

1	2	Σ

Prof. Daniel Göhring Robotik, WiSe 18/19

Übung 02

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1 (3 Punkte)

1. Erstelle die Kommunikation mit dem Model-Car.

```
myz@abook:~/catkin_ws$ export ROS_MASTER_URI=http://192.168.43.128:11311 # ip of the target machine
myz@abook:~/catkin_ws$ export ROS_IP=192.158.43.28 # ip of the local machine
myz@abook:~/catkin_ws$ export ROS_HOSTNAME=192.158.43.28 # ip of the local machine
```

Abbildung 1: Erstellen der Kommunikation mit dem Model-Car

2. Photographiere mittels *rviz*.

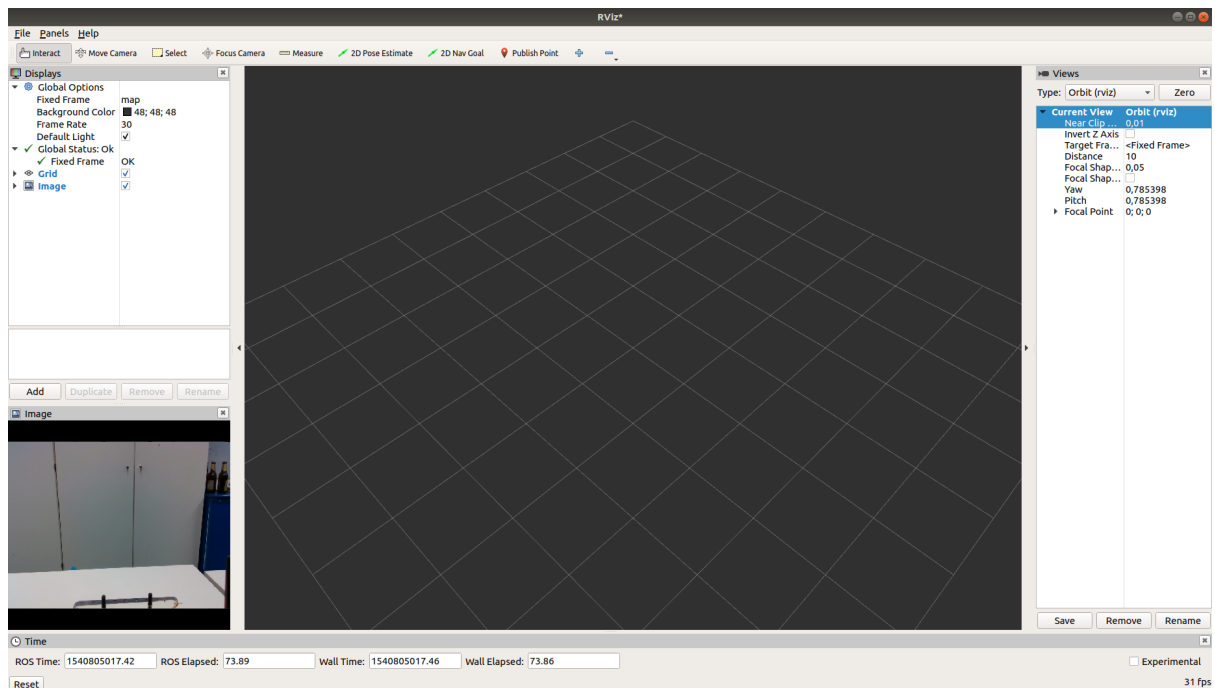


Abbildung 2: Ein Photo mittels *rviz*

2 (7 Punkte)

