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 Acceleraton @100Hz

Livox 3D LiDAR

- LaserScans @ 10Hz

Continuously function during a time period of at least 2hours

All Software is well integrated within ROS

Use a small factor onboard computer

The apparatus needs to withstand temperatures of 60ºC

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 them 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 SSD memory

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