Abstracts

A New Finite-Difference Time-Domain Algorithm for Solving Maxwell's Equations

Z. Bi, K. Wu, C. Wu and J. Litva. "A New Finite-Difference Time-Domain Algorithm for Solving Maxwell's Equations." 1991 Microwave and Guided Wave Letters 1.12 (Dec. 1991 [MGWL]): 382-384.

A new algorithm is presented for deriving finite-difference time-domain (FD-TD) solutions of Maxwell's equations. When compared with Yee's method, it is found that the stability conditions for this method exceed those of Yee's method by the factors 1.41 and 1.73, respectively, for the two-dimensional and three-dimensional cases. Two additional important advantages of the method are given in the conclusions.

❑ Return to main document.