

# RoboCup Challenge 2018

---

## Abstract

In the following you will find a task description of the challenge for the end of the winter term 2018. Please refer to the Redmine and the Fibel for help and documentation. In this task the robot will have to show proficiency in a wide range of topics. The robot will take orders and execute deliveries. During this, the robot will be asked to perform aspects of navigation, object and person recognition, manipulation, and speech interaction.

---

## Task Description

You rented a new robot to assist a waiter at your home party. The robot shall get orders from guests and deliver drinks to them. The robot already knows a list of 5 different drinks. The robot does not have a pre-recorded map of the apartment.

1. The robot starts in the corridor facing the living room, there he has to wait for an operator and ask what t-shirt color the waiter is wearing.
2. In the apartment, there are several guests and the waiter whom the robot has to find and engage. The robot has to clearly announce when he has found the waiter, approach and face him.
3. The waiter will show the robot the location of the bar by going there and raising his hand. The robot has to move to this place looking for drinks. On the bar are three drinks. The robot has to clearly announce where that he has found the drinks facing them.
4. After this, the robot has to find guests who will order a drink. The robot has to try to complete as many orders as possible in the time available. Guests who order unavailable drinks should be informed and provided with alternatives.
5. The robot may go several times to fetch the drinks. Each time the robot has to repeat the order he has understood and describe the ordering person (e.g. color of the shirt). If the robot fails to grasp the drink it can ask the waiter for a hand-over. If the robot takes a drink from the bar, it will be replaced by the waiter.

The Time limit for this task is 10 minutes.

## Score Sheet

Description	Points
<b>Explore the Environment</b>	
Understand the correct t-shirt color	5
Find the waiter	10
Reach the bar area	10
Identify where the drinks are standing	10
<b>Complete an Order</b> (can be scored multiple times)	
Find a guest who wants to order	10
<i>Inform the guest, if an ordered drink is unavailable</i>	5
Repeat the order correctly at the bar	5
<i>Describe the guest clearly</i>	5
Grasp the correct drink	20
Grasp any drink	10
Handover the order to the guest	10