Data Expert Group Update

COVESA AMM

2023-10-11

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Accelerating the future of connected vehicles

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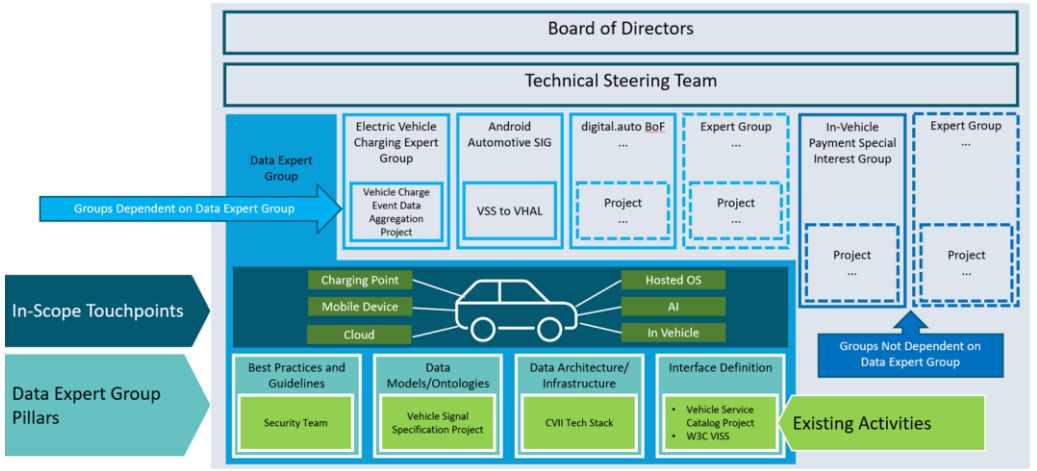
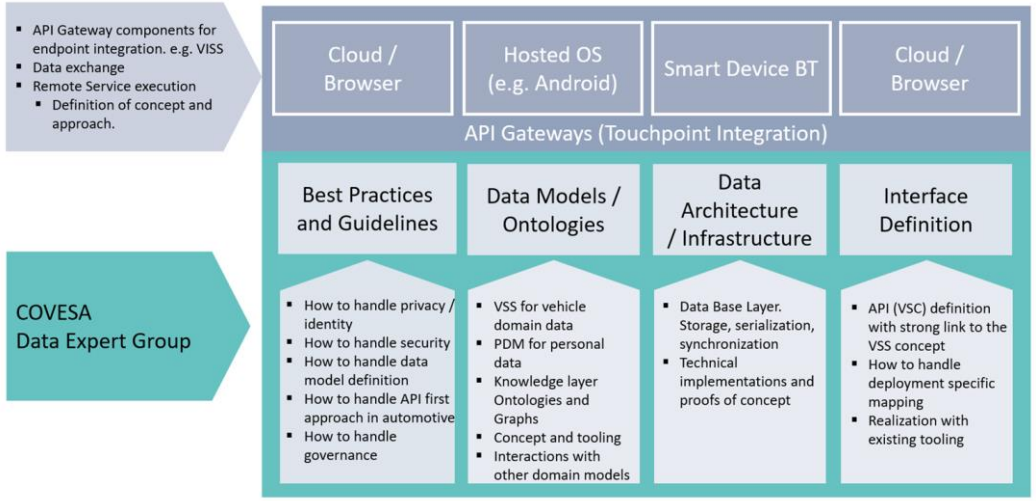
Data Expert Group Introduction

- A group discussing and coordinating COVESA activities in the data area
  - Including: VSS, VSC, IFEX, Vehicle API
- Four pillars
  - Best Practices and Guidelines
  - Data Models & Ontologies
  - Data Architecture & Infrastructure
  - Interface Definition
- Most of the work performed in separate sub-groups/meetings
- Group work loosely coordinated by the co-leads:
  - Adnan Bekan, BMW
  - Erik Jägervall, Bosch





Regular Meetings related to Data Expert Group

- VSS Ontology (VSSo) – Tuesdays
- VSS – Tuesdays
- Common Vehicle Interfaces – Tuesdays
- Architecture and Infrastructure - Wednesdays
- Weekly Data Expert Group – Thursdays

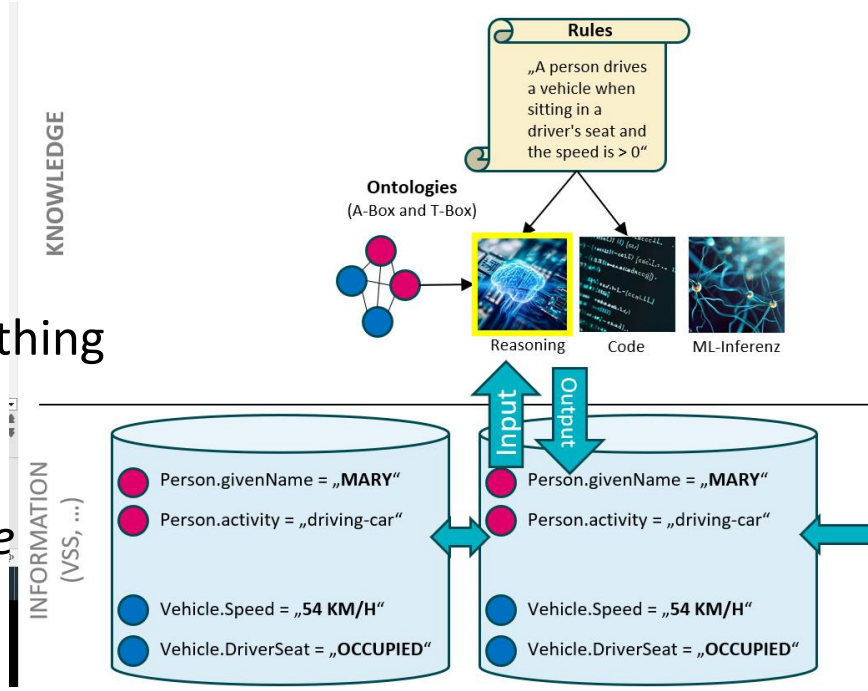
- All welcome to join!
- All meetings visible in the COVESA Community Calendar

