Alignment opportunities for SENSORIS and VSS

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Alignment opportunities for SENSORIS and VSS

- **Motivation**
  - **Common understanding** on what SENSORIS and VSS are
  - **Discuss how to "do not reinvent the wheel"**, share / sync on specification of signals
- **Actions taken**
  - **Presentation of CVII and VSS to SENSORIS** General Assembly 2020-09
  - **SENSORIS task force** with gap and overlap analysis
    - High-level comparison of VSS and SENSORIS: tabular summary of scope, contributors, license, format, data model (structure, content)
    - Goals of VSS
    - Overlap analysis of vehicle signals

Goals of SENSORIS

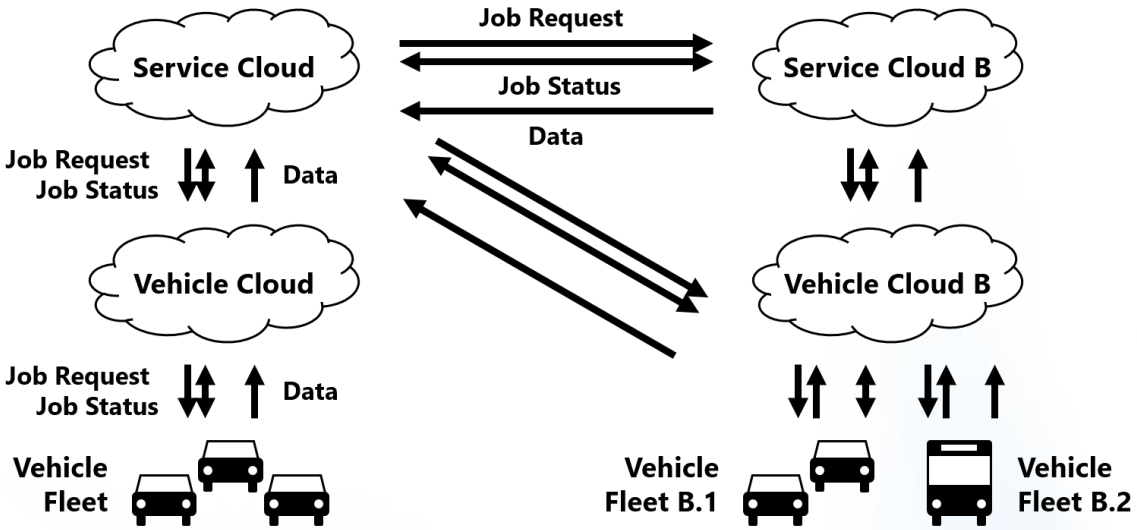
The **Sensor Interface Specification (SENSORIS)** defines an interface for requesting and sending vehicle sensor data from vehicles to clouds and across clouds.

In scope

- Content: data types, reference systems, vehicle signals (“time series”)
- Encoding: de- / serialization

