

# New Configuration-Based Tool Streamlines Real-Time Test System Development

National Instruments has released NI VeriStand 2009, an open, configuration-based software environment for creating real-time testing applications such as hardware-in-the-loop (HIL) and controlled environmental tests. All of the common functionalities of a real-time test system are implemented and optimized inside NI VeriStand in a ready-to-use format, making it possible for real-time test system developers to complete their test application development more efficiently. NI VeriStand helps developers configure a multicore-ready, real-time engine capable of supporting third-party I/O interfaces including a variety of data acquisition and field-programmable gate array (FPGA)-based I/O interfaces as well as triggerable data-logging and stimulus-generation tasks.

Customers' control algorithms and simulation models often required by real-time testing applications also can be imported into NI VeriStand from NI LabVIEW software and many other third-party modeling environments, including The MathWorks, Inc. Simulink® and ITI SimulationX® software environments because NI VeriStand is an open environment for real-time test system development. Additionally, NI VeriStand provides a rich, configurable run-time interface that includes a variety of tools to interact with real-time testing applications. The user interface is a run-time-editable workspace, so engineers can create and modify their user interfaces without interrupting real-time test system execution.

NI VeriStand assists engineers in developing real-time test systems faster by giving them the ability to quickly capture the essential hardware I/O, simulation model and other real-time task settings using an interactive system explorer window. These settings are saved in a system definition that is deployed to a real-time execution target such as a PXI system. Engineers then can add user interface controls and indicators and map them to the system definition resources to interact with their real-time test systems. They also can use stimulus profile editors to create stimulus and logging configurations that are deployed to the real-time execution target for deterministic execution.

While no programming knowledge is required to use NI VeriStand, the software is designed to be customized and extended using the LabVIEW, LabVIEW FPGA Module, NI TestStand, Microsoft Visual Studio .NET and Python environments, ensuring that NI VeriStand can adapt to meet virtually any application requirement.

**Source URL (retrieved on 07/25/2014 - 8:32pm):**

<http://www.wirelessdesignmag.com/product-releases/2009/11/new-configuration-based-tool-streamlines-real-time-test-system-development>

