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**THE MATHWORKS INTRODUCES SIMULINK DESIGN VERIFIER**

*New Tool Automates Test Generation and Property Proving for Model-Based Design Using Formal-Methods Engine from Prover Technology*

**NATICK, Mass. – June 4, 2007** – The MathWorks today introduced [Simulink® Design Verifier](#), which generates tests and proves design properties for [Simulink®](#) and [Stateflow®](#) models using the Prover® Plug-In from [Prover Technology](#).

Developers of embedded systems—especially complex or safety-critical systems—can now automatically obtain test cases to satisfy industry-standard metrics, such as modified condition/decision coverage (MC/DC), while uncovering design errors earlier in the development process when they are significantly less expensive to fix.

Simulation, a key activity of Model-Based Design, enables engineers to gain insight into system behavior, tune parameters for optimal performance, and ensure that their design behaves as intended. Simulink Design Verifier augments simulation with new verification and validation technology based on formal methods that significantly reduces the need to hand-code tests for establishing complete model coverage and verifying requirements.

Engineers can generate test inputs that satisfy standard coverage objectives as well as user-defined test objectives and requirements. These test inputs can also be combined with tests defined using measured data so that simulations are testing against model coverage, requirements, and real-world scenarios.

For property proving, engineers can directly capture design requirements and performance objectives as properties in their Simulink or Stateflow models. Simulink Design Verifier mathematically proves whether those properties are satisfied and, if not, provides counterexamples that would violate the properties. As a result, engineers can find design flaws,

unsatisfied requirements, and unreachable states or logic that would be difficult to uncover using simulation alone.

“Model-Based Design is becoming widely used for embedded system development, moving from R&D and proof-of-concept projects into production programs,” said Paul Barnard, marketing director of design automation at The MathWorks. “With this shift, customers have a critical need for verification, validation, and testing tools that Simulink Design Verifier helps to address.”

Simulink Design Verifier incorporates the Prover Plug-In proof engine from Prover Technology, which automatically generates test cases and counterexamples. It also performs proofs by using automated mathematical reasoning to explore model execution paths. Such systematic analysis complements simulation and provides deeper insight into the behavior of designs.

“We worked closely with The MathWorks to extend our Prover Plug-In interface to handle the dynamic systems that are typically modeled in Simulink and Stateflow,” said Marcus Tallhamn, chief marketing officer at Prover Technology. “We are proud to be part of a tool that enables embedded system developers without formal-methods expertise to perform state-of-the-art formal verification.”

### **Availability and Pricing**

Simulink Design Verifier is available immediately for the Microsoft Windows and Linux platforms. U.S. list prices start at \$8,000.

### **About The MathWorks**

The MathWorks is the world’s leading developer of technical computing and Model-Based Design software for engineers and scientists in industry, government, and education. With an extensive product set based on MATLAB and Simulink, The MathWorks provides software and services to solve challenging problems and accelerate innovation in automotive, aerospace, communications, financial services, biotechnology, electronics, instrumentation, process, and other industries.

The MathWorks was founded in 1984 and employs more than 1,600 people worldwide, with headquarters in Natick, Massachusetts. For additional information, visit [www.mathworks.com](http://www.mathworks.com).

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