



The European Coordination Hub for Open Robotics Development



DUAL ARM WORKER

TECNALIA – LAAS -- AIRBUS

Urko Esnaola PhD, TECNALIA



Brief Experiment Description

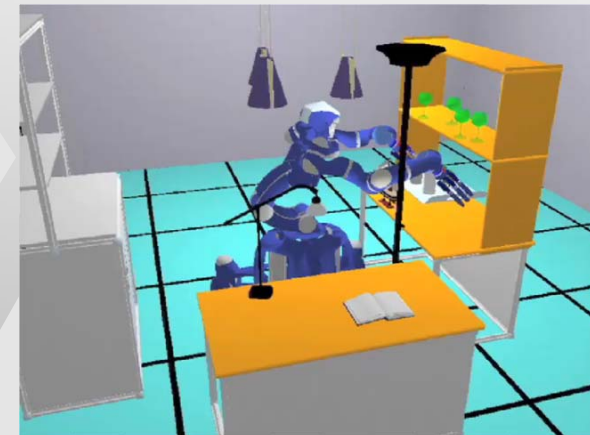
Solve the planning and execution of complex closed kinematics chain dual-arm motion



- Parts requiring two hands
For size or weight
- Low accessibility and static/dynamic obstacles



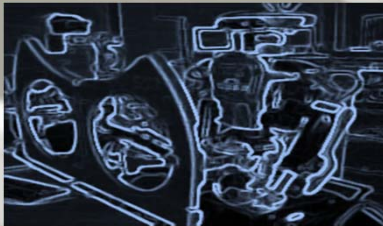
TECNALIA & AIRBUS



@ LAAS under EU Project PHRIENDS
<http://www.phriends.eu/>

Novelty/Objectives

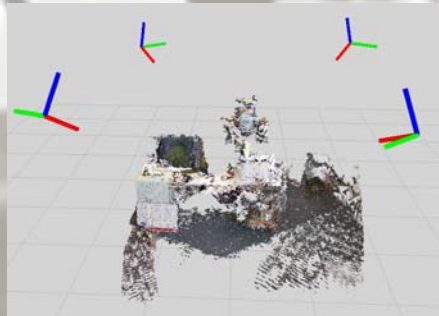
TRL3



Dual-Arm + Torso Close Kinematics Planner module With Static and Non-Planned Obstacle Avoidance



Moveit Module



WorkSpace Monitoring for Obstacle Detection



Automatic Programming From CAD



Deploy into Real AIRBUS Aeronautics Pilot Station

TRL6

Impact

Dual-Arm Robot Programming Framework

Module Part of a Larger Dual-Arm Robot Programming Framework

More Safety and Reliability

Perform Risky Operations for Health
Non Ergonomic Operations

Job Creator for System Integrators

Posible to Automate New Processes
at Lower Cost

Low cost Manual Operation Automation with Interesting ROI

Robotics Community Impact

Create Open Source Dual-Arm
Planning Module

Exportable to Other Sectors

Interest from other AIRBUS plants
Interest from several Automotive
Companies
Interest from other SMEs (ej. Mobile
phone Antena Company)

**Thank you
for your Attention.**



LAAS-CNRS

Urko Esnaola PhD.

urko.esnaola@tecnalia.com