Abstracts

Perturbation Method for Sinusoidally Excited FDTD Analysis

O.P.M. Pekonen, P. Alinikula and K.I. Nikoskinen. "Perturbation Method for Sinusoidally Excited FDTD Analysis." 1995 Microwave and Guided Wave Letters 5.12 (Dec. 1995 [MGWL]): 432-434.

A method for perturbing a sinusoidally excited FD-TD simulation is introduced. In this scheme, desired simulation output data is read after the first steady state is reached. Simulated structure is altered slightly as the simulation runs, and thus a perturbation is created into the steady state. A new steady state emerges faster than the initial one and computational efficiency is gained. The new steady state can be perturbed again with similar efficiency. The method is applicable for fast optimization of various microwave applications in FDTD analysis.

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