefficients are fixed to equalize the input signal.

Reference

Blind Equalization using Constant Modulus Algorithm and Multi-Modulus Algorithm in Wireless Communication Systems

- Hanks and H.Zeng and Lang Tong "The Mse Perfromance Of Constant Modulus Algorithm".

Index Terms

Computer Science
Communication Systems

Key words

Equalization
CMA
MMA
Cost function