

Possible questions for discussions if audience is quiet

FOR PREP ONLY, NOT TO SHOW

- What's the existing solution before VSS and what are the limitations?
 - Inconsistent naming by OEM and model, region, brand
 - Chaos in signal naming across different ECU's
 - Same signal may have different meanings, even different units, in different vehicles
- What's the downside to not adopting VSS
 - Decreased reuse
 - Increased development costs
 - Duplication of appl development effort
- What is the process OEMS need to follow to deploy VSS?
 - Look up existing signal names
 - Standard hierarchy and naming conventions
 - Propose extensions where a signal is missing
- What can we do to streamline VSS development?
 - Sonatus helping our OEMs deploy this
 - Providing tool support
- Do we need to deploy VSS on vehicle, cloud, or both? [Sudhir]
 - Range of benefits depending where you deploy
 - Cloud is a good starting point
 - Allow path for engaging legacy vehicles
- Are there any shortcomings to VSS?
- What can be done to expand VSS
 - Promote consistent time stamps in signals?

Using COVESA Vehicle Signal Specification (VSS) to Accelerate Sonatus' Next Generation Vehicle Services

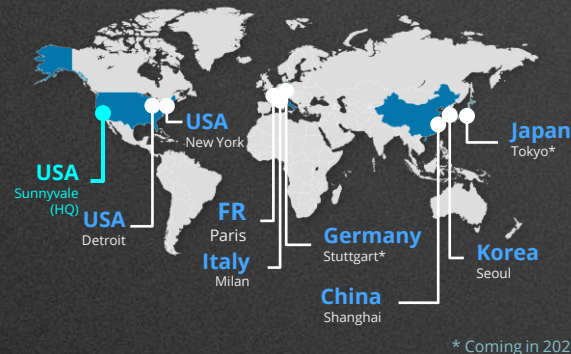
COVESA - Webinar 2023

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SONATUS



Sonatus: Silicon Valley-Based Automotive SW Leader



Award Winning Technology

A Successful Track Record in Production

Global Presence

Proven solutions in production today with Hyundai
Ramping across their product line

Building on proven data center expertise



Networking, Storage
and Compute
Systems



Communications
(Wireless, Broadband
Fixed Wireless, APN,)



Security: Authentication,
Encryption, VPN, FW



Cloud/Data
Management



Mobile and Cloud based
Applications & Services



Virtualization,
Orchestration, SaaS,
Managed Services

The importance and benefits of SDV

Software-defined vehicles (SDV) unlock a range of powerful benefits

- Improved functionality
- Upgradability
- Extensibility including after development
- Development cost savings
- New business models
- New monetization opportunities

Key challenges to adopting SDV

Data Volume

- Vehicle data is significant
- Impractical to send all vehicle data to the cloud all the time
- Prohibitive transmission and storage costs

Upgrades and Extensibility

- SDV enables extensibility
- Heavy OTA updates may be burdensome
- Deploying updates quickly
 - New use cases
 - New business opportunities
 - Evolving needs
 - Urgent situations

Data Formats

- Inconsistent naming across OEMS, models, regions
- Inconsistent units
- Conflicting naming conventions
- Same names, different meaning

Sonatus Vehicle Data Collector

Powerful data collection, configurable in seconds

Technology Examples



Vehicle Data Collector



Vehicle Automation

Features

- Collect only necessary data
- Data policy deployed in seconds
- One vehicle or entire fleets
- Stream to any cloud
- Dynamically adapt data resolution

Benefits

- New monetization options
- Diagnose or eliminate recalls
- Reduce data transmission costs

Sonatus Vehicle Automation Manager

Vehicle automation and extensibility without coding

Technology Examples



Vehicle Data Collector



Vehicle Automation

Features

- Deploy automations in seconds
- Inputs from across vehicle
- In-vehicle and external actions
- Create workflows without coding
- Limit access to ensure safety

Benefits

- Prototype new features rapidly
- Enhance vehicles after production
- Diagnose issues in the field
- New monetization opportunities
- Lower manufacturing costs

Benefits of COVESA VSS

Interoperability

- Consistency across OEMs
- Consistency across models
- Communication between different vehicles, infrastructures

Innovation

- Faster develop applications
- Signal meaning clearer
- Abstracts low-level architecture

Reduced Costs

- Lower development costs
- Software reuse across OEM brands/models
- Easier programmer ramp-up

Easier after-market usage

- Lowers burden on downstream value-added services

Safety

- Consistent use of signals avoid confusion
- Consistent units
- Safer data sharing for V2V

Discussion

Summary

Positive experience with VSS

- Sonatus has found VSS useful in building consistency across automotive
- Our solutions benefit from the portability it provides
- We are excited to be one of the leaders driving VSS adoption

More information about Sonatus

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SONATUS

ACCELERATING VEHICLE SOFTWARE INNOVATION

More information about COVESA

- <https://www.covesa.global/>
- <https://www.linkedin.com/company/covesa-alliance/>

