

Abstracts

Conditions for the Equivalence of the Chen and Yee FDTD Algorithms

K.L. Shlager, S.L. Ray, J.G. Maloney and A.F. Peterson. "Conditions for the Equivalence of the Chen and Yee FDTD Algorithms." 1994 Microwave and Guided Wave Letters 4.2 (Feb. 1994 [MGWL]): 48-49.

A two-dimensional dispersion analysis of the recently proposed Chen Finite-Difference Time-Domain (FDTD) algorithm is presented and its properties evaluated. The dispersion properties of this scheme vary with respect to propagation angle, Courant stability factor, and the definition of numerical characteristic impedance. These dispersion characteristics can be used to identify parameters that make the Chen algorithm equivalent to the Yee FDTD algorithm.

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