

Team-JSK: MBZIRC Progress Report

Team JSK[†]

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I. INTRODUCTION

This document provides a report of Team JSK's progress in preparing for the Mohamed Bin Zayed International Robotics Challenge (MBZIRC). The team consists of members from the JSK Laboratory at the University of Tokyo. The JSK Lab, founded in early 1980s, has a long history of robotics research with focus on areas including humanoids, drones, robotics manipulation, and perception, and the lab has experience in participating in robotics challenges including the DARPA Robotic Challenge and the Amazon Picking Challenge. JSK lab is also an active contributor to the ROS community.

II. PROJECT PERSONNEL

Team JSK is made of eleven members: Prof. Masayuki Inaba, Prof. Kei Okada, Dr. Yohei Kakiuchi, Dr. Wesley Chan, Bakui Chou, Xiangyu Chen, Krishneel Chaudhary, Kohei Kimura, Yuki Furuta, and Hiroto Mizohana. The team is roughly divided into three groups corresponding to each task with groups having overlapping personnel.

III. CHALLENGE 1: LANDING UAV ON A MOVING VEHICLE

IV. EXAMPLE

This example.tex shows how to write the module

V. CHALLENGE 2: OPERATING A VALVE STEM

VI. EXAMPLE

This example.tex shows how to write the module

VII. CHALLENGE 3: SEARCH, PICK AND PLACE

A. Platforms

VIII. GRAND CHALLENGE

A. Setup of Testbed

We have prepared our testbed where we will perform the outdoor testing in the real world located in Hachioji, Tokyo, Japan, as shown in Fig.1. Thus far, we have developed the robot systems for each task in this testbed individually.

B. Future Work

Once we complete each of the three tasks above, for the grand challenge we will combine each of the 3 tasks above, however, we also plan to make some changes such as UAV to UAV and UAV to UGV communications so that all the robots are able to collaborate in completing the tasks.

* [†]<http://www.jsk.t.u-tokyo.ac.jp>



(a)



(b)



(c)



(d)

Fig. 1: JSK–Team testbed setup at Hachioji, Tokyo, Japan