Abstracts

A TLM-SPICE interconnection framework for coupled field and circuit analysis in the time domain

P.P.M. So and W.J.R. Hoefer. "A TLM-SPICE interconnection framework for coupled field and circuit analysis in the time domain." 2002 Transactions on Microwave Theory and Techniques 50.12 (Dec. 2002 [T-MTT] (Special Issue on 2002 International Microwave Symposium)): 2728-2733.

A general SPICE-transmission-line matrix (TLM) interconnection framework has been developed. The connection algorithm is based on the representation of the TLM network by equivalent Thevenin and/or Norton sources. Fundamental issues such as source equivalence and SPICE-TLM interconnection options have been examined. The framework opens new and far-reaching possibilities for hybrid global microwave and high-speed digital circuit modeling in the time domain because it combines the extensive circuit and device models of SPICE with general three-dimensional field solutions.

❑ Return to main document.