

Project proposal

Title: Rover Simulation with ROS integration
Supervisor: ...
Timeframe: Spring 2022

EPFL Xplore is an interdisciplinary project whose aim is to design and develop a Rover to participate in international competitions, namely The University Rover Challenge and the European Rover Challenge. During those competitions, the rover has to navigate autonomously through mars-like terrain using its on-board sensors.

Project description

To develop the navigation software efficiently, it is essential to start testing the individual modules as soon as possible. However, the access to the rover and the different sensors is not always guaranteed, which slows down the project. A better suited solution is therefore needed.

In this perspective, the project's aim is to develop a simulation of the rover equipped with all the sensors used for autonomous navigation. The simulation must be compatible with ROS Melodic (e.g. Gazebo simulator) and allow the testing of the different modules of the Navigation subsystem independently. The student will be part of the Xplore Navigation subsystem and attend its weekly meetings, such that a close collaboration with the other team members is possible.

Requirements

- Basic knowledge of Ubuntu
- Basic Knowledge of ROS 1

Contact

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