

## **ANALYSIS OF TRANSIENT SCATTERING FROM DIELECTRICS IN TIME DOMAIN**

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### **Abstract**

Presented in this paper, is a comparison of two popular time domain numerical techniques, viz. the finite-difference time-domain method and the time domain integral equation method, for electromagnetic-scattering problems. The comparison is made via standard canonical shapes, a cube and a sphere of dielectric, to address the factors affecting accuracy, efficiency, and the required computer resources.

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**Keyword :** Differential equations, finite-difference methods, integral equations, method of moments (MoM).