Abstracts

Nonlinear distortion compensation of microwave fiber optic links with asymmetric adaptive filters

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Microwave fiber optic (MFO) links are being increasingly used in microcellular wireless access. However, their nonlinear distortions (NLD) limit the dynamic range. In this paper a baseband adaptive post nonlinearity compensation scheme is described for the uplink. For cost sharing the compensation is done at the central base station. Measurement and simulation results show that 3rd order memoryless filters efficiently restore the amplitude and phase distortions. However, their performances heavily depend on the desired dynamic range.

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