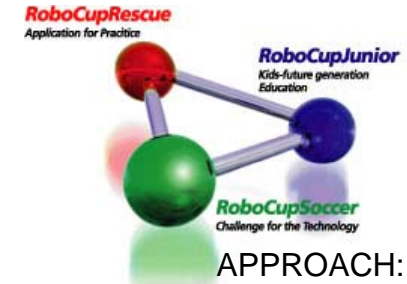




# ROBO RESCUE TEAM

## University of Applied Sciences , AUSTRIA

**CONTACT: Raimund Edlinger,**  
**raimund.edlinger@fh-wels.at, <http://rrt.fh-wels.at>**



### APPROACH:

The drive system basically consists of four pulley belts. Additionally the two belts on the front and the two belts on the rear side can rotate individually. The robotic arm has six degrees of freedom and is designed to carry a payload of approximately 2kg.

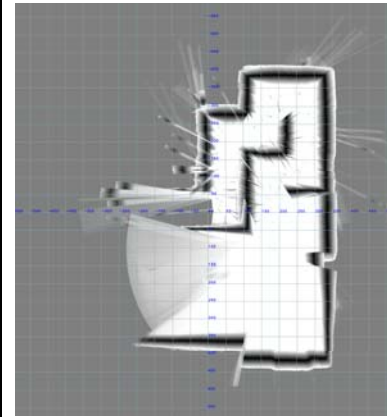
### KEY FEATURES:

LKR-Ranshofen,  
Manufacturers

### MECHANICAL DESIGN AND MOBILITY



### NAVIGATION, MAPPING AND PLANNING



### APPROACH:

The two dimensional map generation is based on the acquired data of a laser range finder LRF UBG-04LX-F01. For map generation we use scan matching and monte-carlo-localization.

### KEY SENSORS/FEATURES:

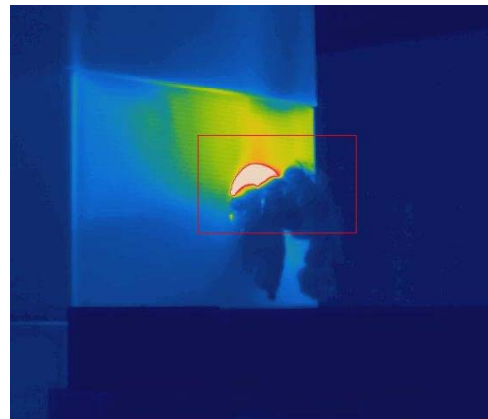
Hokuyo UBG 04LX-F01

### APPROACH:

A thermo cam, 2 LAN-cams, CO2 sensor and a microphone detect the simulated victims.

### KEY SENSORS/FEATURES:

FLIR Thermo cam, CO2-Sensor, Prosilica Vision cameras



### VICTIM IDENTIFICATION AND OTHER SENSORS



### CONTROL AND HUMAN-ROBOT INTERFACE

### APPROACH:

The NI Single-Board RIO integrates an embedded real-time processor, a high performance FPGA, and onboard analog and digital I/O on a single board.

### KEY SENSORS/FEATURES:

Logitech Joystick,  
National Instruments SBRIO

**ALL RADIO TRANSMISSIONS: 5 GHz, XXX mW, ANTENNA: XXX dB**