



Mirabilis Design accelerates SystemC-based architecture exploration by coupling graphics, integration of system and implementation tools and extending functionality.

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## **Mirabilis Design announces VisualSim SystemC Modeler; Graphical SystemC solution coupling micro- and macro-architecture exploration for corporate use**

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**Sunnyvale, CA. — September 12<sup>th</sup>, 2005**— Mirabilis Design Inc. of Sunnyvale, CA, a leading provider of system architecture design software for electronics and embedded software, today announced the coupling of the OSCI-compliant SystemC v2.1 to the core VisualSim simulation engine. This new capability increases modeling options in VisualSim Architect software and addresses SystemC limitations. The solution accelerates Transaction-Level Model (TLM) construction and analysis by 3X, enables software design, and adds pre-built traffic, analysis and resource sharing.

With this VisualSim SystemC Modeler release, Mirabilis Design has created a superset of the proposed OSCI SystemC 3.0 specification. VisualSim SystemC improvements include graphical UML entry and XML-based connectivity management, graphical state machine definitions, application-specific traffic generators; co-simulation with MatLab, Excel, Verilog, VHDL, serial I/O and hardware-in-the-loop; pre-built statistics generators and dynamic run-time visualization tools; and mixed signal simulation. VisualSim seamlessly imports existing models and Intellectual Property available in SystemC plus generates templates to easily construct new SystemC modules.

This solution extends the FIFOs and basic programming constructs of SystemC with pre-built parameterized building block libraries of traffic generators, schedulers, architecture resources, data path and control flow. The new functionality introduces full-system macro-architecture exploration and rapid resource sizing to the SystemC code-based modeling methodology.

“Mirabilis Design created this extension to VisualSim to address frustration expressed by users and managers at DAC and DATE this year,” according to Deepak Shankar, President and Founder of Mirabilis Design Inc. “System-level modeling is an important methodology but SystemC success has been primarily limited to micro-architectures. The VisualSim SystemC release significantly reduces the coding for the abstracted and untimed modeling to extend the SystemC utility.”

VisualSim Architect is a graphical, platform-independent modeling and design environment that accelerates performance analysis and architecture exploration by providing pre-built parameterized model construction components, automated statistics generation and run-time visualization, and interface to a



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wide variety of third party tools frequently used in the design flow. VisualSim starts with a documented specification in a UML-like graphical description and refines through the OCP-IP Transaction Level Modeling flow of untimed and timed abstraction of algorithms behavior, processor and memory design and control logic.

### **Availability**

VisualSim SystemC Modeler is currently available on Windows, Linux and UNIX, and requires VisualSim Architect to simulate. Pricing for VisualSim SystemC Modeler starts at \$1700 and includes OSCI SystemC v2.1 simulator at no charge. Standard support is provided for Visual Studio and Borland CBuilder on Windows and gcc on UNIX.

VisualSim is available in two configurations. VisualSim Architect is a desktop application used to construct models and conduct explorations. VisualSim Explorer is a server-software for non-Architect users to view and execute simulations within Web Browsers.

### **About Us**

Founded in 2002 and headquartered in Sunnyvale, CA, USA, Mirabilis Design is an innovative software company providing system simulation software for the conceptual design, performance analysis and architecture exploration of electronics and embedded software. Using the product, VisualSim, architects can quickly capture the behavior, architecture resources and use-cases of their proposed and existing system, and conduct ad-hoc trade-off analysis. The advantage of the Mirabilis Design approach is approximately 3X reduction in modeling time, with high analysis accuracy, consolidation of system-level design requirements into a single platform and creation of executable marketing documents out of simulation models. The product, VisualSim, is used by Designers, Architects and Systems Engineers in the Defense, High-Performance Computing, Wireless, Aerospace, Networking, Automotive and Semiconductor industries.

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