

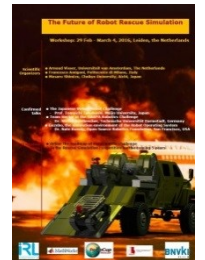


Team YILDIZ



Overview

- The team is working in robotics area since 2007
- Participating to RoboCup competitions since 2011
- Both real and virtual rescue robot leagues



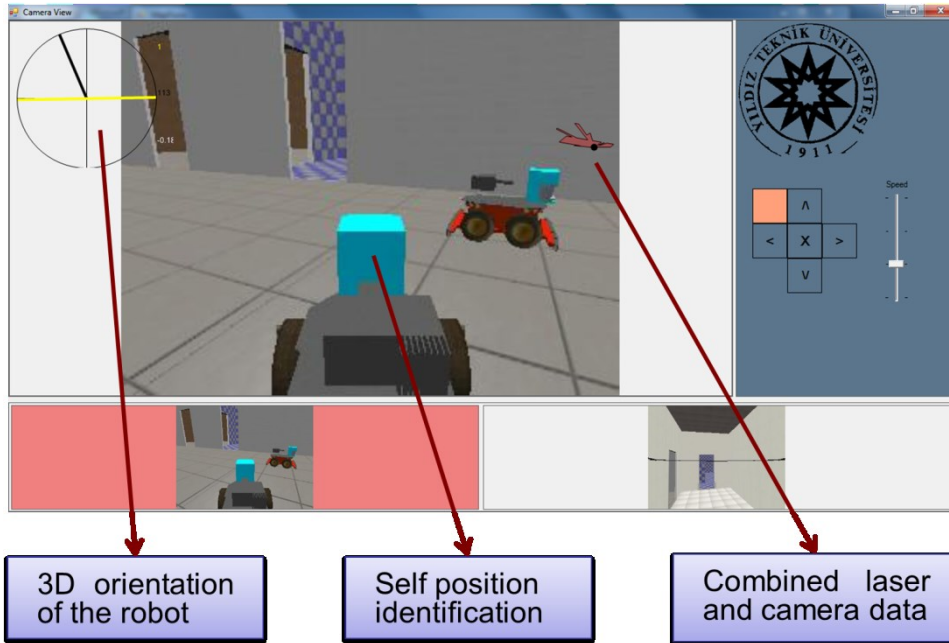
Comparison of our methods for Virtual and Real Robot Leagues

Methods	Virtual	Real
Environment	USARSIM-UDK	ROS-GAZEBO
Sensors	RGB Cam, Laser, Ins	Kinect, Thermal Cam, Laser, IMU
Exploration	Frontier Based	
Navigation	Our Code	Ros Navigation Stack
SLAM	Our Code (RSLAM)	
Victim Detection	DPM (Deformable Partial Models)	
Development Issues	Teams have to develop their own algorithms	There are number of good libraries making easy to start up

