Abstracts

An algorithm for realizing Yee's FDTD-method in the wavelet domain

Multidimensional calculations like FDTD rather persistently resist a formulation and implementation in the wavelet domain. We present an algorithm that allows us to carry out Yee's three-dimensional FDTD-algorithm in the wavelet domain at arbitrary scale. Thus, simulation time reductions are possible due to compression properties of multi resolution analysis (MRA). Simulation results show the validity of the algorithm.

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