Abstracts

Simulating Distributed Elements with Asymptotic Waveform Evaluation

J.E. Bracken, V. Raghavan and R.A. Rohrer. "Simulating Distributed Elements with Asymptotic Waveform Evaluation." 1992 MTT-S International Microwave Symposium Digest 92.3 (1992 Vol. III [MWSYM]): 1337-1340.

A new method for simulating distributed elements is described. The Asymptotic Waveform Evaluation (AWE) technique is used to compute a low-order approximation to the admittance matrix for a system of coupled lossy lines. The Y-matrix can serve as a macromodel for the lines, so that they can be simulated together with arbitrary (nonlinear) terminations. A major advantage of the new method is that it allows general distributed elements to be simulated in the time domain without using computationally expensive lumped models or numerical inverse transform techniques.

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