COVESA Work Package Mapping to HAL4SDV

2024-02-12 - SD...COVESA (1).pptx

Hardware/Software Abstraction

COVESA Work Product or Group	Pain Point
Given the diversity in solutions the (historical) Hypervisor Project took a logical top-down approach to closing the gaps when implementing virtualisation in-vehicle, with a focus on VIRTIO as a standardised approach. Whilst various artifacts were created a major one was the guidelines codified in the Automotive Virtual Platform Specification version 2.0. Some of the participants are continuing the work in SOAFEE.	HW Abstraction – Hypervisor
How does vsomeip fit? Where?	Middleware besides AUTOSAR Adaptive
Common Vehicle Interfaces • Vehicle Signal Specification over Data Distributiion Service	Communication Middleware (DDS and other solutions)
Common Vehicle Interfaces • Capabilities • IFEX • uServices • Vehical Information Service Specification (VISS) • Vehicle API • Hierarchical Information Model (HIM) • Interface Blueprint Vehicle Signal Specification Automotive AOSP App Framework Standardization Expert Group	Defragmentation of interfaces
Common Vehicle Interfaces • Capabilities • IFEX • uServices • Vehical Information Service Specification (VISS) • Vehicle API • Hierarchical Information Model (HIM) • Interface Blueprint Vehicle Signal Specification Automotive AOSP App Framework Standardization Expert Group	Interface concept for service oriented and signal-oriented functions

Architecture and Infrastructure
    Data Architecture Terminology (including Logical Components)
    Data Architecture Pillar Proposals
    Central Data Service Playground
 	
Zonal Arch VSS Scope Diagram
 	
Vehicle Signal Specification
	Data Architecture for Automotive

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API	
Vehicle Signal Specification	Vehicle Signal Specification

Common Vehicle Interfaces
 	
   • Capabilities
   • IFEX
   • uServices
   • Vehical Information Service Specification (VISS)
   • Vehicle API
   • Hierarchical Information Model (HIM)
   • Interface Blueprint
 	
Automotive AOSP App Framework Standardization Expert Group
	Efficient Integration SDV

	Mapping for internationalization
Vehicle Signal Specification	Plug & charge according to ISO standards available as open implementations
Development Process Tools	
	Linux Ecosystem for Safety
	Memory safe languages for critical systems
	Open tool for architecture modeling following a model-based-systems-engineering approach for overall vehicle definition
Integration, Testing, Simulation	
	Tooling for performance
	Tools interoperability in automotive SW dev area
	Software testing on integration – level
	Virtualisation for vehicle subsystems
	Reprocessing / replay and simulation
SW Mainenance & Updateability	
	Isolation of applications
	Sustainable maintenance
Open Source	
	OSS blueprints for compliance with EU regulations (e.g. cyber security)

Mindset & Ecosystem	
	Define and show "automotive grade"
Governance	
	Process Mapping: CRA Compliance with OSS supply chains
	Open-Source Governance Model

COVESA Group/Work Product

Data Expert Group
Data Models and Ontologies
    Vehicle Signal Specification (VSS)
    Vehicle Signal Specification Ontology (VSSo) - W3C Collaboration
Architecture and Infrastructure
    Data Architecture Terminology (including Logical Components)
    Data Architecture Pillar Proposals
    Central Data Service Playground
Interface Definition
    Common Vehicle Interfaces
    Vehicle API
    Vehicle Service Catalog (VSC)
    Vehicle Information Service Specification (VISS) - W3C Collaboration
Best Practices
    Governance
    Privacy and Identity
    Data Model Definition
    API First

Data Expert Group Workshop 2023Q428 at Spring AMM
Data Expert Group Workshop 2023Q1

Electric Vehicle Charging Expert Group
EV Charging Event Data Aggregation Project
Private Cross OEM Joint Compute for EV Charging

Android™ Automotive SIG

Automotive AOSP App Framework Standardization Expert Group

Security Team

Simulation and Tooling
digital.auto

Vehicle Experience and Content - Entertainment BoF
In-vehicle Payment BoF
In-vehicle Payment SIG

Commercial Vehicle BoF

Connected Safety BoF

VSOMEIP