Abstracts

FDTD accuracy improvement by incorporation of 3D edge singularities

N.-H. Huynh and W. Heinrich. "FDTD accuracy improvement by incorporation of 3D edge singularities." 1999 MTT-S International Microwave Symposium Digest 99.4 (1999 Vol. IV [MWSYM]): 1573-1576 vol.4.

The finite-difference approximation resolves the electromagnetic field near singularities at metallic edges with only poor accuracy. However, if the singular field behavior is known, it can be incorporated into the formulation. We present a method to describe 2D and 3D edge singularities, which significantly improves accuracy without increasing numerical efforts.

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