RVIZ IMU 센서 과제

조정민

imu_generator.launch

```
#!/usr/bin/env python

import rospy, math, os
from sensor_msgs.msg import Imu
import tf
from tf.transformations import euler_from_quaternion,
quaternion_from_euler

rospy.init_node('imu_generator', anonymous=False)
pub = rospy.Publisher("imu", Imu, queue_size=1)

rate = rospy.Rate(10)
# 파일을 불러서 읽는다.
f = open(os.path.dirname(__file__)+"/imu_data.txt", 'r')
imu_datas = f.readlines()
broadcaster = tf.TransformBroadcaster()
for imu_dt in imu_datas:
   # 파일의 내용을 파싱하여 전송한다.
   value_list = imu_dt.split(" ")
   quat = quaternion_from_euler(float(value_list[2][:-1]), \
                                float(value_list[5][:-1]), \
                                float(value_list[8][:-1]))
   imu_data = Imu()
   # rospy.loginfo(quat)

   broadcaster.sendTransform(
       (0, 0, 0.),
       quat,
       rospy.Time.now(),
       "map",
       "imu"
   )

   imu_data.header.stamp = rospy.Time.now()
   imu_data.header.frame_id = "imu"
   imu_data.orientation.x = quat[0]
   imu_data.orientation.y = quat[1]
   imu_data.orientation.z = quat[2]
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    imu_data.orientation.w = quat[3]
    pub.publish(imu_data)
    rate.sleep()
f.close()
```

실행 화면

```
roslaunch  rviz_imu imu_generator.py
```