Automated Test Summit 09

A Virtual Industry Event Hosted by National Instruments

Event Date: Wednesday, May 20, 2009
10:30 a.m.–4:00 p.m. CDT

Live Keynotes		
Time	Topic	Speakers
Morning Keynote (9:00 a.m. PDT/11:00 a.m. CDT/ Noon EDT)	Top Trends Changing the Face of Automated Test in 2009	**Richard McDonell**, Sr. Group Manager, Automated Test, National Instruments
Afternoon Keynote (11:00 a.m. PDT/1:00 p.m. CDT/ 2:00 p.m. EDT)	Lean Innovation: Testing in a Tough Economy	**Eric Starkloff**, Vice President of Test Marketing, National Instruments

On-Demand Workshops

Topic	Sessions
Software-Defined Automated Test (SD)	
The adoption of software-defined instrumentation is the most significant trend in test and measurement for 2009. Test engineers are turning to a software-defined approach to instrumentation because they need the flexibility to perform all of their tests using a common instrumentation core and the ability to apply their own algorithms as required by their software-defined devices under test. Learn proven techniques for integrating software-defined instruments in your automated test systems.	▪ SD1: Moving to a Software-Defined Test Strategy *Kevin Bisking, National Instruments* ▪ SD2: Understanding Traditional versus Software-Defined System Design *Kevin Bisking, National Instruments* ▪ SD3: Choosing the Right Modular Instruments Based on Your DUT Requirements *Jaideep Jhangiani, National Instruments* ▪ SD4: Techniques for Software-Defined Measurements and Analysis *John Hottenroth, National Instruments* ▪ SD5: Software-Defined Instrumentation Tips from a Systems Integrator *Joe Spinozzi, Cyth Systems*
Multicore and Parallel Test (MP)	
Software-defined instrumentation uses the latest multicore processors and high-speed bus technologies, such as PCI Express, to ensure engineers are able to generate, capture, analyze, and process the gigabytes of raw data required to properly design and test today's electronics products. In this workshop, learn how to develop automated test applications capable of achieving the highest possible throughput through parallel processing.	▪ MP1: Maximizing Processor and Instrumentation Utilization *Chetan Kapoor, National Instruments* ▪ MP2: Demystifying Multicore and Multithreaded Programming *Casey Weltzin, National Instruments* ▪ MP3: Implementing Parallel Test Architectures *Jared Aho, National Instruments* ▪ MP4: Increasing Parallel Data Streaming Bandwidth with PXI Express *Chetan Kapoor, National Instruments*
RF and Wireless Test (RF)	
RF and wireless test is among the fastest growing electronic areas and is one of the most challenging for design and test engineers. This growth in adoption requires test engineers to learn wireless protocols and keep pace with the rapid introduction of new standards. Learn how you can test multiple standards using common modular hardware components and implement emerging and custom wireless protocols regardless of the maturity of a new wireless standard.	▪ RF1: Understanding RF Test: What Every Engineer Should Know *David Hall, National Instruments* ▪ RF2: Optimizing WLAN Measurements *David Hall, National Instruments* ▪ RF3: Mastering RF Record and Playback *Sophie Gigliotti, Averna* ▪ RF4: Configuring Phase-Coherent RF Test Systems *Sean Wallace, Cal-Bay Systems Inc.* ▪ RF5: Fundamentals of GPS Simulation *David Broadbent, National Instruments*

Real-Time and Protocol Aware Test (RT)

More manufacturers are including FPGAs on modular instruments and giving engineers the access in software to implement more complex digital signal processing at faster rates than ever before. Because software programs such as NI LabVIEW offer test engineers the ability to program FPGAs without requiring knowledge of VHDL, the performance benefits of FPGAs are no longer limited to a subset of hardware engineers with extensive knowledge in digital design. Learn how to increase application performance by exploring these topics.

- RT1: Discovering New Techniques for Closed-Loop Test *Luke Schreier, National Instruments*
- RT2: Architecting Adaptable Hardware-in-the-Loop (HIL) Test Systems *Chris Washington, National Instruments*
- RT3: Developing Protocol Aware Test Systems *Ryan Verret, National Instruments*
- RT4: Designing Custom FPGA I/O for High-Performance Test *Ryan Verret, National Instruments*

Test System Best Practices (TS)

Learn how National Instruments and its partners have overcome test system challenges by applying proven techniques for increasing throughput with zero cost, streamlining software deployment, and creating hybrid systems.

- TS1: Cost-Free Techniques to Improve Test Throughput *Jared Aho, National Instruments*
- TS2: Integrating GPIB, PXI, VXI, and LXI Hybrid Systems *Matthew Friedman, National Instruments*
- TS3: Applying PXI System Design Best Practices *Jennifer Schwartz, National Instruments*
- TS4: Exploring Advanced NI TestStand Software Architectures *Aaron Gelfand, VI Technology*
- TS5: Best Practices for Large Application Development with LabVIEW *Elijah Kerry, National Instruments*
- TS6: NI LabWindows™/CVI Advanced Programming Techniques *Wendy Logan, National Instruments*
- TS7: Exploring Effective Calibration and Sparing Strategies *Matt Anderson, National Instruments*

Expo Pavilions

Application Pavilions

Software-defined instrumentation is successfully used across all industry segments today, including consumer electronics, communications, aerospace and defense, and automotive. Moreover, all of the top electronics companies and contract electronics manufacturers use software-defined instrumentation in many of their complex and high-volume design and production areas. Take advantage of the opportunity to meet with industry experts and discuss your application needs.

RF and Wireless	Semiconductor	Aerospace and Defense	Audio and Video	Automotive

Exhibitor Booths

Explore the exhibition halls to find booths from a variety of participating companies, visit with representatives ready to discuss your application needs, and discover innovative solutions and resources for helping you address your test challenges.