



\$US1.6 million
in prize money

Wanted! Super-smart robots to complete a challenge in 210 minutes

MAGIC 2010 Downunder is an international technology competition to develop super-smart robots that can cooperate autonomously in high-risk environments and emergency situations to protect human lives.

Selected robots will participate in the Grand Challenge Event in Australia in the lead-up to the Land Warfare Conference during November 2010.

MAGIC 2010 Downunder – an international event

The Multi Autonomous Ground-robotic International Challenge (MAGIC 2010) is jointly sponsored by the Australian and US Departments of Defence to attract innovative proposals from worldwide research organisations to develop next-generation fully autonomous ground vehicle systems that can be deployed effectively in military operations and civilian emergency situations.

The Defence Science & Technology Organisation (DSTO) in Australia and the Research Development & Engineering Command (RDECOM) in USA are taking the lead in organising MAGIC 2010.

What's the challenge?

The challenge requires competitors to submit proposals demonstrating the use of multi-vehicle robotic teams that can execute an intelligence, surveillance and reconnaissance mission in a dynamic urban environment.

Shortlisted competitors will need to field cooperatives of unmanned vehicle prototypes with the ability to autonomously and dynamically coordinate, plan and carry out tasks against changing priorities.

To complete the challenge competitors must: (i) accurately and completely explore and map the challenge area; (ii) correctly locate, classify and recognise all simulated threats; and (iii) complete all phases within 3.5 hours.

The challenge event will be conducted in Australia during November 2010.

www.dsto.defence.gov.au/MAGIC2010/

Organised by:



Australian Government
Department of Defence
Defence Science and
Technology Organisation



Eligibility

The challenge is open to national and international organisations from industry and academia. Government organisations are not eligible.

Time Table

MAGIC 2010 will be conducted in two phases:

1. Initial shortlisting of ten teams based on their proposals – 19 October 2009.
2. Grand challenge event – 8-14 November 2010.

Date	Event
1 July 2009	Challenge announced
31 July 2009	Participants Conference, Adelaide (Australia)
4 Aug 2009	Participants Conference Frankfurt (Germany)
6 Aug 2009	Participants Conference TARDEC Warren, Michigan (USA)
4 Sep 2009	Intention to Compete forms – closing date
2 Oct 2009	Closing date for receipt of technical proposals from competitors
19 Oct 2009	Ten shortlisted teams notified
2 – 13 Nov 2009	Site visits by judging panel for detailed technical assessments of ten shortlisted competitors
16 Nov 2009	Five competitors (out of ten) selected and research contracts awarded - 50% first payment initiated
7-21 June 2010	Site visits to shortlisted competitors by assessment panel. Progress assessments - balance 50% payment initiated
22 Oct 2010	Closing date for submitting MAGIC 2010 Technical Paper for Land Warfare Conference
8-14 Nov 2010	Grand Challenge Event at undisclosed location in South Australia
15-19 Nov 2010	Land Warfare Conference, Brisbane (winners announced)

Research awards

Of the ten shortlisted teams, five teams will be selected to receive US\$100,000 each to develop and build their unmanned vehicle prototypes.

After successfully completing the challenge the top three ranked teams will receive US\$750,000, US\$250,000 and US\$100,000 respectively.

Judging

A panel of international experts in the field of robotics, military operations, academia, and defence R&D will be appointed. The judges will be responsible for verifying compliance with the rules and determining the winners.

Proposal presentation

The selected competing teams will be required to submit a detailed technical paper covering all aspects of their technology for presentation and publication in the proceedings of the Land Warfare Conference 2010 being held in Brisbane, Australia from 15 to 19 November 2010.

More information

For detailed information on challenge rules, entry requirements, judging criteria and forms, visit:

www.dsto.defence.gov.au/MAGIC2010/

For information on the Land Warfare Conference, visit:

www.dsto.defence.gov.au/lwc2010/

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