



FOR IMMEDIATE RELEASE

RE2, Inc. Awarded U.S. Navy SBIR to Develop a Dexterous Manipulation System for Small Robots

Pittsburgh, PA — April 23, 2007 — RE2, Inc., a leading provider of JAUS software solutions and unmanned systems technologies, announced today that it has been awarded a Phase I Small Business Innovation Research (SBIR) program by the U.S. Navy to develop a dexterous manipulation system for small robots and explosive ordnance disposal (EOD) robotic platforms.

Many of the manipulators currently available for EOD robotic platforms cannot adequately manipulate small items, such as wires and blasting caps. These current manipulators are limited because of the small number of degrees of freedom available and the joint-by-joint control that is predominantly used. They also are limited because the operator does not receive any feedback on the amount of force the manipulator is applying, making it difficult to hold sensitive items without dropping or damaging them. Currently, movements of the base platform can be used to augment the limited dexterity of the manipulators (e.g. grab an object and then move the platform back), but in truly unstructured environments this may not be possible.

The goal of this SBIR program is to develop a dexterous manipulation system that can grip a blasting cap or wire protruding from a target and remove the item by pulling straight back, without moving the robot base or damaging the item gripped. The system should also be able to pick up a wire or blasting cap from the ground. Robotic control for these tasks must be accomplished by either a human operator viewing the scene remotely and controlling the manipulator, an autonomous controller, or some combination of the two.

During the six-month Phase I, RE2 will do the following:

- Develop a concept and preliminary design for the Dexterous Manipulation System
- Model the system to demonstrate the potential performance specifications
- Provide documentation of design tradeoffs and feasibility analysis

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“We are extremely pleased to have been selected by the U.S. Navy to develop a dexterous manipulation system. This program is completely in line with our unmanned system and robotic manipulator expertise,” states Jorgen Pedersen, president and chief executive officer for RE2, INC. “We plan to work closely with industry experts, military users, and domestic bomb squads to design a system that meets the needs and requirements of our EOD operators at home and abroad.”

RE2 will partner with small robot manufacturer, Foster-Miller, Inc., a wholly-owned QinetiQ subsidiary, during Phase I for industry insight, technical resources, and commercialization guidance. “Foster-Miller is pleased to partner with RE2 in the design and development of the dexterous manipulation system,” stated Edward J. Godere, vice president, group director, Power Systems Technology Group, Foster-Miller, Inc. “We will leverage our understanding of small EOD robots and dexterous manipulation, as seen with the TALON® robot, by providing our expertise and system design to RE2.”

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About RE2, Inc.

RE2, Inc. (Robotics Engineering Excellence) is a leading provider of JAUS software solutions and unmanned systems technologies. RE2’s feature products include the RE2 JAUS Software Development Kit and the RE2 Sensor Stabilization Platform. RE2 also provides a broad range of unmanned systems services, including system integration, software development, robotics engineering, and semi-autonomous navigation. RE2’s expertise lends itself to several markets, including defense, law-enforcement, homeland security and EOD. To learn more about the RE2 JAUS SDK, visit www.resquared.com/JAUS-SDK.html. For more information, please visit www.resquared.com or call (412) 681-6382.

RE2, Inc. Media Contact:

Jessica Jordan-Pedersen
(412) 681-6382
jessica.pedersen@resquared.com