Towards Dynamic and Flexible Sensor Fusion for Automotive Applications

Abstract:
In this paper we describe the concept of the data fusion and system architecture to be implemented in the collaborative research project Smart Adaptive Data Aggregation (SADA). The objective of SADA is to develop technologies that enable linking data from distributed mobile on-board sensors (on vehicles) with data from previously unknown stationary (e.g., infrastructure) or mobile sensors (e.g., other vehicles, smart devices). Data not only can be processed locally in the car, but also can be collected in a central backend, to allow machine learning based inference of additional information (enabling so-called crowd sensing). Ideally, crowd sensing might provide virtual sensors that could be used in the SADA fusion process.