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National Instruments Control Design and Simulation Technology to Play Key Role in EcoCAR Challenge

NI Donates Industry Tools to Student Teams in Green Automotive Engineering Competition

NEWS RELEASE – Feb. 4, 2009 – National Instruments today announced its contribution as a platinum sponsor for EcoCAR: The NeXt Challenge, a new collegiate vehicle engineering competition for which students will reengineer a 2009 Saturn VUE with advanced technology to reduce environmental impact while retaining consumer appeal. As a platinum sponsor, NI is donating more than $300,000 worth of engineering hardware and software to student teams in 2009, including NI LabVIEW graphical system design software, CompactRIO in-vehicle embedded control systems and PXI modular simulation systems. Teams will use these tools to design, prototype and deploy their vehicles and tackle the unique algorithm engineering challenges associated with developing advanced hybrid vehicles.

The EcoCAR challenge continues the 20-year history of advanced vehicle technology competitions established by the U.S. Department of Energy (DOE). The three-year competition gives engineering students the opportunity to design and build advanced vehicles with next-generation automotive technologies while gaining valuable hands-on learning experience with the latest automotive engineering tools and techniques.

“In this first year of competition, NI LabVIEW software and PXI hardware will prove especially useful while teams focus on the modeling, simulation and testing of their control strategies,” said Kristen De La Rosa, director of advanced vehicle technology competitions at Argonne National Laboratory, the organizer of the competition. “Additionally, NI equipment will help teams through the entire multiyear process because students can continue using this single development environment and NI hardware as a platform for bringing their vehicle designs to life.”

The competition is patterned after real-world automotive engineering practices that emphasize a model-based design approach. Students will focus on the vehicle design and modeling in the first year, during which selected teams will use NI PXI hardware and the LabVIEW Real-Time Module to develop hardware-in-the-loop (HIL) simulations of their vehicles. These HIL simulations will serve as virtual vehicles on which teams can test and validate advanced in-vehicle hybrid system controllers before the actual vehicle designs are assembled. Students will use NI CompactRIO embedded controllers with LabVIEW as well as systems from other sponsors to implement control models that will optimize the interaction between electric motors, combustion engines and energy storage systems.

When teams receive actual vehicles in the second year of competition, they will be able to integrate their controllers into those vehicles with minimal effort. At the end of years two and three, students will use their reengineered Saturn VUE vehicles to compete in a weeklong series of competitions for proving-grounds testing and technical evaluation in a number of key categories including fuel economy, greenhouse gas emissions, dynamic performance, consumer acceptability and engineering practices.

This will be the ninth consecutive year that National Instruments has sponsored the DOE competition series with equipment and cash donations. Teams that receive NI systems will also receive ongoing training and support from National Instruments engineers to ensure the teams’ success.

Readers may visit www.ni.com/academic to learn more about National Instruments academic programs. Additional information about the EcoCAR challenge is available at www.ecocarchallenge.org.

National Instruments in Academia

National Instruments is committed to enhancing engineering and science education worldwide by providing educators and students with powerful graphical system design software and modular hardware to connect the curriculum with the real world. Professors and students benefit from powerful, professional tools such as NI LabVIEW graphical development software, which helps students visualize and implement engineering concepts. The integration of LabVIEW in the classroom creates an effective, dynamic learning environment – from LEGO® MINDSTORMS® NXT in primary schools to research laboratories in universities. For more information about NI academic products, curriculum resources and discounts, visit www.ni.com/academic.

About National Instruments

National Instruments (www.ni.com) is transforming the way engineers and scientists design, prototype and deploy systems for measurement, automation and embedded applications. NI empowers customers with off-the-shelf software such as NI LabVIEW and modular cost-effective hardware, and sells to a broad base of more than 25,000 different companies worldwide, with no one customer representing more than 3 percent of revenue and no one industry representing more than 10 percent of revenue. Headquartered in Austin, Texas, NI has more than 5,000 employees and direct operations in more than 40 countries. For the past 10 years, FORTUNE magazine has named NI one of the 100 best companies to work for in America.