# Abstracts

## A General Formulation for Connecting Sources and Passive Lumped-Circuit Elements Across Multiple 3-D FDTD Cells

*C.H. Durney, W. Sui, D.A. Christensen and J. Zhu. "A General Formulation for Connecting Sources and Passive Lumped-Circuit Elements Across Multiple 3-D FDTD Cells." 1996 Microwave and Guided Wave Letters 6.2 (Feb. 1996 [MGWL]): 85-87.*

A previous extension of the finite-difference time-domain (FDTD) method to include lumped-circuit elements is further extended to model lumped-element circuits connected across multiple FDTD cells. This formulation is needed to model many kinds of circuits, like those with a transistor or other active device connected across a transmission line with more than one dielectric. The FDTD analysis of a shielded suspended microstrip transmission line excited by a current source in parallel with a resistance illustrates the usefulness of the formulation.

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