Abstracts

Modeling of arbitrary shaped radiating structures by the wave concept iterative process

E. Richalot, M.F. Wong, H. Baudrand and V. Fouad-Hanna. "Modeling of arbitrary shaped radiating structures by the wave concept iterative process." 2000 MTT-S International Microwave Symposium Digest 00.1 (2000 Vol. I [MWSYM]): 113-116.

An iterative process based on the wave concept is presented to study radiating structures. This technique enables the rigorous radiation condition treatment of radiating structures modeled by the finite element method (FEM) while preserving its computational efficiency with sparse matrices. The coupling of the FEM model with the open region modeled by integral equation technique is solved iteratively. At each iteration, each model related to one domain sees the other model by means of incoming waves. The study of a feedhorn and the comparison of its radiating patterns to those obtained using another rigorous heavy method shows the efficiency of our proposed process.

❑ Return to main document.