Abstracts

A Hybrid 3D TLM-FDTD Model of Microwave Fields

C. Eswarappa and W.J.R. Hoefer. "A Hybrid 3D TLM-FDTD Model of Microwave Fields." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 1063-1066.

This paper presents a hybrid method which combines 3D Symmetrical Condensed Node-Transmission Line Modeling (SCN-TLM) and Yee's Finite Difference Time Domain (FDTD) methods. This work is an extension of our earlier work on the interface between 2D TLM and FDTD. Even though, the 3D SCN-TLM and FDTD nodes differ in structure and high-frequency dispersion characteristics, they give virtually the same numerical results for identical band-limited excitation, and equal space and time resolution. Using the interface presented in this paper, the specific features of both of these nodes can be exploited when solving a given problem.

❑ Return to main document.