Day1- 2-3:30pm

Systems evaluation for sensor mounting. Understand real-world scenarios. Make a list and give answers if there are ones that are not addressed mark as issue and give argument. Make a case study. Put it in the review channel.

Look at what is you need to solve.

## Rover Operation

Rover Operation Key issues

1. Terrain constraints
   1. Slope in different directions
   2. What to do if the robot is off center due to rocks, ect
2. Avoiding locations where sensor cannot operate
3. Low battery condition

Sensor operation [sensor bar]

1. Maintaining proper sensor position

Marking operation

1. Place visible marker on mine for drone
2. Exert less than 10 newtons to ensure safe marking
3. Must deploy a safe distance from the rover [sensor location]

**What we won’t do**

* Scan multi directional slopes whose height difference exceeds the reach of the sensor system.
* Water
* Indoors
* Snow
* Inclement weather ie high winds or heavy rain

## Marking

Spraycan with pattern

Located on sensor arm or separate

## Sensors a second look

Maybe a single metal detector head and spray can mounted on a four bar this is on a linear track on the front of the robot.

## User walk through

Equipment required

1. Rover
2. Computer for base station with internet connection and usb port.
3. Electricity for recharging / base station computer
4. Marking refils. Spray paint

Define minefield and base station[where to robot will return when done]

1. Draw on google map by selecting the draw tool and define a shape for the minefield. Right click edge points to remove them, drag edge points to adjust the shape. Create a shape of one point to define a base station.
2. Click on each shape to bring up an information panel and copy the contents of the information panel *into text file.*

Deploy: Base station, Deploy rover

1. Start up base station and rover. [start GPS to get updated base station]
2. Transfer minefield data, update/change base station coordinates.
3. Send start command from base station with the rover a reasonable distance away and pointed away from the base station.