Abstracts

A new hybrid FDTD-BIE approach to model electromagnetic scattering problems

H. Rogier, F. Olyslager and D. De Zutter. "A new hybrid FDTD-BIE approach to model electromagnetic scattering problems." 1998 Microwave and Guided Wave Letters 8.3 (Mar. 1998 [MGWL]): 138-140.

A new hybrid finite-difference time-domain boundary integral equation (FDTD-BIE) method is proposed. The geometry under consideration is decomposed into several subregions. For some of the bounded subregions the FDTD technique is used to construct an interaction matrix, relating virtual electric and magnetic currents at the boundary of the subregion, for several frequencies at the same time. The remaining bounded and unbounded subregions are described by a boundary integral equation technique. An example is given to validate the new technique.

❑ Return to main document.