Embedded Tutorial 3

Validation and Test Problems for Cross Talk Noise

Presenters

Sandeep Gupta, *University of California, Santa Clara*
Craig Gleason, *Hewlett-Packard*

Coordinator

Tim Cheng, *University of California, Santa Barbara*

The first part of the tutorial will begin with a description of (1) the conditions under which noise effects, such as cross talk pulse and speedup or slowdown, of significant magnitude occur, and (2) the conditions under which these effects propagate with minimum attenuation (or possibly, with maximum amplification). Next, issues and methodologies pertaining to (1) selection of effects to be targeted during validation and/or testing, (2) simulation of a given set of effects for a given sequence of input patterns, and (3) pattern generation for validation and/or testing, will be discussed. This part will conclude with a discussion of appropriate framework for validation and testing.

The second part of the tutorial will describe a practical methodology that has been used for validation and characterization and found to be very successful in finding bugs that cannot be found by current toolsets. It will also discuss example cases where noise problems are beginning to emerge at the system level, mainly at the interfaces between chips.

0-8186-8436-4/98 $10.00