Software Testing

# I-USLocalizer

Test Explanation: The robot should receive information via Wifi about which corner it should be positioned in. It should then localize and orient itself to 0 degrees, or towards East and navigate to the inside corner of it starting square. The robot’s ability to accomplish this will be tested in each corner and with all four cardinal directions as starting orientation.

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| --- | --- | --- | --- | --- | --- |
|  | Localization Successful? | X Displacement | Y Displacement | Angle Displacement | Observations |
| Test A1- Corner 1 facing N | Y | 1 | 0 | 4 |  |
| Test A2- Corner 1- facing E | Y | -1 | 0 | 1 |  |
| Test A3- Corner 1- facing S | Y | -2 | -2 | -2 |  |
| Test A4- Corner 1- facing W | N | NA | NA | NA | Robot picks up corner as not seeing wall – increase distance required |
| Test B1- Corner 2- facing N | Y | 2 | 0 | 0 |  |
| Test B2- Corner 2- facing E | Y | 4 | 2 | -5 |  |
| Test B3- Corner 2- facing S | N | NA | NA | NA | Same as A4 |
| Test B4- Corner 2- facing W | Y | 0 | -1 | -2 |  |
| Test C1- Corner 3- facing N | N | NA | NA | NA | Localization failed |
| Test C2- Corner 3- facing E | N | NA | NA | NA | Localization failed |
| Test C3- Corner 3- facing S | Y | 1 | 3 | -3 |  |
| Test C4- Corner 3- facing W | Y | 0 | 5 | 0 |  |
| Test D1- Corner 4- facing N | N | NA | NA | NA | Localization failed! |
| Test D2- Corner 4 – facing S | Y | 3 | 1 | 2 |  |
| Test D3- Corner 4- facing E | Y | 3 | 0 | -2 |  |
| Test D4- Corner 4- facing W | Y | -4 | 3 | -5 |  |