Robot Operating System – modelowanie robotów (URDF)

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Poznań 14.11.2017





Uruchomienie ROSa



ROS Master:

\$ roscore



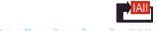


Wymagane oprogramowanie



\$ sudo apt-get install ros-kinetic-urdf-tutorial ros-kinetic-urdf-sim-tutorial





Przykłady



- \$ cd ~/catkin ws/src
- $\$ \ git \ clone \ https://github.com/ros/urdf_tutorial$
- \$ cd urdf_tutorial/urdf_tutorial
- \$ roslaunch urdf_tutorial display.launch model:=urdf/05-visual.urdf





Złącza



\$ roslaunch urdf_tutorial display.launch model:=urdf/06-flexible.urdf





Robot w Gazebo



\$ cd ../../urdf_tutorial/urdf_sim_tutorial/

\$ roslaunch urdf_sim_tutorial gazebo.launch





Złącza



\$ roslaunch urdf_sim_tutorial 09-joints.launch

zobacz: joints.yaml





Złącza - napęd



\$ roslaunch urdf_sim_tutorial 09-joints.launch model:=urdf/10-firsttransmission.urdf.xacro

zobacz: urdf/10-firsttransmission.urdf.xacro i "rostopic echo /joint states"





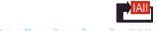
Złącza - napęd



\$ roslaunch urdf sim tutorial 10-head.launch

\$ rostopic pub /r2d2_head_controller/command std_msgs/Float64 "data: -0.707"





Złącza - napęd



\$ roslaunch urdf_sim_tutorial 12-gripper.launch

\$ rostopic pub /r2d2_head_controller/command std_msgs/Float64 "data: -0.707"





Złącza - otwieranie chwytaka



http://wiki.ros.org/urdf/Tutorials/Using%20a%20URDF%20in%20Gazebo

rostopic pub /r2d2 gripper controller/command std msgs/Float64MultiArray "layout: dim: - label: " size: 3 stride: 1 data offset: 0 data: [0, 0.5, 0.5]"





Złącza - zamykanie chwytaka



http://wiki.ros.org/urdf/Tutorials/Using%20a%20URDF%20in%20Gazebo

rostopic pub /r2d2 gripper controller/command std msgs/Float64MultiArray "layout: dim: - label: " size: 3 stride: 1 data offset: 0 data: [-0.4, 0, 0]"



Sterowanie kołami

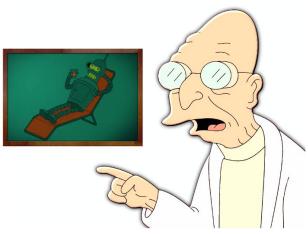


\$ roslaunch urdf_sim_tutorial 13-diffdrive.launch





Dziękuję za uwagę



lrm.put.poznan.pl www.monoscience.com

