Vehicle Big Data Aggregation and Marketplace

- Vehicles move in their surroundings, perceiving various aspects via on-board sensors providing a mobile sensor network producing over 4000 signals per second per vehicle
- Traditionally sensor information used only for in-vehicle services (e.g. airbag, etc.)
- Millions of vehicles create major potential for cloud-based Big Data services
- The AutoMat-Project aims at creating a Marketplace for automotive sensor data
- Vehicle data exchange in the novel Common Vehicle Information Model (CVIM)

**Data Processing Chain**

- **Data Mining within the Vehicle**
- **Vehicle to Cloud Data Delivery**
- **Harmonization and Enrichment**
- **Aggregation over Vehicle Fleet**
- **Big Data Analysis**

**Common Vehicle Information Model**

**Data Package**

- **Mined data and descriptive meta data** in form of exchangeable packages e.g. Data Package containing samples of a Speed Measurement Channel

**Measurement Channel**

- **Data aggregation and sampling of Signals** on OEM– and harmonized level e.g. Standardized Speed Signal between different car manufacturers with common sample rate and data type

**Signal**

- **Raw information providers within vehicles** e.g. proprietary in-vehicle CAN Bus Speed Signal

**Measurement Channels**

- Measurement Channels describe the sampling and processing of Signals
- Over 500 Measurement Channels defined
- Standardized and brand-independent
- Supports variety of aggregation strategies

**Selected References**


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