Out of scope

- Privacy, transport, resource management, operation, tools

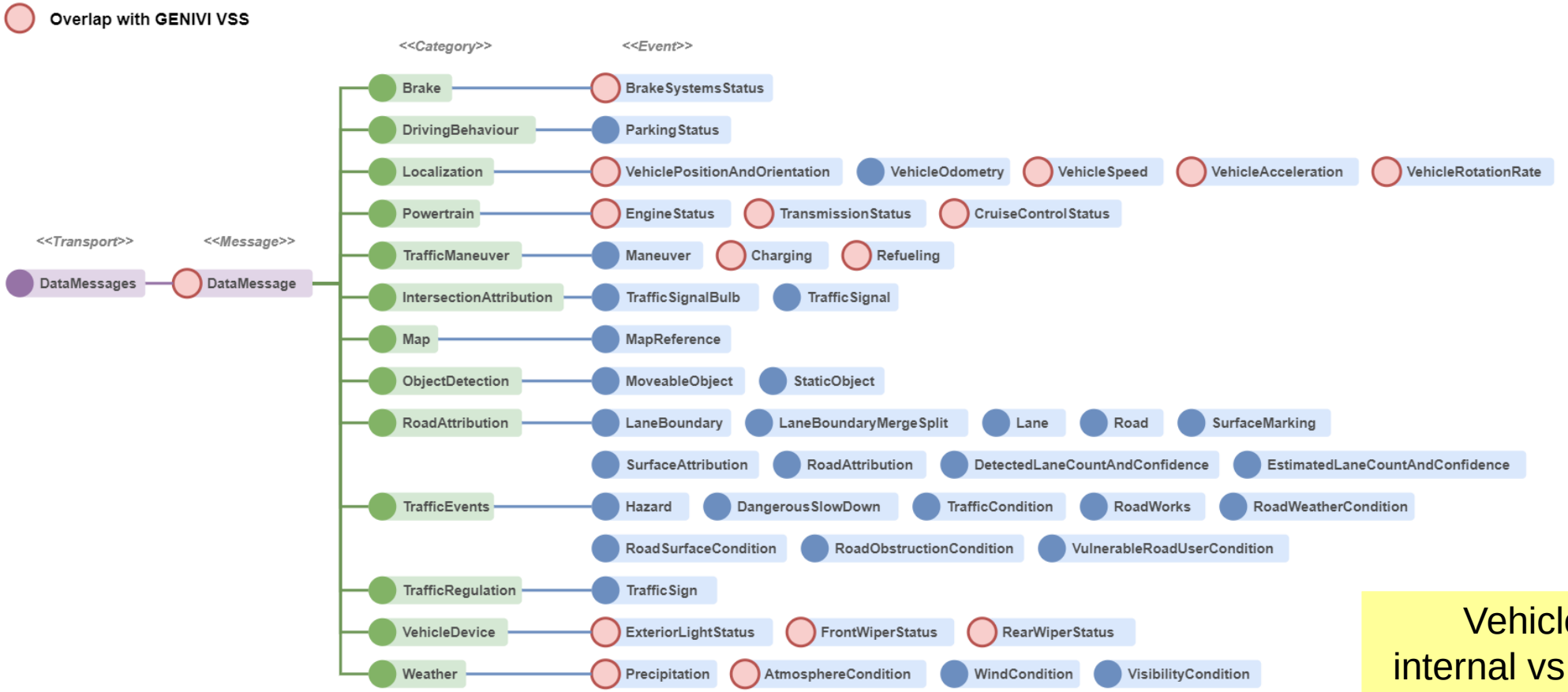


Gap and overlap analysis

SENSORIS v1.3.0 vs. GENIVI VSS v2.0.0

The Sensor Interface Specification (SENSORIS) defines an interface for requesting and sending vehicle sensor data from vehicles to clouds and across clouds.

The specification and its standardization focus on the content and encoding of the interface.

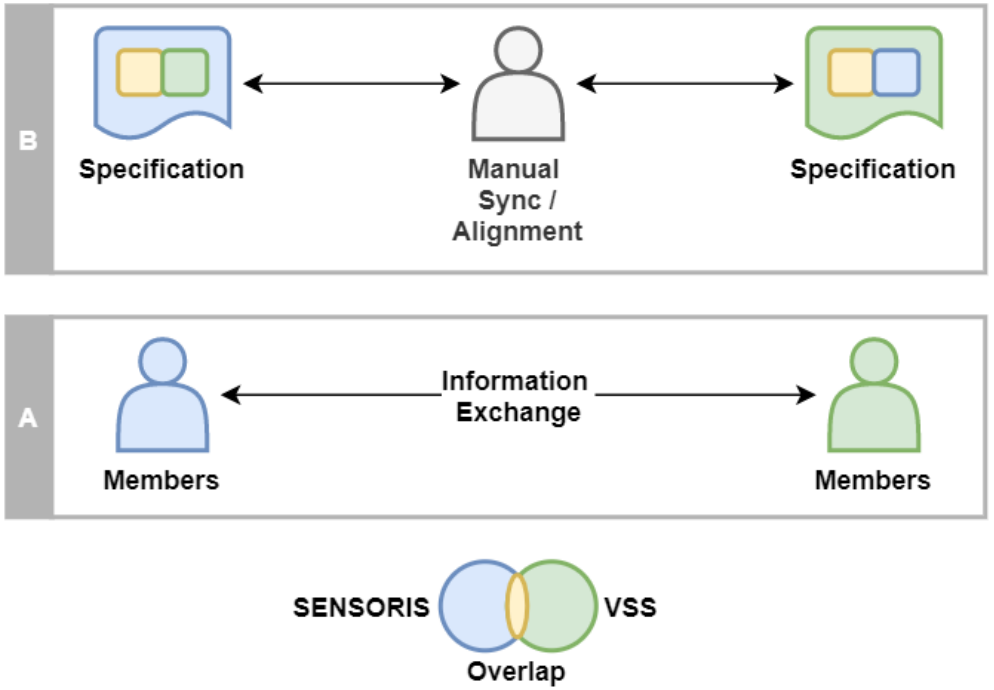


Vehicle signals:
internal vs. environment

Gap and overlap analysis (continued)

