NI Welcomes Brian Muirhead of JPL

Dr. James Truchard, NI CEO, president, and cofounder, kicked off NIWeek 2003 today by delivering his vision for virtual instrumentation. He was joined by NI engineers who demonstrated new software products and previewed future areas of innovation to show how the software is the instrument.

“Today our vision of virtual instrumentation is alive and strong,” Truchard said. “With the redesign of the entire NI software platform, we see that the software truly is the instrument. The next step in our vision is to make the hardware disappear through powerful and flexible software that makes it seamless to integrate with intuitive measurement hardware.”

Truchard outlined how NI is eliminating traditional hardware limitations through new product developments, such as Express VIs in LabVIEW. He expressed that simplify development and the new LabVIEW FPGA Module that gives you the freedom to run LabVIEW code directly in hardware.

Truchard also discussed how the latest suite of 100 M/Ss mixed-signal PXI instruments helps achieve this software-empowered vision by delivering state-of-the-art signal integrity, timing, and synchronization. This gives you a measurement solution with high dynamic range, eliminating concern for distortion and broadband noise.

In a series of demonstrations, NI engineers showed how LabVIEW tools seamlessly integrate with hardware and other software, how NI-DAQ 7 delivers greater than 10 times the performance of the old version of NI-DAQ 7, how you can create an entire Visual Studio.NET application from scratch in five minutes with Measurement Studio 7.0, and how you can decrease your development time by 75 percent with TestStand 3.0.

NI Business and Technology fellow Mike Santori discussed using LabVIEW in control design and embedded applications. Santori highlighted the wide variety of targets on which you can run LabVIEW — from a desktop to the rugged new Compact Vision System, and gave a sneak peak at some future targets for LabVIEW, including microcontrollers, a single-board computer, and a wireless smart sensor.

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Don’t Miss This Today:

FieldPoint/Compact FieldPoint Basics Session
10:30-11:30 a.m., Room 17A
This session covers the basics of FieldPoint and Compact FieldPoint I/O and provides an overview of hardware functionality and configuration. At the session, NI engineers demonstrate how to configure a FieldPoint bank and show the VIs used to program the systems in LabVIEW.

Using LabVIEW FPGA to Create Intelligent I/O for LabVIEW Real-Time
11:45 A.M.-12:45 P.M., Room 16A
Use the flexibility of LabVIEW FPGA to build a real-time system with intelligence embedded at the I/O level. Topics in this session include recommended program architecture, data transfer techniques, and debugging and benchmarking strategies.

Building Integrated Analog and Digital Test Systems
1:00-2:00 P.M., Room 19B
Get an in-depth look at the newest PXI modular instruments from National Instruments. Learn how you can easily combine modular instrumentation, DAQ, and LabVIEW to build integrated mixed-signal test solutions that provide dramatic improvements in development time and test throughput.

Developing LabVIEW Plug and Play Instrument Drivers
2:15-3:15 P.M., Room 14
In this session, learn how to develop LabVIEW plug and play instrument drivers and discover the advanced debugging tools and new instrument I/O features in LabVIEW 7 Express.

LabVIEW Analysis Techniques for Device Characterization
3:30-4:30 P.M., Room 19B
Stop by this session to learn how the wealth of interactive analysis and measurement functions in LabVIEW 7 Express, combined with the advanced timing and synchronization of PXI, provide instant feedback on your device under test.

NI Welcomes Brian Muirhead of JPL

Join us for Friday’s keynote, featuring guest speaker Brian Muirhead, former project manager of the Mars Pathfinder mission and current chief engineer of the Mars Science Laboratory at the Jet Propulsion Laboratory. Muirhead shares his knowledge, experiences, and vision of the roles of software and hardware technology in the exploration of near and deep space. During his keynote, Muirhead will discuss current and future applications of space, and preview future areas of innovation to show how the software is the instrument.

“One of the most important and exciting areas of new technology is the exploration of near and deep space,” Muirhead said. “I am excited to share our vision for putting fun back in the classroom and for developing new software and hardware technologies.”