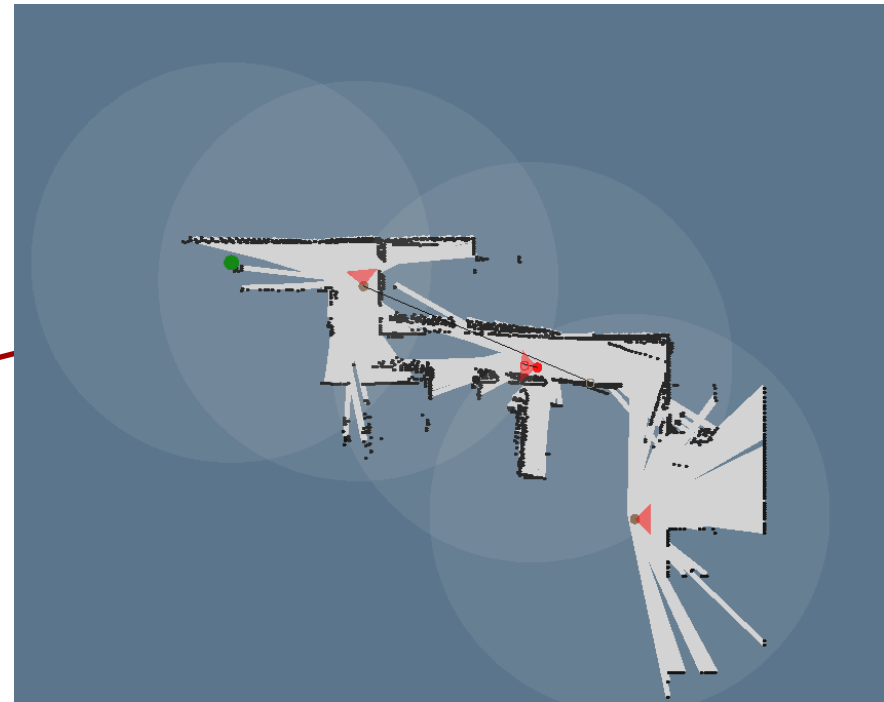
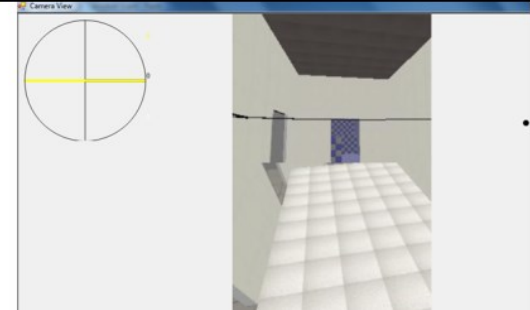


Our Virtual League Efforts

Control Interface



Combined image of two cameras on AirRobot

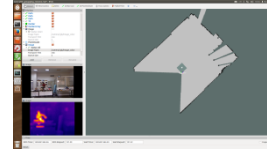


Indirect Communication between ComStation and Robots

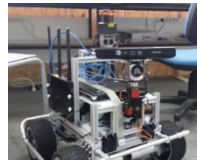
Video

Our Real League Efforts

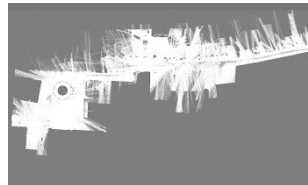
- Navigation in Our Lab



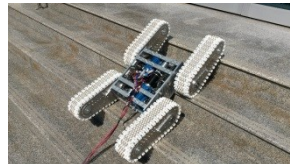
- Exploration



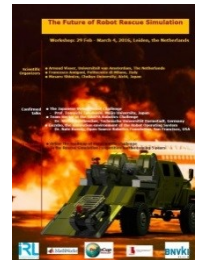
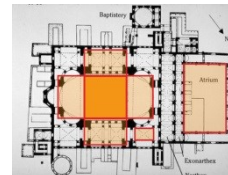
- RSLAM



- Tracked Robot

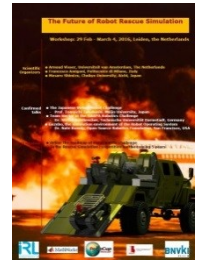


- Hagia Sophia



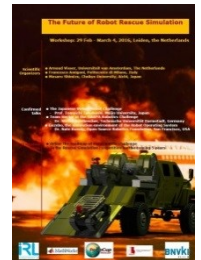
YILDIZ Team Members

- Erkan Uslu
- Muhammet Balcılar
- Furkan akmak
- Nihal Altuntaş
- Salih Marangoz
- M. Fatih Amasyalı
- Sırma Yavuz



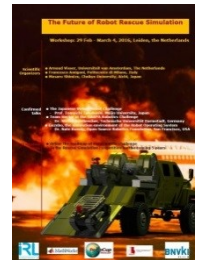
Suggestions for the future of the league

- The main problem is the number of participants
- The start up with UDK is not easy.
- During this workshop, we all witnessed the capabilities of ROS/Gazebo environment.
- Moving to ROS/Gazebo will benefit the league and will encourage the new participants.



Suggestions for the future of the league

- As demonstrated in this workshop, it is also possible to use Gazebo-Usarsim client interface. But, this type of environment will not solve current issues; like developing your own algorithm from the scratch.



Sample Application

- After the yesterday's discussions, our team developed a demo to show how multiple robots can be controlled in ROS/Gazebo (thanks to Stefan Kohlbrecher):

https://github.com/YildizTeam/pioneer3at_demo

