Abstracts

A Transformed Symmetrical Condensed Node for the Effective TLM Analysis of Guided Wave Problems

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We propose a novel TLM algorithm for the effective solution of arbitrary guided wave problems. The algorithm uses an appropriately transformed symmetrical condensed node introduced herein. In comparison with the previous SCN TLM formulation for the analysis of guiding structures, our approach maintains equivalent accuracy and generality while providing a 50% gain in terms of required computer memory and time. The advantages of our algorithm are verified by means of several examples, including full - wave analysis of waveguides filled with anisotropic and lossy media.

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