Real-Time InnovationsÂ NDDS to Network DARPA Grand Challenge Vehicle

Autonomous Off-Road Vehicle Relies on NDDS for Synchronized, Distributed Sensor Communications

Santa Clara, CA (PRWEB) June 8, 2005 -- Real-Time Innovations, Inc. (RTI), today announced that Flying Fox, built by Autonomous Vehicle Systems, will rely on RTIÂs Network Data Distribution Service (NDDS) middleware for synchronized, distributed sensor integration for their unmanned autonomous vehicle in the DARPA (Defense Advanced Research Products Agency) Grand Challenge race.

The 2005 DARPA Grand Challenge will be held on October 8, 2005 in the Southwest desert. The team that develops an autonomous ground vehicle that finishes the designated route most quickly (within ten hours) will receive $2 million. The route will be no more than 175 miles over desert terrain featuring natural and man-made obstacles. The exact route will not be revealed until two hours before the event begins.

The Grand Challenge is intended to accelerate the development of autonomous vehicle technologies for both military and civilian use. ÂDARPA and other US agencies, are already funding numerous robotic vehicle development programs and the Grand Challenge is targeted to find innovative solutions that are being tested in realistic conditions,Â said Gerardo Pardo-Castellote, chief technology officer of Real-Time Innovations, Inc.

Dan Komaromi of Autonomous Vehicle Systems explained, "We selected RTI because of their proven track record in synchronized, distributed communications and their understanding of the critical design requirements of autonomous vehicles. RTI's history of working with Stanford University is invaluable and this experience is evident in the refined NDDS architecture that makes it seamless to arrange real-time, dynamically configurable communication between multiple vision and laser sensors and the embedded processing modules."

RTIÂs open-architecture platform, NDDS, based on the Object Management Group's (OMG) Data Distribution Service (DDS) standard, offers a rich set of publish-subscribe middleware that is a compelling solution with its fully integrated tools for system visualization, analysis and real-time debugging.

About Flying Fox
The Flying Fox vehicle is built on the chassis of an all-terrain vehicle by Autonomous Vehicle Systems (http://www.autonvs.com), a collaboration between Michigan State University, University of California San Diego, American Institute of Aeronautics and Astronautics and industry professionals. Autonomous Vehicle Systems uses NDDS to communicate with advanced sensor systems that work in various ranges of electromagnetic spectrum to provide the ÂeyesÂ and ÂearsÂ for autonomous ground vehicles and integrates with a modular software system that allows sensors to be added or removed as the mission requires. Some sensor systems include adaptive vision, Ladar and other sensors attached to the vehicle to provide feedback as to the vehicle state or health. Flying Fox is among the first to demonstrate a neuroscience-inspired adaptive vision system in an off-road environment that allows the vehicle to learn the best path through training examples and generalize unseen terrain based on automatically derived features.

About RTI
Real-Time Innovations, Inc. (RTI, www.rti.com) the expert in real-time information networking, leads the industry with high performance standards-based software solutions for data-critical applications. Its products

and consulting services provide the infrastructure for national railways, air traffic control, traffic monitoring, mission-critical combat systems, financial transaction processing and industrial automation. RTI's flagship product, NDDS, is middleware based on the Object Management Group's (OMG) Data Distribution Service (DDS). NDDS provides the essential foundation for real-time communication in a networked system and enables a new class of embedded to enterprise (e2E) applications. Raytheon, Nikon, Omron, Harmonic, Applied Materials, Schneider Automation, Boeing, Lockheed Martin and the US Military rely on RTI technology for their real-time, data-centric, distributed applications. Headquartered in the heart of Silicon Valley since 1991, RTI is a privately held company.

Additional details of the DARPA Grand Challenge autonomous ground vehicle competition can be found at: http://www.redteamracing.org/include/images/qualifierdarpapressrelease.pdf.

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