

Eurathlon 2013

23-27. September 2013,
Berchtesgaden, Germany

Team Information

Picture of vehicle:



Name of vehicle: MSAS II

Return form to: eurathlon@fkf.fraunhofer.de

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Team Information



Picture of team leader:

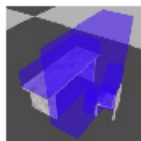
Name of team leader: Janusz Będkowski

Team Name: IMM-IAIR

Team E-mail: januszbedkowski@gmail.com

MSAS

**Mobile
Spatial
Assistance
System**



Logo:

Website: <http://gpuformobilerobot.github.com/>

Location: Warsaw, Poland

Institution/Company: Institute of Mathematical Machines with the collaboration of
Institute of Automatic Control and Robotics

Address: ul. Krzywickiego 34, 02-078 Warsaw , Poland

Telephone: 0048 501 090 020

Fax: -

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Team Description:

After successful CELROB 2011 we decided to improve our mobile platform (IAIR team). It is equipped with rotated LMS 100, therefore it can navigate in 3D environment. The novelty in proposed approach is based on GPGPU computation for 3D cloud of points processing. Robot can filter, sub sample and register 3D data on line. It can build consistent map based on 6DSLAM algorithm[1]. The new approach is related to use semantic information for loop closing detection. Semantic information is also sent to base station and it can be used for further decision support.

[1]. Janusz Marian Bedkowski, Andrzej Maslowski, Geert De Cubber, (2012) "Real time 3D localization and mapping for USAR robotic application", Industrial Robot: An International Journal, Vol. 39 Iss: 5

Sponsors:

Selection of scenario:

- Reconnaissance and surveillance in urban structures (USAR)
- Mobile manipulation for handling hazardous material
- Search and rescue in a smoke filled underground structure
- Autonomous navigation using GPS, GLONASS and GALILEO
- EOR/EOD/IEDD/CIED (for professionals only!)

Proof of citizenship:

A copy of team leader passport will do (will not be published)!

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