SystemVision®
Multi-discipline System Verification

FEATURES AND BENEFITS:
- Virtual environment for mechatronic system design and analysis
- Multi-language modeling support including VHDL-AMS, SPICE, and C/C++
- Extensive library of VHDL-AMS and SPICE simulation models for analog and mixed-signal system design
- Intuitive modeling tools automate model generation from multiple data sources
- Standard time- and frequency-domain analyses quantify nominal system performance
- Advanced parametric analyses verify system performance beyond nominal conditions
- Full featured data measurements and waveform calculations quantify performance metrics
- Scripting automation for modifying designs, running simulations, and analyzing simulation data
- Collaborative simulation environment linking multiple tools and processes, including Simulink, LabVIEW, C/C++, Java, and SystemC
- Integration with Mentor Graphics industry-leading PCB flows
- Large library of general purpose and domain-specific simulation tutorials

The SystemVision multi-discipline collaboration environment lets you explore concepts, validate performance specifications, investigate architectural partitions, and integrate implementation-level details, all in an easy-to-use virtual prototyping environment. Focus on a single design domain, or combine multiple domains, for full-system verification.

Powerful System Design & Analysis
SystemVision integrates multiple design and engineering domains, including mixed-signal (analog/digital), multi-discipline (thermal, mechanical, hydraulic, etc.), and continuous and sampled data control systems. Engineering teams across multiple industries use SystemVision to speed development time, simplify HW/SW integration, promote design re-use, and reduce the risk of late stage defects.

The SystemVision environment supports mixed-language system and circuit descriptions, generates simulation data in technology-specific units, and ensures accurate multi-domain and mixed-signal simulation results. It includes graphical design entry, VHDL-AMS model and library development tools, advanced simulation technology, and powerful waveform viewing and data analysis applications.

Flexible System Modeling
SystemVision leverages the power and flexibility of VHDL-AMS, the IEEE standard for modeling electronic and multi-discipline systems at multiple levels of design abstraction. SystemVision also supports ModelSim®-compatible libraries, SPICE format models, and C/C++, SystemC, and Verilog-AMS language descriptions for exceptional modeling flexibility. Model entire systems in a single language, or easily mix languages in a single system simulation.

SystemVision supports any level of component and system definition, from high-level behavioral, signal-flow (s-domain) and sampled-data (z-domain)
Advanced System Simulations

While SystemVision supports the standard operating point, time-domain, and frequency-domain simulations, modern systems often require more detailed analyses. SystemVision enables advanced system performance verification with support for parametric sweep, sensitivity, statistical, and worst case analyses. Easily determine which design parameters most affect system performance, how component tolerances influence design quality and manufacturing yields, and what happens if extremes in component tolerances combine in a worst-case system scenario.

Innovative Data Analysis

SystemVision's powerful waveform analyzer displays complex simulation data in clear, easily understood graphs. Once a waveform is displayed, the analyzer supports a variety of data analysis options. Along with the measurement tool's 45+ detailed performance measurements, the analyzer's waveform calculator supports advanced data calculations and transformations. Measurements and calculations can be saved and later rerun on the same or new data file. Graph windows and templates can be saved and later used to further analyze system performance.

System Experiments Improve Performance

Use SystemVision’s Experiment Manager to create, execute, and manage system simulation experiments. Each experiment defines a set of parameters to vary during the experiment, simulation commands to execute for each parameter set, and measurements that evaluate system performance. SystemVision’s link to Microsoft Excel® makes creating and running performance-improving simulation experiments quick and easy.

Integration With Leading Industry Tools

The SystemVision conneXion technology links industry-leading tools, bringing together best-in-class system modeling, analysis, and test capabilities into a single development environment. SystemVision + MathWorks Simulink® toolset combines mechatronic system hardware design and analysis with control algorithm development. SystemVision + National Instruments LabVIEW™ environment enables concurrent system and test program development from the beginning to the end of the design flow. With these and similar integrations, the SystemVision environment is an essential tool for developing and testing complex mechatronic systems.

System Requirements

Operating Systems:
Windows XP Pro (SP1, SP2); Windows 7

Minimum System Requirements:
1.0 GHz clock
512 MB RAM
3 GB disk space