1. Das erste Screenshot für das *rostopic echo*.

```
rostopic echo /assignment1_publisher_subscriber
phugpu-ThinkPad-T480: ~/catkin_ws 74x27
TypeError: cannot concatenate 'str' and 'float' objects
hello
[C[ERROR] [1540808474.327870]: bad callback: <function callback at 0x7fa10
44545f0>
Traceback (most recent call last):
  File "/opt/ros/melodic/lib/python2.7/dist-packages/rospy/topics.py", ln
  750, in _invoke_callback
    cb(msg)
  File "/home/phu/catkin_ws/src/assignment1_publisher_subscriber/src/publi
sher_subscriber.py", line 8, in callback
    yaw_message = rospy.get_caller_id() + "I heard %s" % data.data
TypeError: cannot concatenate 'str' and 'float' objects
hello
[INFO] [1540808474.347663]: /assignment1_publisher_subscriber_9588_1540808
341622I heard 1.21242888821
phugpu-ThinkPad-T480: ~/catkin_ws$ source devel/setup.bash
phugpu-ThinkPad-T480: ~/catkin_ws$ roslaunch assignment1_publisher_subscrib
er_publisher_subscriber.py
[WARN] [1540808752.202671]: Inbound TCP/IP connection failed: connection f
rom sender terminated before handshake header received. 0 bytes were recei
ved. Please check sender for additional details.
phugpu-ThinkPad-T480: ~/catkin_ws$ source devel/setup.bash
phugpu-ThinkPad-T480: ~/catkin_ws$ roslaunch assignment1_publisher_subscrib
er_publisher_subscriber.py
phugpu-ThinkPad-T480: ~/catkin_ws$
rostopic echo /assignment1_publisher_subscriber 154x22
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.30645480752"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.306855142117"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.307486534119"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.30783230465"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.307832658291"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.307487457991"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.30697157979"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.306455761194"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.306453585625"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.306969672441"
...
```

Abbildung 3: Das erste Screenshot für das *rostopic echo*

2. Das zweite Screenshot für das *rostopic echo* nach etwaiger Drehung. So ist es zu beobachten, dass Ψ sich je nach der horizontalen Drehung des Model-Cars parallel verändert.

```
rostopic echo /assignment1_publisher_subscriber
phugpu-ThinkPad-T480: ~/catkin_ws 74x27
TypeError: cannot concatenate 'str' and 'float' objects
hello
[C[ERROR] [1540808474.327870]: bad callback: <function callback at 0x7fa10
44545f0>
Traceback (most recent call last):
  File "/opt/ros/melodic/lib/python2.7/dist-packages/rospy/topics.py", ln
  750, in _invoke_callback
    cb(msg)
  File "/home/phu/catkin_ws/src/assignment1_publisher_subscriber/src/publi
sher_subscriber.py", line 8, in callback
    yaw_message = rospy.get_caller_id() + "I heard %s" % data.data
TypeError: cannot concatenate 'str' and 'float' objects
hello
[INFO] [1540808474.347663]: /assignment1_publisher_subscriber_9588_1540808
341622I heard 1.21242888821
phugpu-ThinkPad-T480: ~/catkin_ws$ source devel/setup.bash
phugpu-ThinkPad-T480: ~/catkin_ws$ roslaunch assignment1_publisher_subscrib
er_publisher_subscriber.py
[WARN] [1540808752.202671]: Inbound TCP/IP connection failed: connection f
rom sender terminated before handshake header received. 0 bytes were recei
ved. Please check sender for additional details.
phugpu-ThinkPad-T480: ~/catkin_ws$ source devel/setup.bash
phugpu-ThinkPad-T480: ~/catkin_ws$ roslaunch assignment1_publisher_subscrib
er_publisher_subscriber.py
phugpu-ThinkPad-T480: ~/catkin_ws$
rostopic echo /assignment1_publisher_subscriber 154x22
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.629776418209"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.634221494198"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.638475298882"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.643015921116"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.647732853889"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.652734041214"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.658108592033"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.663585722446"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.668764710426"
...
data: "/assignment1_publisher_subscriber_9739_1540808803441 I heard 0.673938274384"
...
```

Abbildung 4: Das zweite Screenshot für das *rostopic echo*

3. Der Link zu unserem Quellcode befindet sich im folgenden Link.

https://git.imp.fu-berlin.de/phup/robotik-uebungen/blob/master/src/assignment1_publisher_subscriber/src/publisher_subscriber.py