

Using neo_docking

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Package source: [neo_docking](#)

Source code: https://github.com/neobotix/neo_docking

Setup server

1. Start up the robot(or simulator) and launch navigation_basic_neo from package neo_mpo_700:

```
roslaunch neo_mpo_700 navigation_basic_neo.launch
```

2. Run neo_docking with launch file:

```
roslaunch neo_docking dock_with_individual_marker_mb.launch
```

Proceed docking

1. Bring robot to a position and orientation where it can detect the marker with its camera via remote controller.
2. Call neo_docking service by running the following command, and its argument is the station number:

```
rosservice call /auto_docking 10
```

3. After it docked to the station, the terminal would print the accuracy of docking process.
4. Now in order for the robot to start the process of charging, (for the simulation you can skip this step)

```
rosservice call /relayboard_v2/start_charging
```

and to stop

```
rosservice call /relayboard_v2/stop_charging
```

5. Call the un-docking service by running the following command, and its argument is the station number:

```
rosservice call /auto_undocking 10
```

Video demo

References

[1] Ar tags, <https://en.wikipedia.org/wiki/ARTag>

[2] Realsense, <https://github.com/IntelRealSense/realsense-ros>