- SENSORIS uses Google Protocol Buffers to define both the **data model** and **serialization** of actual vehicle data. VSS uses YAML to define the data model and does not define the serialization of actual vehicle data.
- SENSORIS only has **very small subset** of the VSS **vehicle sensor signals**. For the **overlapping sensor signals**, the “hierarchical model” of SENSORIS and VSS are on par and some **notable differences** were identified.
- SENSORIS has features that increase complexity and flexibility, e.g. multiple options for the representation of sensor signals, relative spatial reference systems, event relations, statistical aggregation for sensor values.
- VSS definition is moving fast, so the analysis tried to capture work in progress as good as possible.

Collaboration options



B - Manual Sync / Alignment

- **Technical gap and overlap analysis** - data model (structure and content) - *basis for everything else on a - technical level, drives decisions for follow ups*
- Potential consolidation first for planned extensions that are not covered yet by respective data model - *do not reinvent the (new) wheel*

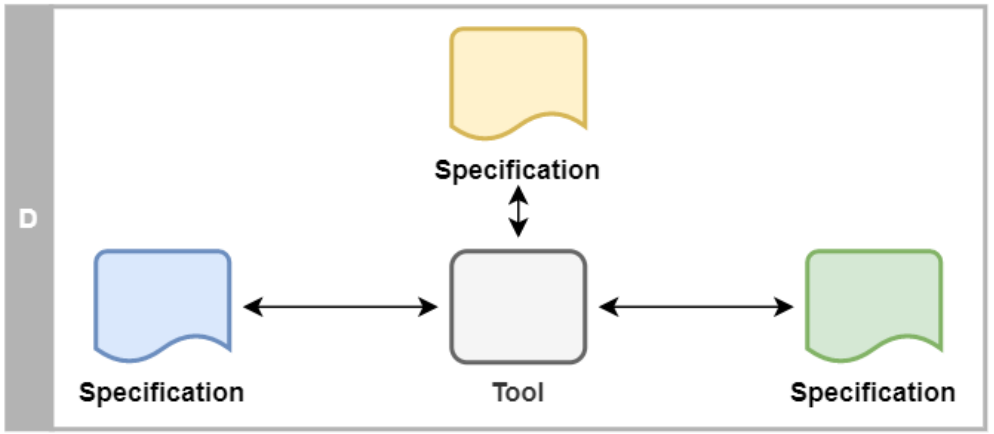
A - Information Exchange

- SENSORIS and VSS members are aware of the respective **goals and activities** - *already a big step!!!*
- SENSORIS and VSS members know how to access the respective detailed documentation
- Regular exchange is setup

Collaboration options (continued)

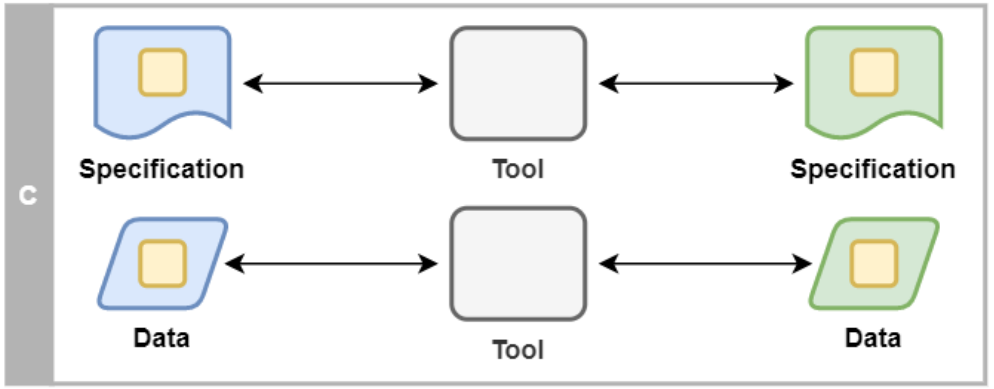
E - Single Specification

- As of now unlikely, due to different goals.



D - Single Specification as Basis

- As of now unlikely, due to different goals.



C - Tool Supported Sync / Alignment

- In theory possible for both specification and data.

(Potential) next steps

- **Get your feedback**
- **Decide about liaison**
- **Work together**

… and this was just the view on SENSORIS and VSS, leaving the bigger picture of SENSORIS and CVII for the future