



## Press Release



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### **University-Industry Teams From United States, Australia Among 12 Finalists In Worldwide Robotics Competition**

**DETROIT ARSENAL, WARREN, MI** – Twelve of the world’s most technologically-savvy universities and several innovative companies have teamed up and are now finalists in an international robotics competition with a purse valued at more than U.S. \$1.6 million. In addition to the prize money, winning teams will have a unique opportunity to work with American and Australian military organizations to develop the advanced robots that will work alongside – and instead of – Soldiers on future battlefields.

The Multi-Autonomous Ground Robotics International Challenge (MAGIC) 2010 is being co-hosted by the U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC) and the Australian Department of Defence’s (ADOD’s) Defence Science and Technology Organisation. TARDEC is the core of ground robotics development for the U.S. Army Research, Development and Engineering Command and U.S. Department of Defense.

The MAGIC 2010 competition, the first of its kind in the world, has been established to attract entries that will further the development of fully autonomous robots for military, commercial and civilian emergency applications. Competing teams will ultimately field squads of unmanned vehicle prototypes that autonomously coordinate, plan and execute a series of timed tasks including classifying and responding to simulated threats and exploring/mapping diverse terrains.

“The levels of quality and innovation in the MAGIC 2010 submissions surpassed our expectations,” said TARDEC Director Dr. Grace M. Bochenek. “We are excited to move on to the next step in this collaborative, competitive process. MAGIC 2010 will lead to groundbreaking robotics research in critical new arenas that will address operational challenges, increase energy security and save Soldiers’ lives.”

MAGIC 2010 entries were open to international organizations from industry and academia. Twenty-three entries were received from the United States, Australia, Canada, Poland, Japan, South Korea and Turkey. Ten university/industry teams, selected as semifinalists, will each receive U.S. \$50,000 in seed money to pursue their technology submissions. They include:

## **Australia**

- 1 **MAGICIAN** (including the University of Western Australia (Robotics and Automation Laboratory, Adaptive Systems Research Group), Flinders University (Artificial Intelligence and Intelligent Systems Laboratories), Edith Cowan University (Artificial Intelligence and Software Engineering Cluster), Thales Australia (D3S&A, Naval Division), ILLIARC Pty Ltd.)
- 2 **STRATEGIC ENGINEERING** (including an Australian robotics company specializing in advanced sensing, vision systems, autonomous vehicles, industrial robotics and field robotic platforms, and the University of Adelaide.)

## **Canada**

- 3 **NORTHERN HUNTERS – Canada** (including Amtech Aeronautical Ltd, Scientific Instrumentation Ltd, Royal Military College of Canada.)

## **Japan**

- 4 **CHIBA TEAM/Chiba University – Japan** (including Chiba University and Analytical Software Inc.)

## **Turkey**

- 5 **CAPPADOCIA – Turkey** (including ASELSAN (Turkish military electronics company) with Bilkent University, Bogazici University, Middle East Technical University from Turkey, and Ohio State University (Control & Intelligent Transportation Research Lab) in the United States.)

## **The United States**

- 6 **RASR - Reconnaissance and Autonomy for Small Robots Team – United States** (including Robotic Research, LLC, General Dynamics Robotic Systems, QinetiQ-North America, Del Services, Cedar Creek Defense University, Carnegie Mellon Robotics Institute, Embry-Riddle Aeronautical University, and the University of Michigan.)

7 TEAM CORNELL, Cornell University – United States (School of Mechanical and Aerospace Engineering.)

8 TEAM MICHIGAN – United States (including SoarTech with research support from the University of Michigan.)

9 VIRGINIA TECH – United States (Department of Mechanical Engineering).

10 UNIVERSITY OF PENNSYLVANIA – United States (including BAE Systems experts as auxiliary team members.)

Two other teams were also selected as semifinalists by the judging panel and have the opportunity to further compete by self-funding their projects. They include:

### **Australia**

11 NUMINENCE - Australia (including Numinence Pty Ltd and LaTrobe University with support from 10 small companies).

12 UNIVERSITY OF NEW SOUTH WALES - Australia (including Kumamoto University, Japan, and University of Western Sydney).

“These teams presented us with outstanding presentations, ideas and strategies,” noted Dr. Jim Overholt, director of TARDEC’s Joint Center for Robotics, and co-chair of Magic 2010. “The intellectual capabilities and vision that these organizations have brought to the field of robotics with their proposals is truly impressive. We are fortunate to be part of an event that will witness the fruition of these ideas and the potential development of new technologies for future military and commercial use.”

In June 2010, MAGIC 2010 judges will visit the 12 semi-finalists to cut the field down to five finalists. Each of those five remaining teams will receive an additional U.S. \$50,000 to complete their entries.

The final MAGIC 2010 challenge is scheduled to take place Nov. 8 – 13, 2010, in an undisclosed location in Australia.

The grand prize winner will be announced at the Land Warfare Conference Nov. 15 – 19 in Brisbane, Australia. During that conference, final awards of U.S. \$750,000, \$250,000 and \$100,000 will be presented respectively to the three top teams to further their robotics research.

More information on MAGIC 2010 go to [www.dsto.defence.gov.au/MAGIC2010/](http://www.dsto.defence.gov.au/MAGIC2010/).



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### ABOUT TARDEC

Headquartered at the Detroit Arsenal in Warren, MI, TARDEC is the Nation's laboratory for advanced military automotive technology and serves as the Ground Systems Integrator for all Department of Defense (DOD) manned and unmanned ground vehicle systems.

With roots dating back to the World War II era, TARDEC is a full life-cycle, systems engineering support provider-of-first-choice for all DOD ground combat and combat support weapons, equipment and vehicle systems. TARDEC develops and integrates the right technology solutions to improve Current Force effectiveness and provide superior capabilities for Future Force integration. TARDEC's technical, scientific and engineering staff lead cutting-edge research and development in Ground Systems Survivability; Power and Mobility; Intelligent Ground Systems; Force Projection; and Vehicle Electronics and Architecture.

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For more information about TARDEC, visit us at [www.tardec.army.mil](http://www.tardec.army.mil). You can also follow us on Twitter at [http://twitter.com/TARDEC\\_PAO](http://twitter.com/TARDEC_PAO).



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