Abstracts

Development and application of an efficient FDTD/Haar MRTD numerical interface

A numerically stable interface between the Haar wavelet based MRTD technique and FDTD is presented in this paper. Such a hybridization of MRTD facilitates the application of the method to open structures and inhomogeneous circuit geometries, where the use of high order wavelets significantly complicates the formulation of a pure MRTD scheme. Furthermore, it allows for the straightforward enforcement of localized boundary conditions, bypassing the necessity to employ image theory, which typically arises in MRTD. The fact that the implementation of the proposed interface involves no spatial or temporal interpolation indicates the efficiency of the developed technique.

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