

# MoSCoWW Analysis

## Must

### Xsens IMU

- Orientation @ 100Hz
- Linear Acceleration @ 100Hz
- Angular Velocity @100Hz
- Magnetometer @100Hz

### Intel RealSense D435i

- RGB Image @ 12Hz
- Depth Image @ 12Hz
- InfraRed Image @ 12Hz
- Camera intrinsic parameters @0.1 Hz
- Angular Velocity @100Hz
- Linear Acceleration @100Hz

### Livox 3D LiDAR

- LaserScans @ 10Hz

Continuously function during a time period of 2hours

All Software is well integrated within ROS

Use a small factor onboard computer

The apparatus needs to withstand temperatures of 60degrees Celsius

Employ a cooling solution that ensures the sensors don't go beyond their maximum operating temperature

Restrict all sensors to a fixed position, keeping the geometrical relationship between the constant

## Should

Be comfortable and safe for the operator to handle during an extended amount of time

### Mynt Eye

- Depth Image @ 12Hz
- InfraRed Image @ 12Hz
- Camera intrinsic parameters @0.1 Hz
- Angular Velocity @100Hz
- Linear Acceleration @100Hz

Be modular, easy to add/swap/remove sensors or processing nodes

Easy to replace the battery

Warn the use in the event of a sensor malfunction at startup

## Could

Easy access to the memory SSD

Have a dedicated space to place the user's Android device

Allow the change of yaw orientation of at least one camera.

Provide visual feedback

## Would

Provide live visual feedback

## Won't

Be weather resistant

Process heavy algorithms in real time