Abstracts

On the Theory of Discrete TLM Green's Functions in Three-Dimensional TLM

M. Krumpholz, B. Bader and P. Russer. "On the Theory of Discrete TLM Green's Functions in Three-Dimensional TLM." 1995 Transactions on Microwave Theory and Techniques 43.7 (Jul. 1995, Part I [T-MTT]): 1472-1483.

The response to a wave pulse incident on the boundary of a certain spatial domain may be represented by discrete TLM Green's functions. On the other hand, the response to a localized electromagnetic excitation at the boundary of a certain spatial domain may be calculated directly from Maxwell's equations and be represented by analytic TLM Green's functions. For low frequencies and small wave numbers, the analytic TLM Green's functions coincide with the discrete TLM Green's functions. Applying the analytic TLM Green's functions in the absorbing boundary condition at the boundary to the open half-space reduces the computational effort considerably when compared with the application of the discrete TLM Green's functions.

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