Project proposal for an environment to enable data exchange between several entities

Author: swen.schisler@endava.com

Framing question

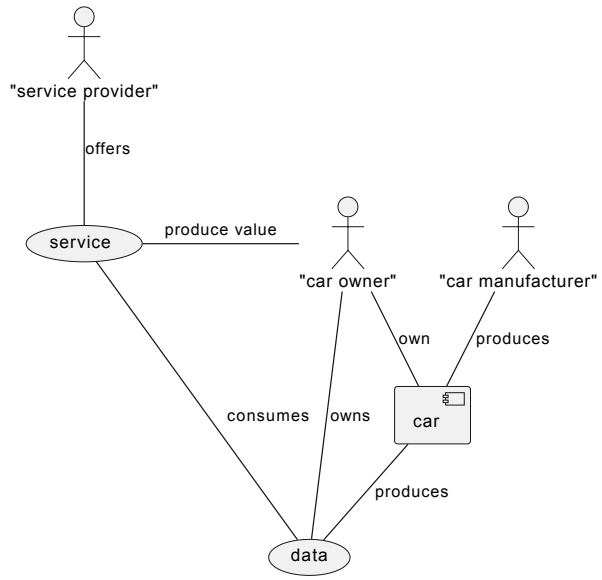
How can COVESA create an ecosystem that allows car manufacturers, car owners (drivers) and 3rd party service providers to offer, monetize and consume services in a:

- secure,
- reliable,
- compliant, and
- managed

environment. To support business of scale, members of the ecosystem are required to onboard through self-services.

Insights

The following figure displays the relations between the parties.



Based on this basic relation and the context we have in COVESA one can derive the following:

- Services are based on exchange of data.
- exchange of personal identifiable information (PII) is governed by user rights based on laws.
- this implies contracts (usually referred as consent) between the user and the data controller and contracts between the controller and the processor
- data is distributed in different environments
- data is available in different formats
- data is protected by several access mechanisms
- data access must be optimized to preserve bandwith

- data access must be governed by SLA's

Product vision

A scaling and managed environment with:

- a unified access to cross OEM and service provider data,
- a well defined SLA and legally compliant,
- a proper separation of safety relevant and regulated data,
- straight access to a number of data points,
- optimized data consumption on transport side,
- upload to any data store,

protected by

- access right management,
- rate limitation,
- a paywall, and
- state of the art security measures.

This increases attractivity, usefulness and visibility to third party developers, and enables them to experiment with their business ideas with very low entry barriers.

To enable scale, all must be self-services. No human interaction is required to onboard car manufacturers users, cars, new services.

Two options are possible and needs to be evaluated.

1. Direct data access after onboarding (bypassing the OEM cloud) or
2. indirect access via the OEM cloud.

For different development phases, not only car data can be utilized but also recorded data in a data lake (served by the playgroud) or synthetic data.

To build a future proof solution, all applicable standards and upcoming laws (like EU Cyber Resilience Act) shall be considered.

Project proposal

Endava would like to initiate and lead a project to

- define and document this ecosystem,
- implement a prototype to demonstrate the capabilities.

Our suggestion is to base this project on already existing work done prevoiusly for COVESA, see references.

References

Date	Dokument	Comment
May 16th, 2019	Kuksa	With some shortcomings of VSS v1, but an IoT connectivity does not work for all use cases, direct access to vehicle data will be faster

Date	Dokument	Comment
May 15th, 2019	Car2Cloud	First find of an IoT-like Interface for driving use cases ""Big Data" style of data usage to generate new services"
May, 2019	neutral server	brought up the idea of accessing read only data for use case sharing across OEM's, there is a slide showing the journey to a API driven ecosystem, that's what we aiming for
November, 2019	High Mobility	Again brought in the concept of monetizing API's and build an ecosystem for 3rd parties
May 2020	Proposal GraphQL Server	a similar solution was already presented in 2020, extending the VSS with a more flexible GraphQL interface to achieve some of the below listed goals a github repo was created
May 2020	cloud and connected services	Project charter
May 2020	CVII	CVII (Bosch, Mr. Kerstan)
October, 2021	The value of data	Geotab
October 2021	SDV	Bosch presentation Mr. Thomas Spreckley
October 2021	ExtVeh	Denso presentation
Feb, 2022	Vehicle integration Platform	Blog post
May, 2022	Business Cases for SDV	Slide 2, 3, 5, and 7 hold crucial statements
May, 2022	Status updates on AMM	CVII already worked on higher level API, output
May 2022	PFA French Automotive Industry	Explaining a need for a commonly shared interface across OEMs, in this paper use cases are given that did not succeed with the current architecture
July, 20th, 2023	EV charging event aggregation	A white paper and proposal to collect data for a complex use case