

**FOR IMMEDIATE RELEASE**  
**October 2, 2008**

**For more information:**  
Dr. Mitchell M. Rohde  
(734) 429 - 9100 voice  
(734) 429 - 9113 fax  
[info@quantumsignal.com](mailto:info@quantumsignal.com)  
<http://www.quantumsignal.com>

## **Quantum Signal Partners with US Army to Keep Robots from Becoming “Stuck in the Mud”**

Ann Arbor, Michigan – Have you ever driven your car in an unfamiliar area, only to get stuck in the mud? Have you ever lost traction in a snow bank, or on a patch of ice? Most of us have, and know that such situations can be a hassle or even dangerous.

The US military faces similar problems everyday, when deploying manned or unmanned vehicles around the world. Understanding the ability of vehicles to travel over various types of terrain is an important capability, and has been the subject of substantial research and development at the US Army Engineer Research and Development Center (ERDC) in Vicksburg, MS.

Quantum Signal (QS), an Ann Arbor, MI engineering company involved in research and development of robotic vision systems, are assisting the Army in this important research. QS and researchers at the Massachusetts Institute of Technology Robotics Mobility Group recently jointly completed two phase 1 STTR research projects by ERDC through the Army Research Office (ARO). STTRs are US government contracts that promote and fund collaborations between small companies and universities to tackle difficult problems through a combination of basic and applied research.

The first research project focuses on the development of algorithms for mobility prediction for Army unmanned ground robots – that is, simulation and analysis software that helps a robot predict its ability to safely travel along a path through challenging terrain. The second research project synergistically builds upon the first project by developing machine vision and artificial intelligence algorithms that allow a robot to “learn” the physical characteristics of terrain. When complete, the combined technology from these two research projects will provide a major leap forward for Army ground robot mobility analysis and prediction, and help the Army use their robots with improved efficiency and reliability.

### About Quantum Signal

Founded in 1999, Quantum Signal is an advanced engineering company located in Ann Arbor, Michigan. The company focuses on signal and image processing development and applications as well as simulation. Markets include homeland

security, defense, vehicle engineering, and entertainment (via its subsidiary, Reactor Zero). For additional information on Quantum Signal, please visit our web site at [www.quantumsignal.com](http://www.quantumsignal.com) or call (734) 429 - 9100.

#### About MIT

The mission of MIT is to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century. For more information, please visit [www.mit.edu](http://www.mit.edu).