Station 6: Teleoperated Robot for Emergency Response

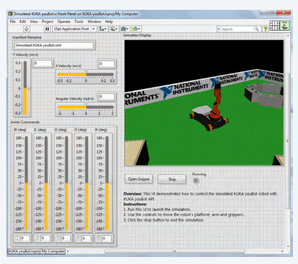
Enabling Remote Operation by Human Responders

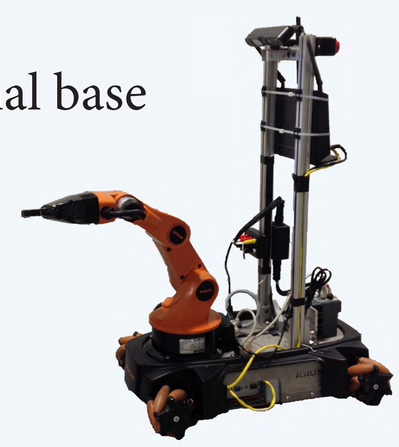
Intuitive Operator Interface with Advanced Algorithms

- Immersive presentation of the remote environment
- Haptic feedback for guiding the operator

Telerobotic Platform with High Mobility and Dexterity

- LabVIEW and NI CompactRIO real-time control of 5 degrees-of-freedom manipulator on an omnidirectional base
- RGB-D camera for recording the environment





BluHaptics

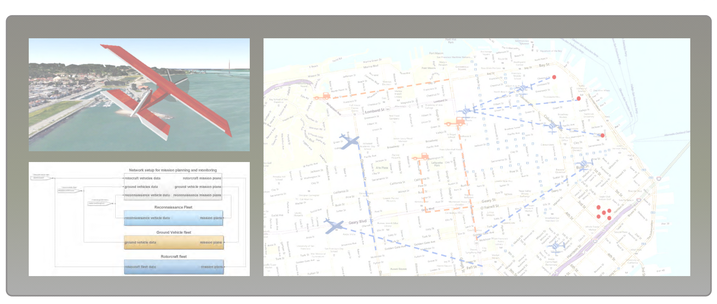
NATIONAL INSTRUMENTS™

UNIVERSITY of WASHINGTON

Collaborative Systems Lab (Boeing)

Booth Map

Station 4
Mission Command and Control Center
(MathWorks)



Station 3
Drone-Carried On-Demand Wi-Fi Networks
(University of North Texas)

Station 2
Smartphone App for Emergency Response
(MIT Media Lab)

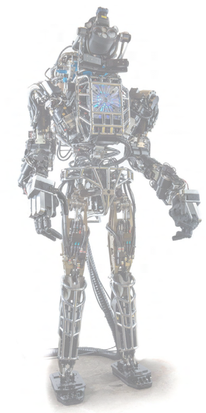
Relay

Help requests

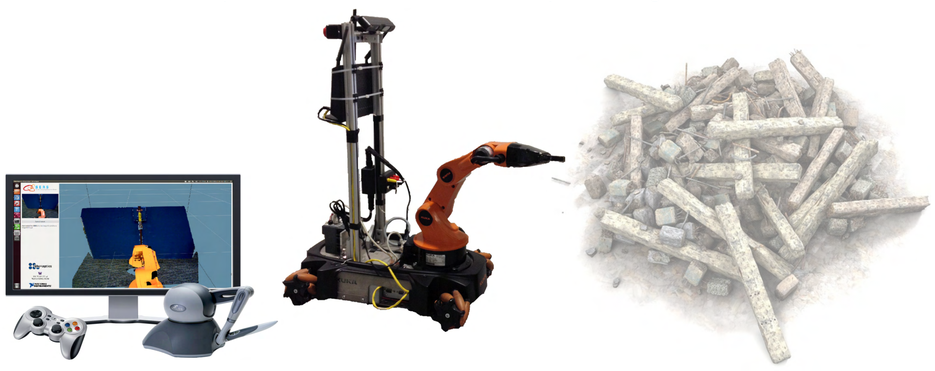
Sensor data

Deploy

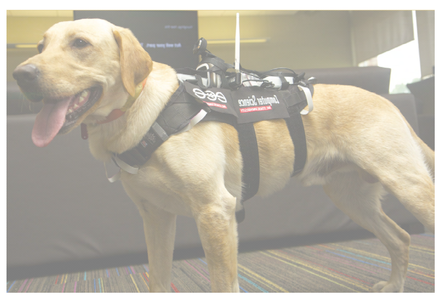
Station 5
Humanoid Robot for Emergency Response
(Worcester Polytechnic Institute)



Station 6
Teleoperated Robot for Emergency Response
(BluHaptics | National Instruments | University of Washington)

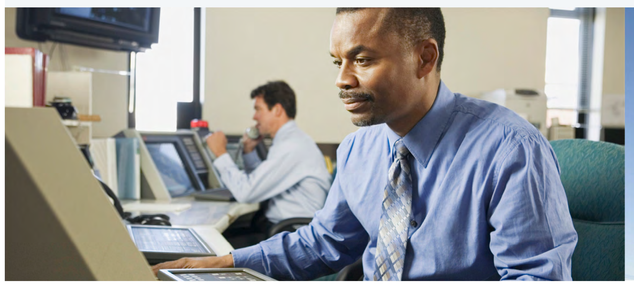


Station 1
Cyber-Physical Search and Rescue Dog
(North Carolina State University)



Entrance

Exit



SERS
Smart Emergency Response System

BluHaptics | Boeing | MathWorks | MIT Media Lab | National Instruments | North Carolina State University
University of North Texas | University of Washington | Worcester Polytechnic Institute

Project realized for SmartAmerica Challenge, www.smartamerica.org, 2013–2014.
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