**Test Objective/Description:** Positioning and Localization Accuracy

**Location:** Fleming VICON Space

**Date:** December 3, 2015

**Hardware Needed:** Guidance sensor, IR orbs, VICON sensors, laptop

**Procedure:**

Check to make sure Guidance cameras are mounted properly.

Attach IR orbs to guidance sensor.

Connect guidance sensor to laptop and power on.

Turn on VICON and select guidance\_standalone from objects.

Place guidance sensor on rolling cart.

Make sure bottom camera view is not blocked.

**Requirements Met**

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**Test Anomalies and Predicted Solution**

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| Guidance sensor internally disconnects. | See if recycling via UART reestablishes communication |
| Velocity only seems to be updating when sensor is stationary. | Only use gray scale for forward and down facing cameras. Compare to other visual odom. results. |
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**Test Results:**

Visual odometry depends on bottom facing camera.

Power cycling restores operation.