Multi-Robot Control (MRC)

W6: Wired to Wireless
Assignment 6
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ROS on multiple machines

Pioneer Setup
• Installation, wiring, etc.

Network Setup
• Simultaneous wired and wireless access

Ex 1: Wired Joystick Control
Ex 2: Post-Processing with MATLAB
Ex 3: Wireless Joystick Control w/ post-processing
Ex 1: Wired Joystick Control

nre_joy package will supply two nodes:

which connect to our robot...
Ex 1: Drive Waypoints

Using rviz to navigate
Ex 2: Post-Process

Using MATLAB to examine rosbag data
Ex 3: Wireless Joystick Control

Desktop/Laptop
• ROS master (roscore)
• Joystick nodes – command and control

Shuttle PC aboard Pioneer
• Rosaria driver node
Summary

Toward wireless control using distributed ROS network.

Challenges
• Working on multiple machines can get confusing.
• Be patient and work on developing the “mental model” of the system.