Topic: COVESA Proposal
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Background - what is COVESA?

COVESA (Connected Vehicle Systems Alliance) is an open, collaborative and impactful technology alliance, accelerating the full potential of connected vehicles. Go to [COVESA](#) to find out more.

Framing Question

How might we deliver groundbreaking EV experience to our customers with a world-class charging infrastructure at hand?

Insights

- Traditional OEMs do not own the EV charge points and heavily rely on data aggregation from 3rd party sources etc.
- The charge point network is highly fragmented and data from the CPOs (Charge Point Operators) is unreliable (e.g. location of chargers, occupancy, broken chargers, actual power, ….), these all lead to typical customer paint points that stop us from delivering an insanely great charging experience
- Vehicles would be able to very easily crowd-source data themselves and off-board them (e.g. communicate back how long a charger will still be occupied)
- OEMs aggregating this data by themselves have no scale - algorithms (typically OEM IP or OEM's supplier IP) can only work with lots of reliable data in this regard to build statistical/predictions models and so on
- One OEM has a key competitive advantage in this regard as they own their charge points, traditional OEMs will most likely always lack this advantage. But harvesting & sharing vehicle charging data at large scale will add great value to power new experiences at large scale.

Product Vision

- an API that exposes read/write access to a standardized data model/data-base hosted in the cloud that represents anonymized data gathered by vehicles on charge events
- Key data points include static as well as dynamic data, e.g. exact location of charger per vehicle GPS/dead-reckoning, actual max power, time to 80% SOC, occupancy, broken charger, and even more sophisticated data points during a charge even such as outside brightness (lit charge point), rain sensor (roofed charge point), …
- Harvested data helps to feed specific external services and IP protected intelligence, such as EV routing algorithms to create novel digital experiences
- This enhances the EV charging experience for all customers as it leverages large scale effects based on big data
- Existing open source data models, such as VSS can be extended to represent anonymized data from charge events to build an open source database to crowdsource and improve data on charge points (e.g. exact lat/long location, occupancy, frequency of errors / reliability, actual power, typical power, forecasted occupation, statistical availability)

Project Proposal

- FORD would like to initiate and co-lead a dedicated Charging and Energy Services Interest group within COVESA
- An initial seeding project aims at the above scope:
  1. develop a data model as a logical extension of VSS to represent charging data & events as described above
  2. demonstrate a POC (preferably with another OEM) that such data can be off-boarded at scale

High Level conceptual architecture sketch