毕设报告

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2020 年 2 月 8 日

- 实现在 gazebo 中用速度控制 turtlebot2 机器人的运动。

- 获得 turtlebot2 机器人中 rostopic 中的数据类型。
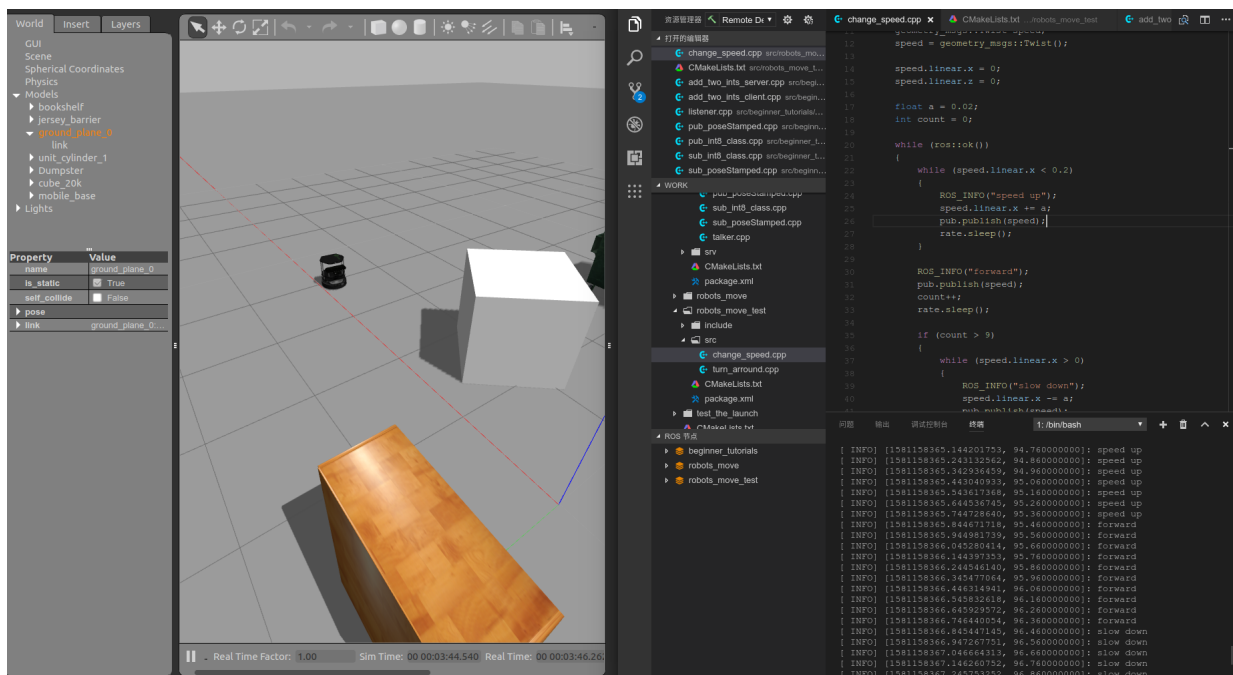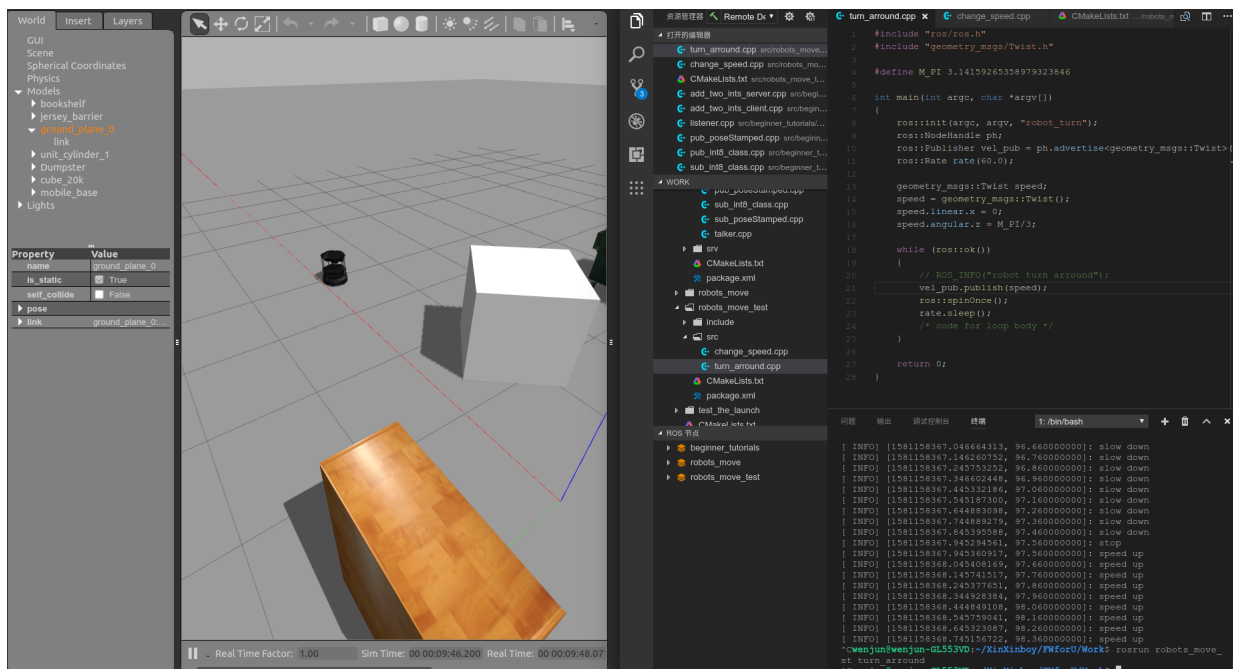
1 效果图

