



Team Information



Picture of vehicle:

Name of vehicle:

Rugbot



Picture of team leader:

Name of team leader:

Andreas Birk

Team Name:

IUB Robot Team

Team E-mail:

a.birk@iu-bremen.de

Website:

<http://robotics.iu-bremen.de>

Location:

Bremen, Germany

Institution/Company:

International University Bremen

Address:

Campus Ring 1

28759 Bremen

Telephone:

++49-421-200 3113

Fax:

++49-421-200 3103

Team Description:

The IUB team consists of students and scientists from the robotics research group of Prof. Dr. Andreas Birk at the International University Bremen (IUB). The team is engaged since 2001 in the area of rescue robotics, where the challenges that are presented in the three different scenarios of ELROB2006 are quite similar.

The latest development of the group is the so-called "Rugbot" type of robot. The robot is a complete in-house development based on the so-called CubeSystem, a collection of hardware



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and software components for fast robot prototyping that was developed over the last decade through several research projects under the guidance of Andreas Birk.

Rugbots are tracked vehicles that are lightweight (about 35 kg) and have a small footprint (approximately 50 cm x 50 cm). They are very agile and fast on open terrain. An active flipper mechanism allows Rugbots to negotiate stairs and rubble piles. Their small footprint is highly beneficial in indoor scenarios. They have significant on-board computation power and they can be equipped with a large variety of sensors. The standard payload includes a laser-scanner, ultrasound sensors, four cameras, one thermo camera, and rate gyros. A manipulator as add-on component is currently under development. The onboard software is capable of mapping, detection of humans and fully autonomous control. Teleoperation is in varying degrees is also supported. The on-board batteries allow for 2.5 hours of continuous operation. At the moment, five Rugbots are in operation at IUB. Two further ones are in production.

Sponsors:

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Selection of scenario:

urban X non-urban X EOD/IEDD/UXO X
exhibition X

Proof of citizenship:

A copy of team leader passport will do (will not be published)!