ECE 742 Final Project

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1 Theory

1.1 PML

Perfectly Matched Layer (PML) boundary conditions are absorbing boundary conditions. PML BCs decay the wave within a boundary layer at the edge of the simulation. The edge of the simulation BC can be implemented as PEC. Well-implemented PML BCs completely decay the wave from the time it enters the boundary layer to the time after it reflects and attempts to leave.

1.2 Graded Conductivity

Reflection Factor $R(\theta) = \exp^{-2\eta cos(\theta) \int_0^d \sigma_x(x)dx}$ Where σ_x is

2 Code

3 Error Analysis

Insert Error Analysis Here

PMLs are exact for continuous functions, but error is introduced for discrete functions. Having a large step discontinuity can

4 Fix me: Bibliography

Susan's book - third edition