Computer Aided Medical Procedures

Robotic Ultrasound Needle Placement and Tracking: Robot-to-Robot Calibration

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Goal

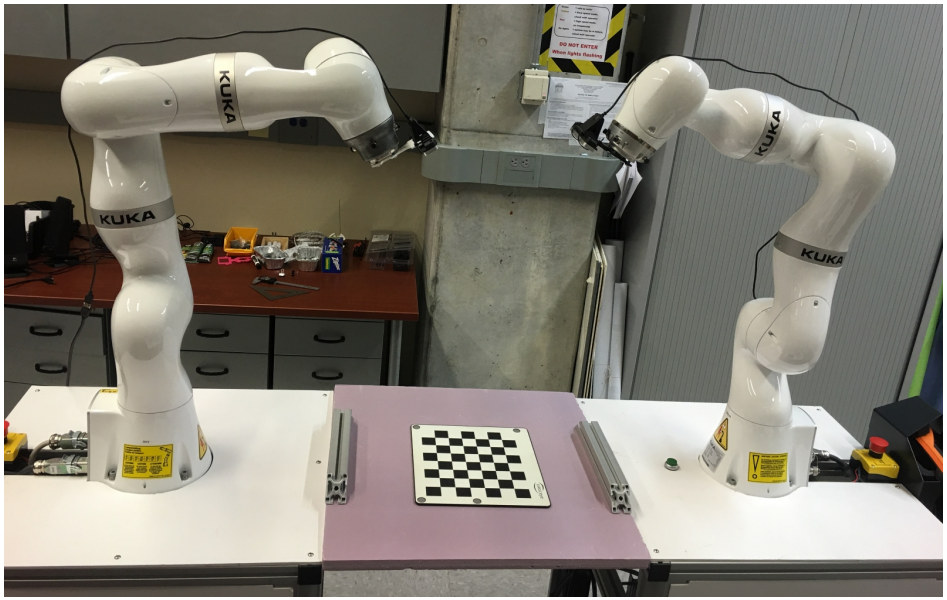
Develop a variety of robot to robot calibration algorithms and validate their efficacy for precise medical procedures

Significance

- In industry and medicine, there is a need for fast and flexible methods for the calibration of multiple mobile robotic manipulators.

Results

- Of the three methodologies developed, two provided millimeter resolution while the other provided centimeter resolution.

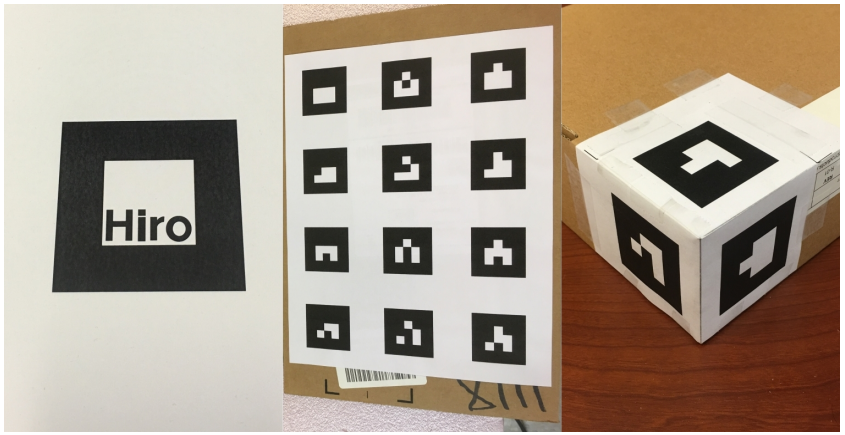


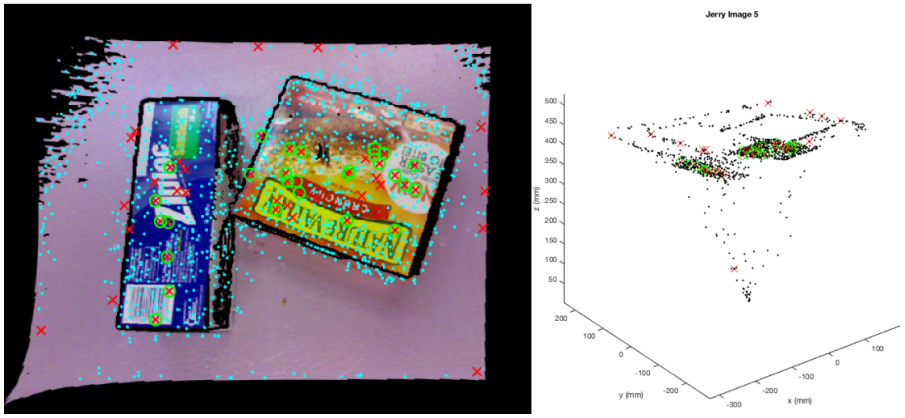
CAMP lab's dual robotic platform.

Methods Developed

Checkerboard Calibration

ARToolKit Calibration





RGB-D Features and Depth