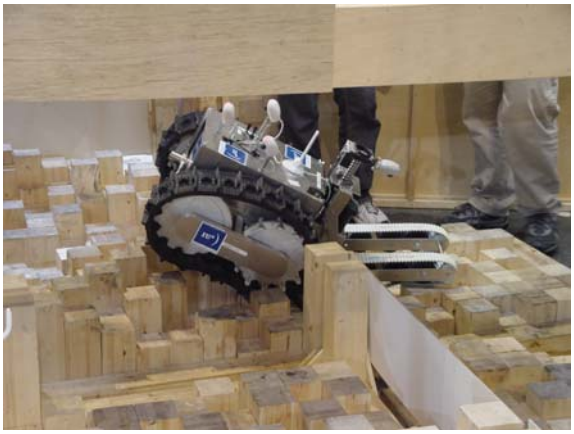
Team Information

Picture of vehicle:	
Name of vehicle:	Rugbot
Picture of team leader:	
Name of team leader:	Andreas Birk
Team Name:	Jacobs Robot Team
Team E-mail:	a.birk@iu-bremen.de
Website:	http://robotics.iu-bremen.de
Location:	Bremen, Germany
Institution/Company:	Jacobs University Bremen
	(previously: International University Bremen, IUB)
Address:	Campus Ring 1
	28759 Bremen
Telephone:	++49-421-200 3113
Fax:	++49-421-200 3103
Team Description:	The Jacobs team consists of students and scientists from the robotics research group of Prof. Dr. Andreas Birk at the Jacobs University Bremen (Jacobs). The team is engaged since 2001 in the area of rescue robotics, where the challenges that are presented in the three different scenarios of ELROB are quite similar.
	The main type of robots used by the group is the so-called “Rugbot” type of robot. The name Rugbot is derived from “rugged robot”. The systems are complete in-house developments based on the so-called CubeSystem, a collection of hardware and software components for fast robot prototyping

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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. 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, six Rugbots are in operation at IUB.

Sponsors:	Jacobs University Bremen Deutsche Forschungsgemeinschaft (DFG)
Selection of scenario:	urban _X_ non-urban _X_ UAV&UGV ___ exhibition _X_ autonomous _X_
Proof of citizenship:	A copy of team leader passport will do (will not be published)!