AGV-Trailer Demo

Hardware

- Charge LiPo battery
- Charge Vive Tracker
- Screw Vive Tracker on Trailer
- Screw Trailer to Angle Encoder
- Plug in Vive Lighthouses and place them around working area
    - Power
    - Connecting cable (not required but recommended)
- Plug Tracker Dongle in computer
- Turn on Tracker, light should be green
- Turn on Beamers, turn on Edge Blend Processor
- Plug HDMI in computer

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Software

- Connect computer to BelkinG
    - pw: `brugsezot`
- Run VRMonitor, Tracker and two lighthouses should be indicated
- ssh to odroid in two terminal windows

    ```
    ssh odroid@odroid
    ```

    - pw: `odroid`
    - start `kelo_tulip`:

    ```
    rosexport
    roslaunch kelo_tulip example.launch
    ```

    - start `angle_encoder_ros`:

    ```
    rosexport
    roslaunch angle_encoder_ros encoder.launch
    ```

    - (don't forget the `rosexport`, it's an alias set in odroid's .bashrc to execute `trailer-agv-multistage/execution/rosexport_onboard`)
- Run offboard components in a new terminal window (Rviz, vive_localization, map_server):

    ```
    cd <path-to-trailer-agv-multistage>/execution/
    source rosexport_offboard
    source run_demo_offboard
    ```

- In Rviz select config `trailer-agv-multistage/catkin_ws_offboard/src/trailer_agv_multistage/config/roblab_floor.rviz`
- Set correct display resolution

```
cd catkin_ws_offboard/src/rviz_floor_map/
./beamer_set_resolution.sh
```

or, if the correct resolution doesn't exist yet

```
cd catkin_ws_offboard/src/rviz_floor_map/
./beamer_make_resolution.sh
./beamer_set_resolution.sh
```

- Run motion planning - control nodes `cd execution/ source rosexport_offboard roslaunch trailer-agv-multistage agv_demo.launch`