AMCC Speeds Verification Using Synopsys' VCS Solution With SystemVerilog and e Testbench Migration Service

AMCC Deploys SystemVerilog Verification Environment With Synopsys' VCS® Native Testbench and Reference Verification Methodology

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced that Applied Micro Circuits Corp. (AMCC) (NASDAQ: AMCC), a global leader in network and embedded PowerPC processing, optical transport and storage solutions, has adopted SystemVerilog for testbench automation using Synopsys' VCS® comprehensive RTL verification solution. Using the reference methodology described in the Verification Methodology Manual (VMM) for SystemVerilog, AMCC has taken advantage of VCS' verification capabilities to rapidly develop advanced, extensible system-level environments based on the widely supported IEEE Std 1800™-2005 SystemVerilog industry standard. To further accelerate deployment of SystemVerilog, AMCC used Synopsys' VCS Native Testbench (NTB) migration service to convert legacy verification components, written in the e language, to the SystemVerilog standard.

"After a detailed evaluation of available verification solutions, we chose to adopt Synopsys' VCS solution with its comprehensive support for industry- standard SystemVerilog testbench automation," said Hugues Deneux, general manager at AMCC France. "Our system-level verification environment, operating natively in the VCS solution with SystemVerilog, runs more than three times faster than our legacy environment based on early results. This high performance will allow us to run more verification cycles and achieve greater quality than was previously possible."

AMCC and Synopsys developed a sophisticated system-level SystemVerilog verification environment for a complex, 15-million gate data communications switch in fewer than four months -- half the time required for previous projects. Synopsys consultants ported AMCC's existing SPI4 e code to SystemVerilog. In the meantime, AMCC engineers developed additional new components and the overall environment using SystemVerilog's object-oriented language constructs and constrained-random stimulus capabilities. AMCC adopted the proven verification methodology and libraries described in the VMM for SystemVerilog and delivered with the VCS solution to further accelerate their ramp-up with SystemVerilog. The high performance of VCS NTB technology enables AMCC's SystemVerilog environment to run up to three times faster than the legacy environment, allowing more verification cycles to be run with greater confidence in design quality prior to tape out.

"AMCC's success with SystemVerilog and the VCS solution clearly reinforces the trend away from proprietary languages and point tools to integrated solutions based on broadly supported industry standards," said Manoj Gandhi, senior vice president and general manager, Verification Group at Synopsys. "The VCS NTB migration service enables our customers to accelerate their transition to SystemVerilog, allowing them to more quickly take advantage of the VCS solution's superior verification performance and integration to increase chip quality and improve productivity."

VCS NTB Migration Service

The VCS NTB migration service allows users of e-based testbench tools to easily migrate to Synopsys' industry-leading VCS comprehensive RTL verification solution. The NTB migration service converts e environments to VCS with SystemVerilog environments and offers accompanying tool, language and methodology training. Combined with a broad portfolio of Synopsys' DesignWare® Verification IP and support for Synopsys' Reference Verification Methodology (RVM), the VCS software provides an industry-proven, high- performance RTL verification solution.

The migration service includes:

- Conversion of e verification environments to VCS NTB environments
- Tools, language and methodology training
- Custom verification IP development
- eVC migration to the Synopsys DesignWare Verification IP portfolio with support for a large number of protocols, including AMBA® 3 AXI, AMBA 2 AHB/APB, Serial ATA and the PCI, USB and Ethernet families

Synopsys Discovery Verification Platform

The Discovery Verification Platform is a unified environment that provides high performance and efficiency of interaction among all platform components, including mixed-HDL simulation, mixed-signal, system-level verification, assertions, DesignWare verification intellectual property, code coverage, functional coverage, testbenches and formal analysis. Combined with support for industry-standard hardware design and verification languages, including Verilog, VHDL, SystemVerilog, SystemC™ and OpenVera®, and Synopsys' proven Reference Verification Methodology, the Discovery Verification Platform helps designers achieve higher levels of verification productivity by contributing to first-time silicon success within required project cycles.

About AMCC

AMCC is a global leader in network and embedded PowerPC processing, optical transport and storage solutions. Our products enable the development of converged IP-based networks offering high-speed secure data, high- definition video and high-quality voice for carrier, metropolitan, access and enterprise applications. AMCC provides networking equipment vendors with industry-leading network and communications processing, Ethernet, SONET and switch fabric solutions. AMCC is also the leading vendor of high-port count SATA RAID controllers enabling low-cost, high-performance, high-capacity storage. AMCC's corporate headquarters are located in Sunnyvale, California. Sales and engineering offices are located throughout the world. For further information regarding AMCC, please visit our web site at http://www.amcc.com/ .

About Synopsys

Synopsys, Inc. is a world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading semiconductor design and verification platforms and IC manufacturing software products to the global electronics market, enabling the development and production of complex systems-on-chips (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time-to-market for its customers. Synopsys is headquartered in Mountain View, California and has offices in more than 60 locations throughout North America, Europe, Japan and Asia. Visit Synopsys online at https://www.synopsys.com/ .

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