



Mirabilis Design introduces a system-level power optimizer to evaluate dynamic system power consumption and design power management units.

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**Mirabilis Design announces Power Modeling Toolkit: First pre-implementation power based architecture exploration.**

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**Sunnyvale, CA. — April 17<sup>th</sup>, 2006—** Mirabilis Design Inc. of Sunnyvale, CA, a leading provider of system architecture design software for electronics and real-time software, today announced the release of the Power Modeling Toolkit for VisualSim Architect. The Power Modeling Toolkit expands system-level architecture design to trade-off performance requirements and power constraints using power information from vendor datasheets. The Toolkit accumulates power activity based on the dynamic state change of the discrete components, hardware accelerators and IP blocks. The Power Modeling Toolkit is used by architects to identify the power consumption sources, compare power between architectures, evaluate power management algorithms and optimize power allocation techniques for lowest energy costs.

“Current low-power design solutions depend on implementation-level details. Trying to fit a pre-selected platform into a power budget and still meet the performance metrics is a very lengthy and, at times, almost impossible task,” according to Deepak Shankar, Founder of Mirabilis Design Inc“. VisualSim Power Modeling Toolkit enables system architects to determine power budget at product definition.”

A number of customers have conducted architecture exploration using the Power Modeling Toolkit. A project by ALaRi presented at DATE 2006 Conference in Munich used the Power Modeling Toolkit to trade-off two architectures for implementing an AES Encryption algorithm. The two architectures, created using the VisualSim Architecture Toolkit, were a dual ARM7 and an ARM8-Cortex. The entire power exploration was conducted in less than 10 hours. Other designs evaluated using this Toolkit include Network-on-Chip design and a multimedia SoC.

Power analysis can be added to any performance simulation in existing or new VisualSim models, with the addition of a single or multiple Power Manager Domain modules in the graphical environment. The Power Modeling Toolkit consists of a manager block, power state transitions commands and utility functions for updates and statistics generation. The Toolkit generates real-time views of the instantaneous and cumulative power consumption for individual components and the full system. The Power Manager block maintains the state and cumulative power information during the execution of the platform model.



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### **Availability**

VisualSim Power Modeling Toolkit is currently shipping and available on Windows, Linux and UNIX. Power Modeling Toolkit is a graphical library that is used in VisualSim Architect. Annual Pricing for the Power Manager is \$3400.

### **About VisualSim**

VisualSim is a graphical software application that enables concept engineering through performance analysis and architecture exploration. Models in VisualSim can be constructed using the configurable, parameterized library blocks, application-specific functions, standard component generators (processors, memory, caches, bus and switches) and a template-driven SystemC. In addition, there are co-simulation links to Verilog, VHDL, STK, Excel and MatLab and an open, timed-API for integrating simulators. VisualSim optimizes the initial concept through a series of modeling refinements and abstractions to allow the best architecture to become an executable specification.

### **About Us**

Founded in 2003, and headquartered in Sunnyvale, CA, USA, Mirabilis Design is a leading provider of System-Level Architecture Exploration software for designing electronics and real-time software. Using VisualSim, designers can architect the “right” product, i.e. one which minimizes product failures and has not been over- or under- designed. Mirabilis Design accelerates Concept Engineering by drastically reducing typical model development from months to days and overall project time by 25-30%. Our customers are focused in computing, semiconductors, networking and aerospace. The end-users are Project Managers, System Architects, Systems Engineers, Hardware Engineers and Software Engineers. Benefits from the solution are a visual executable specification; easier creation of optimized and differentiated products and; corporate infrastructure enabling extremely fast design trade-offs for price, performance and power.

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