Abstracts

Treatment of Instabilities of One-Way Equation Absorbing Boundary Conditions Using Digital Filters

C. Eswarappa and W.J.R. Hoefer. "Treatment of Instabilities of One-Way Equation Absorbing Boundary Conditions Using Digital Filters." 1995 MTT-S International Microwave Symposium Digest 95.1 (1995 Vol. I [MWSYM]): 39-42.

This paper presents a general solution to the difficult problem of treating instabilities of one-way equation (local) absorbing boundary conditions in time domain electromagnetic simulations. Digital filters have been inserted between the mesh and the absorbing boundaries to filter out the high frequency numerical noise generated by the absorbing boundary interpolation equations. The problem arising out of the finite delay of the digital filters has been solved my making the filter delay equal to the time delay in the longer link lines of the graded mesh. By adopting this technique, instabilities have been eliminated.

❑ Return to main document.