



ROYAL INSTITUTE
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iQMatic@SML Roadmap

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iQMatic@SML

1. "SML world" communication protocol defined. Modular enough so other incoming blocks can be easily added.
2. Projector manager communication protocol defined. It should be able to show the road network and highlight one controlled agent (for example).
3. Command central communication protocol defined (global plan, mission and exchange of messages with the control system). The map should be updated in real time accordingly to the status of the agent(s).
4. Scenario (road network and other properties) defined. Should be changed easily.
5. Control system in place and able to recognize between open area and normal road and control a single simulated agent.
6. The data can be logged and post processed.

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1. The designed scenario can have traffic (dummy agents) on the road network and traffic signs.
2. The control system is able to receive V2V (or mimicked sensors) information from the dummy agents to be able to take those into account.
3. The road network has one traffic light. The control system is able to get information from the V2I and stop whenever is red light.
4. The command central is able to define several missions (to be defined later).
5. The control system controls the real agents (the scale trucks).
6. The projector manager is able to project dynamically different aspects from the control system (the trajectory along prediction horizon), the RRT, and text messages (communication between the control system and command central).

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1. The system handles dynamic obstacles (detectable by the QTM). The control system is aware of those using its mimicked sensors.
2. The command central can be used by an external user that can give any of the missions available to any available truck.
3. Different control systems can be tried simultaneously for benchmarking and to investigate vehicle cooperation (V2V, platooning).

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1. Final details finished and final rehearsal.
2. Documentation describing in detail each one of the system components as well as all the protocols used. A "HOW TO" manual is essential for using the system and for future extensions.

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REHEARSAL

May 12

DEMO

The iQMatic@SML demo is run from Södertälje at the SML.

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