Implementation of a Road-Side Unit for the Automated Driving Testbed

Motivation
Using Vehicle-To-Infrastructure (V2I) Communication allows efficient and safe driving: current traffic situations can be analyzed to redirect and to optimize traffic flow. Further, information about weather conditions and speed limitations may be forwarded to vehicles. Additionally, vehicles may be warned about dangerous situations: building lots, traffic jams, or collisions.

Target Group
Students in ICE, Electrical Engineering, or comparable.

Thesis Type
- Bachelor Thesis
- Master Project

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Goals and Tasks
• Literature research on sensors and existing standards.
• Implementation of a RSU able to provide different data.
• Integration of the RSU in the existing Automated Driving Lab at the institute.
• Experiment with the testbed where data from the RSU is used.
• Summarize results in a written report.

Requirements
• Interest in automated driving applications.
• Basic knowledge on wireless networks.
• Good programming skills.