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Si2 Releases Power Extensions in ECSM 2.1 Standard for Design Libraries; Open Modeling Coalition Continues on Roadmap

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AUSTIN, Texas--(BUSINESS WIRE)--July 24, 2006--The Silicon Integration Initiative (Si2) today released the Effective Current Source Modeling (ECSM) Version 2.1 specification, which includes dynamic power analysis power extensions. These extensions allow power and dynamic power grid analysis information to be passed from cell characterization to design tools enabling them to perform accurate power predictions for nanometer design. The Open Modeling Coalition (OMC) working group which produced this latest version of the standard has representatives from industry leaders: Cadence Design Systems, Freescale Semiconductor, Intel, LSI Logic, Silicon Navigator, Sun Microsystems, and Virage Logic.

"The OMC continues to make excellent progress with this announcement of the next version of the ECSM standard," said Steve Schulz, president and CEO, Si2. "Since the coalition's formation in September of 2005, they have produced their second deliverable, and are progressing rapidly towards a comprehensive library modeling system which will change the way design libraries are produced. This collaborative effort by the leaders in the EDA, IP, and IDM sectors will ease the way as the semiconductor industry moves toward smaller process nodes."

Dynamic power and power rail analysis is becoming critically important at and below the 90nm node. During dynamic power rail analysis, where simultaneous switching events are analyzed, the ECSM power extension information is used to provide dynamic current switching information to analysis tools enabling accurate calculation of dynamic power consumption. The ECSM power extensions capture SPICE-like cell characterization details that reflect how power is consumed as cells switch.

"Progress on the ECSM Version 2.1 standardization at Si2 once again demonstrates the benefits of strong open collaboration within our industry," said Jan Willis, senior vice president, Industry Alliances at Cadence. "Working together, industry leaders are rapidly evolving ECSM to address their needs. This enables our customers and the industry to continue leveraging ECSM as an open format that supports more accurate design libraries."

The power extensions in Si2 ECSM Version 2.1 are compatible with existing ECSM and Liberty constructs, for ease of extraction by tools that correctly parse Liberty models, and to provide efficient representation to control the amount of data. The ECSM power extension format has been optimized to provide an efficient storage medium for dynamic cell behavior, and appropriate reductions are performed on the waveforms to provide a user-specified level of accuracy. The controls provided to adjust the accuracy enable a compromise between the computational time and accuracy of the analysis and the size of the model.

"The ECSM 2.1 specification is a significant deliverable from the OMC," said Kam Kittrell, general manager of Magma's Design Implementation Business Unit. "The rapid move to smaller process geometries brings new modeling challenges. We applaud the collaboration in the industry in extending ECSM as an open industry-standard format suitable for the next generation of semiconductor technology."

"With today's mobile devices, power consumption and battery life being key product differentiators, Intel as the leading supplier of semiconductors to the PC, laptop, and server markets, is dedicated to providing our designers with the most accurate models for dynamic and static power consumption," said Robert Kezer, representative from Intel to the ECSM WG.

With the completion of the 2.1 specifications the OMC will next focus on extending ECSM into the area of Signal Integrity and later into the areas of Statistical Analysis. The OMC expects to present further details of the new ECSM extensions in the Si2 Booth #1001 at DAC in July.

The new ECSM 2.1 Specification is available for download at <http://openeda.si2.org/projects/omcdistrib/>

About the Open Modeling Coalition (OMC)

The OMC technical objectives are to define a consistent modeling and characterization environment in support of both static and dynamic library representations for improved integration and adoption of advanced library features and capabilities, such as statistical timing. The system will support delay modeling for library cells, macro-blocks and IP blocks, and provide increased accuracy to silicon for 90nm and 65nm technologies, while being extensible to future technology nodes. Member companies are: ARM (Nasdaq:ARMHY), Cadence Design Systems (Nasdaq:CDNS), Extreme DA, Freescale (NYSE:FSL), IBM (NYSE:IBM), Intel (Nasdaq:INTC), LSI Logic (NYSE:LSI), Philips Semiconductors (NYSE:PHG), Renesas Technology Corp., Silicon Navigator, ST Microelectronics (NYSE:STM), Sun Microsystems (Nasdaq:SUNW), and Virage Logic (Nasdaq:VIRL). For more information on the OMC, visit: www.si2.org/?page=430

About Si2

Si2 is an organization of industry-leading semiconductor, systems, EDA and manufacturing companies focused on improving the way integrated circuits are designed and manufactured in order to speed time-to-market, reduce costs, and meet the challenges of sub-micron design. Si2 is uniquely positioned to enable collaboration through a strong implementation focus driven by its member companies. Si2 focuses on developing practical technology solutions to industry challenges. Si2 represents over 100 companies involved in all parts of the silicon supply chain throughout the world.

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