Collaboration Project: eSync

COVESA has a liaison agreement with eSync Alliance to explore common interests.

eSync Alliance is an initiative to define Over The Air updates (OTA/SOTA) and Disgnostics.

A presentation **LINK PENDING** of the activities was made at the Automotive Linux Summit in Tokyo, December 2021.

Background

eSync is interested in leveraging the use of their OTA protocol not only for software transfer (cloud to vehicle) but also data transfer (primarily vehicle to cloud).
It was early on decided that the work within CVII to achieve an automotive industry-common data model, and use of VSS in particular, was desirable for such work.

Protocol Specification

eSync develops and publishes OTA protocol specifications among their members. (Contact eSync for further details.)

Technical Prototype

The potential of a technical prototype has been discussed. Outreach ongoing to companies that may be interested in implementing.

Message Formats

Some of eSync technology leverages Apache frameworks and uses AVRO encoding and therefore we envision trying that in the technical prototype.

Therefore a specification and implementation of AVRO encoding for VSS-signal data is one choice listed in the CVII Tech Stack components planning (in combination with protobuf, JSON and other choices).

A set of message definition schemas, and prototype code in python have been proposed on a separate branch of vss-tools named serialization, and it follows this generic proposal of data-protocol message types.

Smaller value-container messages can be bundled and there are definitions of such bundles (TimeSeries, etc.) and these definitions can thereby be a definition of a data bulk storage.

Prototype design

  <design diagram pending>

Components for development

- ❓ Convenience-library for data encoding. (VSS values in, AVRO-encoded data messages out). (C++)
- eSync has in-vehicle components that the prototype might be aligned with (e.g. modify AVRO schema to fit VSS but the code gets reused).
- Raw CAN-signals are often used. CANVSS is a frequent topic, also listed in the planning/organization of CVII.

Hardware environment

- Raspberry Pi is preferred for evaluation (embedded system)