This project looks into automating the path planning process in a testbed with scaled articulated vehicles. The idea is to use a number of algorithms for finding out an appropriate set of paths for a given road map and a number of trucks so that each vehicle can travel from its origin to its destination. The plan is to demonstrate these algorithms and their path planning frame in a simulation environment and a testbed.

**Motivation**

This project aims to contribute to several main features to the concept to an existing testbed, such as the following:

- Provide an elegant and evaluation framework for many path planning algorithms for multi-agent systems. The idea is to provide clear interfaces that allow the generic use of the framework.
- Implement and evaluate the relevant state of the art in path planning algorithms. A special emphasis will be devoted to algorithms that can adapt to changing goal and constraints.
- Design, implement and evaluate an interface that will allow these algorithms to control the path of the scaled vehicles in the testbed.

One of the key objectives is to provide a system that can provide safety in the presence of failures, whether they are in the communication system and/or the infrastructure.

**Challenge**

With this project, we aim to contribute to several main features to the concept to an existing testbed, such as the following:

- Provide an elegant and evaluation framework for many path planning algorithms for multi-agent systems. The idea is to provide clear interfaces that allow the generic use of the framework.
- Implement and evaluate the relevant state of the art in path planning algorithms. A special emphasis will be devoted to algorithms that can adapt to changing goal and constraints.
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