图 1: 移动效果图

图 2: 旋转效果图

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Published topics:
 * /camera/rgb/image_raw/compressedDepth/parameter_updates [dynamic_reconfigure/Config] 1 publisher
 * /camera/rgb/image_raw [sensor_msgs/Image] 1 publisher
 * /cmd_vel_mux/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /tf [tf2_msgs/TFMessage] 2 publishers
 * /odom [nav_msgs/Odometry] 1 publisher
 * /scan [sensor_msgs/LaserScan] 1 publisher
 * /camera/rgb/image_raw/compressed [sensor_msgs/CompressedImage] 1 publisher
 * /cmd_vel_mux/parameter_updates [dynamic_reconfigure/Config] 1 publisher
 * /camera/depth/camera_info [sensor_msgs/CameraInfo] 1 publisher
 * /camera/rgb/camera_info [sensor_msgs/CameraInfo] 1 publisher
 * /mobile_base/sensors/bumper_pointcloud [sensor_msgs/PointCloud2] 1 publisher
 * /mobile_base/sensors/imu_data [sensor_msgs/Imu] 1 publisher
 * /camera/rgb/image_raw/compressed/parameter_updates [dynamic_reconfigure/Config] 1 publisher
 * /camera/parameter_updates [dynamic_reconfigure/Config] 1 publisher
 * /gazebo_gui/parameter_updates [dynamic_reconfigure/Config] 1 publisher
 * /tf_static [tf2_msgs/TFMessage] 1 publisher
 * /gazebo/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /camera/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /cmd_vel_mux/active [std_msgs/String] 1 publisher
 * /camera/rgb/image_raw/compressed/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /laserscan_nodelet_manager/bond [bond/Status] 2 publishers
 * /depthimage_to_laserscan/parameter_updates [dynamic_reconfigure/Config] 1 publisher
 * /joint_states [sensor_msgs/JointState] 1 publisher
 * /rosout [rosgraph_msgs/Log] 8 publishers
 * /camera/depth/image_raw [sensor_msgs/Image] 1 publisher
 * /rosout_agg [rosgraph_msgs/Log] 1 publisher
 * /mobile_base/events/bumper [kobuki_msgs/BumperEvent] 1 publisher
 * /gazebo_gui/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /mobile_base/commands/velocity [geometry_msgs/Twist] 1 publisher
 * /camera/depth/points [sensor_msgs/PointCloud2] 1 publisher
 * /camera/rgb/image_raw/compressedDepth [sensor_msgs/CompressedImage] 1 publisher
 * /camera/rgb/image_raw/compressedDepth/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /mobile_base/events/cliff [kobuki_msgs/CliffEvent] 1 publisher
 * /camera/rgb/image_raw/theora [theora_image_transport/Packet] 1 publisher
 * /gazebo/link_states [gazebo_msgs/LinkStates] 1 publisher
 * /camera/rgb/image_raw/theora/parameter_updates [dynamic_reconfigure/Config] 1 publisher
 * /gazebo/model_states [gazebo_msgs/ModelStates] 1 publisher
 * /clock [rosgraph_msgs/Clock] 1 publisher
 * /mobile_base_nodelet_manager/bond [bond/Status] 3 publishers
 * /depthimage_to_laserscan/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /camera/rgb/image_raw/theora/parameter_descriptions [dynamic_reconfigure/ConfigDescription] 1 publisher
 * /gazebo/parameter_updates [dynamic_reconfigure/Config] 1 publisher

Subscribed topics:
 * /gazebo/set_model_state [gazebo_msgs/ModelState] 1 subscriber
 * /mobile_base/sensors/core [kobuki_msgs/SensorState] 1 subscriber
 * /gazebo/set_link_state [gazebo_msgs/LinkState] 1 subscriber
 * /laserscan_nodelet_manager/bond [bond/Status] 2 subscribers
 * /mobile_base/commands/reset_odometry [std_msgs/Empty] 1 subscriber
 * /joint_states [sensor_msgs/JointState] 1 subscriber
 * /rosout [rosgraph_msgs/Log] 1 subscriber
 * /cmd_vel_mux/input/switch [geometry_msgs/Twist] 1 subscriber
 * /clock [rosgraph_msgs/Clock] 8 subscribers
 * /cmd_vel_mux/input/safety_controller [geometry_msgs/Twist] 1 subscriber
 * /mobile_base_nodelet_manager/bond [bond/Status] 3 subscribers
 * /cmd_vel_mux/input/navi [geometry_msgs/Twist] 1 subscriber
 * /cmd_vel_mux/input/teleop [geometry_msgs/Twist] 1 subscriber
 * /mobile_base/commands/velocity [geometry_msgs/Twist] 1 subscriber
 * /mobile_base/commands/motor_power [kobuki_msgs/MotorPower] 1 subscriber
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图 3: turtlebot2 信息