Abstracts

A hybrid fourth-order FDTD utilizing a second-order FDTD subgrid

S.V. Georgakopoulos, R.A. Renaut, C.A. Balanis and C.R. Birtcher. "A hybrid fourth-order FDTD utilizing a second-order FDTD subgrid." 2001 Microwave and Wireless Components Letters 11.11 (Nov. 2001 [MWCL]): 462-464.

A hybrid method utilizing the second-order accurate in time and fourth-order accurate in space FDTD (2, 4) coupled with the standard second-order accurate both in time and space FDTD (2, 2) on a subgrid is presented. The accuracy of the method is tested by computing the S-parameters of two monopoles mounted on a ground plane and it is found to be very satisfactory. Significant computational savings both in memory and time are accomplished by using this hybrid method.

❑ Return to main document.