



For more information

Leslie Landers
Sigrity, Inc.
(408) 688-0145 ext. 148
leslie@sigrity.com

Sarah Miller
ThinkBold Corporate Communications
(231) 264-8636
sarah@thinkbold.com

Sigrity Introduces T2B for Transistor to Behavioral Model Conversion

Power-aware models now available for accurate and efficient full bus simulations in hours or minutes instead of days

CAMPBELL, Calif. – Sept. 1, 2011 – Sigrity, Inc., the market leader in signal and power integrity solutions, today announced T2B software for transistor to behavioral model conversion that is accurate, fast, globally supported, and practical for on-chip and packaged IO circuits. Such software is essential for analyzing combined signal and power integrity effects in today's high-speed designs such as those that include DDR parallel bus interfaces. Models generated by T2B retain transistor-level accuracy while enabling dramatically improved simulation efficiency. T2B power-aware behavioral models enable accurate full bus simulations to be completed in hours or minutes, while similar simulations with transistor models often take days. High-speed design teams now have access to a practical design flow that addresses the need for accurate issue identification within short project windows.

“It can be difficult to select good driver models to use in high-speed time domain simulations,” said Naoshi Higaki, Deputy General Manager of SoC Design Engineering Division, Fujitsu Semiconductor Limited. “Traditional IBIS models do not provide the accuracy needed for SSO, and transistor models take so long to run that they are not viable either. With T2B we expect to be able to convert transistor level models to IBIS 5.0 power-aware models that retain the accuracy of the original. This enables us to support a full bus simulation flow to help us quickly make design improvements.”

The efficient transient simulations enabled by T2B-generated models can help engineers identify the root cause of signal and power integrity issues and verify fixes, resulting in higher-quality designs with fewer iterations. Broadband chip, package and board models can be included in the co-simulations. In contrast, co-simulation with transistor driver models is impractical for most real-world designs because capacity limitations result in model simplifications that sacrifice accuracy. In addition, T2B automatically generates IBIS 3.2, 4.2, 5.0 and Sigrity accuracy-enhanced models from transistor level driver models, utilizing a familiar and well established flow. IBIS 5.0 models generated by T2B automation include all BIRD95/BIRD98 power-aware effects. Sigrity's accuracy-enhanced model provides an even more precise reproduction of the transistor model than IBIS 5.0 models support. The T2B models can be used for time domain simulations with Sigrity's



SPEED2000 tool, and end-to-end bus simulations with Sigrity's SystemSI tool. T2B power-aware models also improve accuracy when used with HSPICE and other transient simulators.

“The introduction of T2B builds on Sigrity's longstanding leadership in integrated signal and power integrity analysis,” said Sigrity, Inc. President Dr. Jiayuan Fang. “With the rapid advance of high-speed interface technologies, accurate system-level simulation is becoming essential. Time-consuming transistor-level simulation and inaccurate traditional IBIS model simulation are unable to meet future simulation demands. We believe the introduction of T2B will open a new page in system-level simulation of high-speed designs.”

Pricing and Availability

T2B is available on Windows and Linux platforms with pricing starting at \$22,500 per year.

About Sigrity

Sigrity, Inc., a privately held U.S. company incorporated in 1998, delivers advanced software solutions for package physical design and for analyzing power and signal integrity in chips, packages and printed circuit boards. Sigrity's patented electrical analysis methodologies run orders of magnitude faster than general purpose electromagnetic tools, helping leading companies in the semiconductor, computer, graphics, communications and networking industries ensure high performance and reduce time to market. The company is headquartered in Campbell, California with direct sales and global distribution through worldwide representatives. For more information about how to ensure operational designs by using Sigrity's package physical design and power and signal integrity analysis solutions, please visit:

<http://www.sigrity.com>.

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