Visualization of near-field and far-field in the time domain

Near-field to far-field transformation techniques have been coupled with a TLM field simulation engine to compute the far-field pattern of microwave circuits and radiators concurrently with the TLM simulation process. Combining the field transformation operations with the TLM field solution process in this co-processing manner allows us to observe the converging and time varying behavior of the far-field pattern for both time-harmonic and transient emissions from microwave and high-speed digital structures. This is important for the assessment of emissions and electromagnetic interference from circuits that carry analog, digital, and mixed signals in the microwave spectrum.

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