

Robot Operating System – uruchomienie robota firmy Universal Robots

Dominik Belter¹

Instytut Automatyki, Robotyki i Inżynierii Informatycznej
Politechnika Poznańska, Poznań, Poland

Poznań 14.11.2017



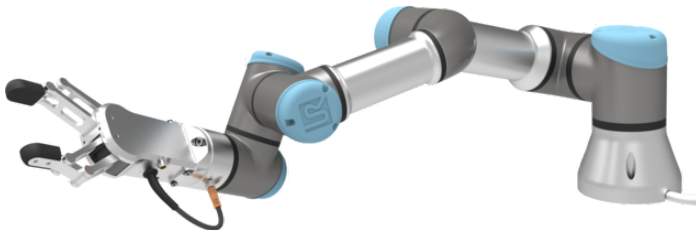


- ROS Master:

```
$ roscore
```



Sterowniki producenta

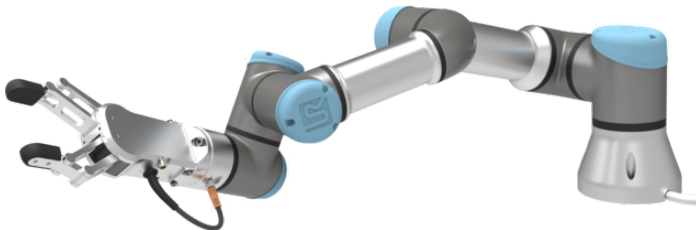


```
$ cd ~/catkin_ws/src
```

```
$ git clone https://github.com/ros-industrial/universal_robot
```



Rozszerzony Sterownik

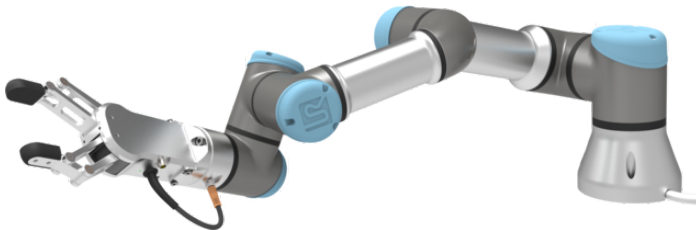


```
$ cd ~/catkin_ws/src
```

```
$ git clone https://github.com/ThomasTimm/ur_modern_driver
```



Rozszerzony Sterownik - patch

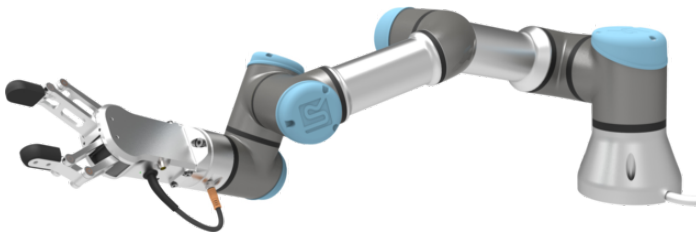


https://github.com/ThomasTimm/ur_modern_driver/issues/58

Zamiana 'controller_it->hardware_interface' na
'controller_it->claimed_resources.at(0).hardware_interface' w
pliku 'ur_modern_driver/src/ur_hardware_interface.cpp'



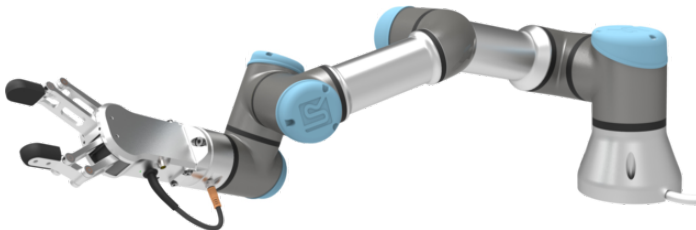
Niezbędne wtyczki do Gazebo i kompilacja



```
$ sudo apt-get install ros-kinetic-gazebo-ros-pkgs ros-kinetic-gazebo-ros-control  
$ sudo apt-get install ros-kinetic-moveit-ros ros-kinetic-moveit-plugins  
$ sudo apt-get install ros-kinetic-moveit-planners ros-kinetic-moveit-controller  
$ cd ~/catkin_ws  
$ catkin_make
```



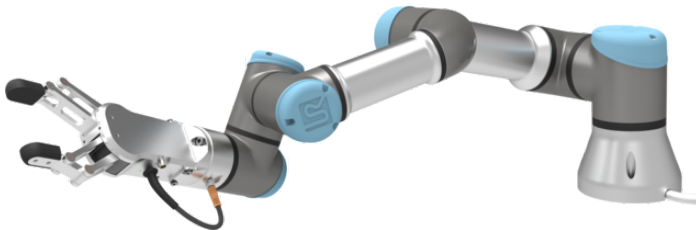
Uruchomienie Gazebo (w nowym terminalu)



```
$ cd ~/catkin_ws  
$ source devel/setup.bash  
$ roslaunch ur_gazebo ur3.launch
```



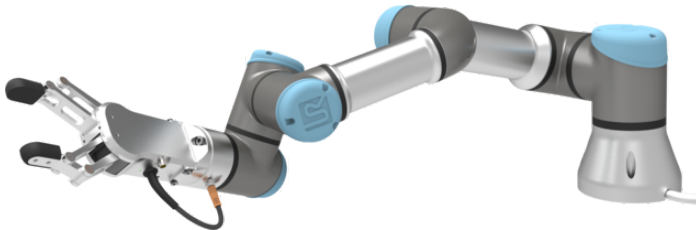
Uruchomienie MoveIt! (w nowym terminalu)



```
$ cd ~/catkin_ws  
$ source devel/setup.bash  
$ roslaunch ur3_moveit_config ur3_moveit_planning_execution.launch sim:=true limited:=true
```



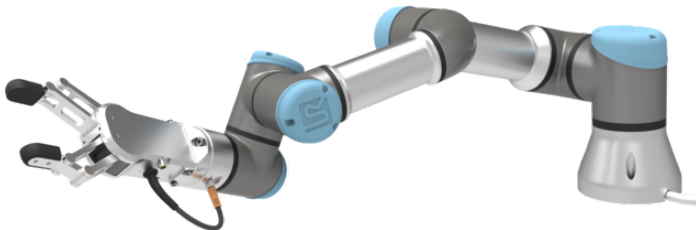
Uruchomienie RViz (w nowym terminalu)



```
$ cd ~/catkin_ws  
$ source devel/setup.bash  
$ roslaunch ur3_moveit_config moveit_rviz.launch config:=true
```



Przykładowy program



```
$ cd ~/catkin_ws  
$ git clone https://github.com/dominikbelter/control_ur3sim  
$ rosrn control_ur3sim control_ur3sim
```



Dziękuję za uwagę



irm.put.poznan.pl
www.monoscience.com

