The Point-Matching Method for Interior and Exterior Two-Dimensional Boundary Value Problems (Correspondence)

There have appeared recently some papers on a "point-matching method" for solving electromagnetic boundary value problems. The only attempts at justifying its use have been qualitative, but the method is plausible, and in some instances gives accurate results. Nevertheless, the method is unsound, in general, as has been pointed out by Harrington. It will be demonstrated, however, that when certain symmetries are maintained, the point-matching method is valid. These symmetries are maintained, or nearly maintained, in the majority of test cases used for "demonstrating" the validity of the method, which explains its apparent success. Yee and Laura describe the background of the method and the motivation for its use.

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