Best Practices and Guidelines

- Most activity related to COVESA repository governance using VSS as the example repository
- Proposal for changed file headers including SPDX headers
  - Currently being discussed at COVESA board levels
- Process for having multiple active branches in parallel developed
  - Rationale: You should not need to update to the next major release to get new signals
  - One branch for all changes intended for next major release
    - May include backward incompatible changes
  - One or more branches for minor releases
    - Must not include backward incompatible changes
  - All contributions shall typically be targeting the “master” branch only.
    - Project maintainers will cherry-pick changes to maintenance branches as needed

Data Models and Ontologies

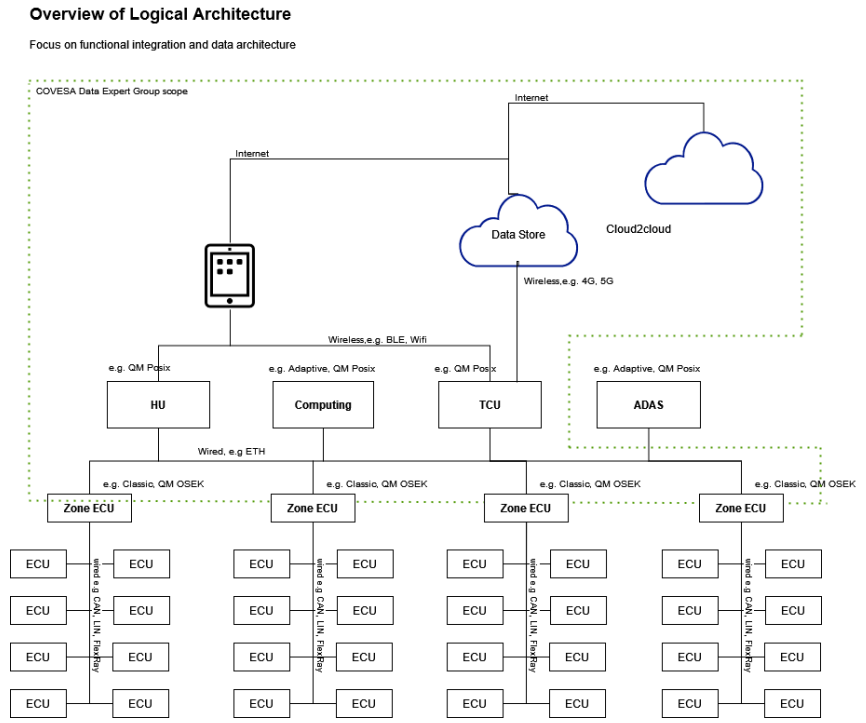
- Ongoing discussions on how and if VSS needs to be extended to simplify support in various deployments
- Example discussion areas
  - Definition/Representation of instances (like doors/seats)
  - Use of UUIDs as identifiers and mechanism to manage backward compatibility
  - Continue to have *.vspec files as source format, or choose something different
- VSS Ontology Project
  - *Proposal for Developing an Official Guideline on Data Architecture Standardization: Integration and Communication of (Generated) Knowledge in a Knowledge Layer of a Data-Centric Architecture*
- Related AMM Sessions
  - VSS Evolvement Workshop, Thursday



Data Architecture and Infrastructure

- Ongoing discussions about data centric architectures.
- Recent proposals:
  - Documentation of How-tos, Patterns and Architectures
  - Framework for a Knowledge layer
  - Central Data Service Playground

- Related AMM Sessions
  - Architecture & Infra. Working Session, Thursday 9-12:15
    - VSS-based Data Middleware Tiered Sync - Proof of Concept
    - Central Data Service Playground workshop
    - How-to/Pattern/Architecture doc workshop
  - Various other sessions such as ‘Vehicle data server southbound architecture’



Interface Definition Pillar

- A lot of discussion on what COVESA shall do in the Vehicle API area
  - Define a protocol independent API for accessing VSS in OpenAPI or AsyncAPI?
  - Collaboration with AUTOSAR Cloud Working Group on how to represent or integrate VSS data in AUTOSAR
  - Use of IFEX as source format or intermediate format for converting between different IDLs
  - Definition of low level functional capabilities on what services can be built
- The term VSC (Vehicle Service Catalog) has been partially redefined
  - VSC now only refers to the deprecated service catalog
  - The syntax and related tooling is now called IFEX!
- Related AMM Sessions
  - The Hierarchical Information Model (HIM) and an Interface Using It, Wednesday
  - uServices, Thursday
  - Vehicle Common Interfaces, Thursday

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