EV Charging Event Data Aggregation Project

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Thur: 10:15h – 12:30h
EV Charging Event Data Aggregation Project

**Scope**

**Goal**

How to find the best charging station:

I need

- Precise location of my charging slot
- space for my trailer,
- a kids-playground
- illumination at night, ...

Result up to now: Extend VSS to charging station data
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A new data tree for infrastructure data

Vehicle signal Specification (VSS)

Extension to Roadinfrastructure incl. Chargingstation
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Road infrastructure data tree except (V0.1)

Chargingstation

- ChargingProcess
- Occupation
- CustomerFeedback
- ChargingMode
- BaseData
- ParkingLocation

- Charging

- AvgPower
- ActPower
- Tme2End
- Complete
- Error
- ...

- Internal ID
- EVSE ID
- PlannedArrival
- PlannedDeparture
- ChargingStationOccupied

- feedbackRating

- Wired
- swapping

- Address
- Opening hour
- Trailer friendly
- Is-Roofed
- Hardware vendor
- ...

- IsParkingGarage
- Longitude
- Latitude
- MaxLength
- Amenities (restaurant, playground)
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User journey = data journey for better charging experience

Cloud sends individual charge station recommendation down to vehicle

Vehicle uploads preferences (e.g. I’ve a trailer)

Prediction of occupation probability over time

Data acquisition

Standardize data aggregation over many fleets in the cloud + merging with charge point operator data + restaurant

Time-profile per charging station history available in cloud

A self-enhancing data system: the bigger the fleet the better the prediction and recommendations
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Enablers for Data Journey

- Multi objective optimization of KPIs
- individual station recommendation for all contributing parties

In-vehicle HMI for input of personal preferences and trip destination

Forecast based on crowd data

- Harmonized data model
- multi-data-tree model in COVESA incl. special KPI's (e.g. trailer suitable)
- Neutral server and data ingress handling
- Update of charging station data during charging
- Link to ETSI and EU ITS Directive to be assessed
- Time-series data-base for charging station data
- Evaluate difference between prediction and current value (e.g. Plug broken)

A new data eco-system : more suitable charging point recommendation thanks to crowd data
Thank you

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