Abstracts

Error signal reuse in a feedforward amplifier

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In this paper, the concept of frequency selective feedback is examined in the context of feedforward (FFWD) amplifier architecture. In a typical FFWD system, a time-delayed signal that represents the distortion products is injected in anti-phase at the main amplifier output, thus improving the overall intermodulation distortion (IMD) of the system. This signal may also be reused as a feedback signal for improving the uncorrected main amplifier performance. Main amplifier linearity improvement is important in terms of efficiency, size and cost, and can be achieved at a small price in terms of added complexity. This paper presents simulation and measured results that were obtained from a realized system. The practical limitations of this technique are also outlined.

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