Muirhead obtained a bachelor’s degree in aeronautical engineering at the California Institute of Technology. Since joining NASA’s Jet Propulsion Laboratory in 1978, he has been named 1997 Laureate for Space by Aviation Week & Space Technology magazine as well as 1997 Engineer of the Year by Design News magazine. Muirhead also authored the book High Velocity Leadership. The Mars Pathfinder Approach to Faster, Better, Cheaper. Currently, as project manager of the Deep Impact mission scheduled for execution on July 4, 2005, Muirhead works on the technicalities of hitting a comet with a spacecraft at 10,000 miles per hour and then capturing the event in 13 minutes using a similar vehicle.

See New NI Compact Vision System Run Three IEEE 1394 Cameras

For the latest in machine vision technology, don’t miss the technical session: Simplify Your Inspection Application with the NI Compact Vision System in Room 16A from 3:30 to 4:30 P.M. This session gives you an in-depth look at the Compact Vision System, a new industrial vision system that takes multicamera inspection, IEEE 1394 Firewire technology, and the power of LabVIEW into rugged environments. Learn how the new vision system uses the new LabVIEW FPGA technology and helps you combine machine vision with NI FieldPoint distributed I/O modules, PLCs, and motion control devices. This session also demonstrates how you can configure the NI Compact Vision System with Vision Builder for Automated Inspection or program the system using the LabVIEW Real-Time Module.
Join experts from industry and academia to learn what's next for technology and the economy during the NIWeek industry experts panel discussion, Thursday at 3:30 p.m. in Ballroom G. During this question-and-answer session, company executives and industry experts share their opinions and insights on everything from the challenges faced by manufacturers today to the current state of the economy and future technological developments.

The panel includes NI President, CEO, and cofounder Dr. James Truchard; University of Texas at Austin Mechanical Engineering Professor Dr. Raul Longoria; Texas Instruments Vice President of Data Acquisition Products Tim Kalthoff; Analog Devices Vice President of Precision Converter Products Dick Meany; and B&G Technologies President Timothy Brooks.

This session has proven to be one of the most popular at NIWeek. Don't miss your chance to discover how leading innovators stay on technology's cutting edge and hear their advice for growth and success.

Word on the Street

What new NI product will benefit you the most? How will you use it?

“We use LabVIEW 7 Express to architect a cantilever sensor product. LabVIEW acts as the open measurement and test platform, performing data acquisition and controlling our electronics. In the future, we plan to use LabVIEW with FPGAs.”

Sergey Belikov, Veeco Santa Barbara, Calif.

“Our company uses the LabVIEW 7 Real-Time Module and PXI to hook up vehicle dynamics and software with hardware from an actual vehicle. We test our equipment with LabVIEW and PXI to take care of the communication, sampling, and synchronization.”

Steve Hann, Mechanical Simulation Corporation Ann Arbor, Mich.

From supporting flight tests in Army Black Hawk helicopters to ensuring that an artificial heart doesn't skip a beat, LabVIEW applications range from enormously powerful to minutely delicate. Come to the LabVIEW Hall of Fame booth in the expo hall to catch a glimpse of LabVIEW history and see some of the most unique LabVIEW applications.

Test Drive New PXI Modular Instruments and LabVIEW 7 Express

NIWeek attendees test drive the new PXI modular instruments in the NI Week Signal Test Pavilion. Experience the ease and power of the newest NI modular instruments firsthand with the PXI test-drive stations in the NI Week Signal Test Pavilion in the expo hall. At these test-drive stations, you can use LabVIEW 7 Express to build and run demos for:

- New 100 MHz digital waveform generator (analyzers [NI PXI-6552 and NI PXI-6551])
- New 100 M Sa/s, 14-bit digitizer (NI PXI-512)
- New 100 M Sa/s, 16-bit arbitrary waveform generator (NI PXI-542)
- 2.7 GHz RF signal analyzer (NI PXI-5660)
- 6G-s digit FlexDMM (NI PXI-4072)
- Dynamic signal acquisition (NI PXI-4472)

Experiment and discover how the combination of world-class NI modular instrumentation and LabVIEW give you the power to create more flexible and versatile systems with higher system performance.

Information has no value until its shared.

The mind-boggling amount of information available to the electronics industry doesn't do any good until it's gathered, organized, analyzed, and distributed. We're proud to be part of the Reed Electronics Group. Where Information Works. We gather and analyze information, alongside our global network of editorial and research colleagues, and organize our information into print, online, and live conferences and trade shows by market sector, job function, and geography.

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Test Drive New PXI Modular Instruments and LabVIEW 7 Express