

# Signal Integrity Modeling of High-Speed Analog Nets

*The attached file (pdf format) contains the slides and notes for the "webinar" given by Dr. John Dunn for Applied Wave Research on November 3, 2005. The recorded webinar can be viewed by downloading:*

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It is important that the behavior of the critical analog nets be accurately predicted as the chip, package, and board are being designed. The designer is faced with the task of a "cross-domain" modeling problem, where the interconnect must be designed in different technologies concurrently. In this seminar, I show a specific example of an output signal from a power amplifier going from the chip, through bondwires onto the package, and then to the system board. The designer corrects for package mismatches by placing a capacitor on the board. Simulations incorporate the effects of the entire path. The example will be used to demonstrate layout and simulation in cross-domain technologies and the proper configuration of the setup files.

**Summary:** This is the final part of our three part series on the inner workings of EMSight, the internal electromagnetic simulator in Microwave Office. Emphasis will be placed on fundamental concepts essential for successful simulations. Topics covered in the webinar are: correct use of ports of the three types of ports: edge ports, via ports, and internal ports.