Abstracts

Transparent absorbing boundary (TAB) for the truncation of the computational domain

J. Peng and C.A. Balanis. "Transparent absorbing boundary (TAB) for the truncation of the computational domain." 1997 Microwave and Guided Wave Letters 7.10 (Oct. 1997 [MGWL]): 347-349.

A new approach to domain truncation without reflection is proposed for finite methods. The open-space Maxwell's equations, along with boundary conditions, are transformed to an equivalent system with a homogeneous closed boundary; the latter is then solved numerically. Like the popular perfectly matched layer (PML), the new method is independent of frequency and incident angle. Its uniqueness is that it does not need the extra absorption region, since the field attenuation takes place in the domain of the subject.

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