

Abstracts

Multiresolution model of electromagnetic wave propagation in dispersive materials

I. Barba, J. Represa, M. Fujii and W.J.R. Hoefer. "Multiresolution model of electromagnetic wave propagation in dispersive materials." 1999 MTT-S International Microwave Symposium Digest 99.4 (1999 Vol. IV [MWSYM]): 1471-1474 vol.4.

We have applied a Multi-Resolution Time-Domain (MRTD) technique based on Haar-wavelets to model the propagation of waves in dispersive materials, using a discretization of the convolution equation which governs the behavior of the media. To validate our method, we have calculated the reflection coefficient at the interface between air and two different dispersive media.

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