**Launching ROS phone data application**

Make sure there is an internet connection.

Run a roscore. Terminal 1:

$ roscore

Launch the Rosbridge server. Terminal 2:

$ roslaunch rosbridge\_server rosbridge\_websocket.launch

Run the application. It shows de IP of the ROS core machine Terminal 3:

$ cd ~/Desktop/starrysky\_release/

$ ./Run.sh

On phone:

Open Mozilla Firefox. Go to http:// <ROS core machine IP> :5000/RosOdom

RosBridge IP Address: <ROS core machine IP> :9090

Update rate (ms): something like 100 or 10

Publish Namespace Topic:

* /phone1 for the first phone
* /phone2 for the second phone

To check if the Rostopic is receiving data type in Terminal 4:

$ rostopic echo /phone1

**Launching UR5 in Rviz with object**

The following line starts Rviz and visualizes the UR5 robot.

$ roslaunch ur5\_moveit\_config demo.launch

To put the table in the simulation the following has to be done. In Rviz go to the tab Scene Objects. Then press the button “import from text” and load the file: Plate\_Collision\_State.scene

**Launching the arm**

In order to launch the python scripts to visualize use the following line. Make sure the phone is connected to the rosbridge server and that the phones are pointing in the same way to make sure the z-orientation of the phones are the same. The following line should start printing the angle of the phone and the location of the cylinder in Rviz.

$ rosrun <location of the python script> node\_phone1.py

$ rosrun <location of the python script> node\_phone2.py

$ rosrun <location of the python script> node\_sphere.py