

16-681

Wiki Familiarization

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## **Q1.**

We were having trouble setting up the Leica Robotic Total Station in the moon yard so that we can localize our rover. We searched the Wiki for “Setting up Total Station” and found the page “Robotic Total Station (Leica TS16)” that goes into detail for setting up, calibrating, and connecting the Total Station to ROS2. A 16-step procedure was detailed that involves placing and measuring Leica prisms for localization. With the help of the Wiki page, we were able to set up the Total Station in the moon yard.

## **Q2.**

One topic that is missing from the Wiki is on using the ZED stereo cameras from StereoLabs. There is a related wiki page on using Intel RealSense stereo cameras, but none on the newer ZED cameras that we plan to use on our rover. Once I finish setting up and integrating the camera to our rover, I would have a better understanding of how the sensor works and how to set it up. For the page, I would consider adding the following subsections:

1. An overview of the ZED stereo camera (e.g. error rates, operational range, field of view, etc)
2. Setting up the ZED stereo camera
3. Calibrating and tuning the ZED stereo camera
4. Connecting the ZED stereo camera to ROS2 topics
5. Links to any additional references that are useful

### **Q3.**

A possible improvement for the Wiki could be to add another heading for “Environments”.

Topics under this heading would have different environments that can be used by the MRSD teams for their projects. This includes the moon yard (at the Planetary Robotics Lab), drone cage (at the upcoming Robotics Innovation Center), aquatic tank (at NSH Highbay), etc. Each topic could elaborate on the following subjects:

1. How to set up the environment
2. How to clean up the environment
3. How and who to contact to book the environment
4. Best practices for using the environment
5. What not to do while using the environment

Adding such a heading would be very helpful to our team as we are developing a lunar rover and will be using the moon yard for most of our project. Knowing how to use the environment and what-to-do and not-to-do would greatly increase our efficiency as we no longer have to start from scratch and figure everything out all over again.