Android Automotive SIG - VHAL
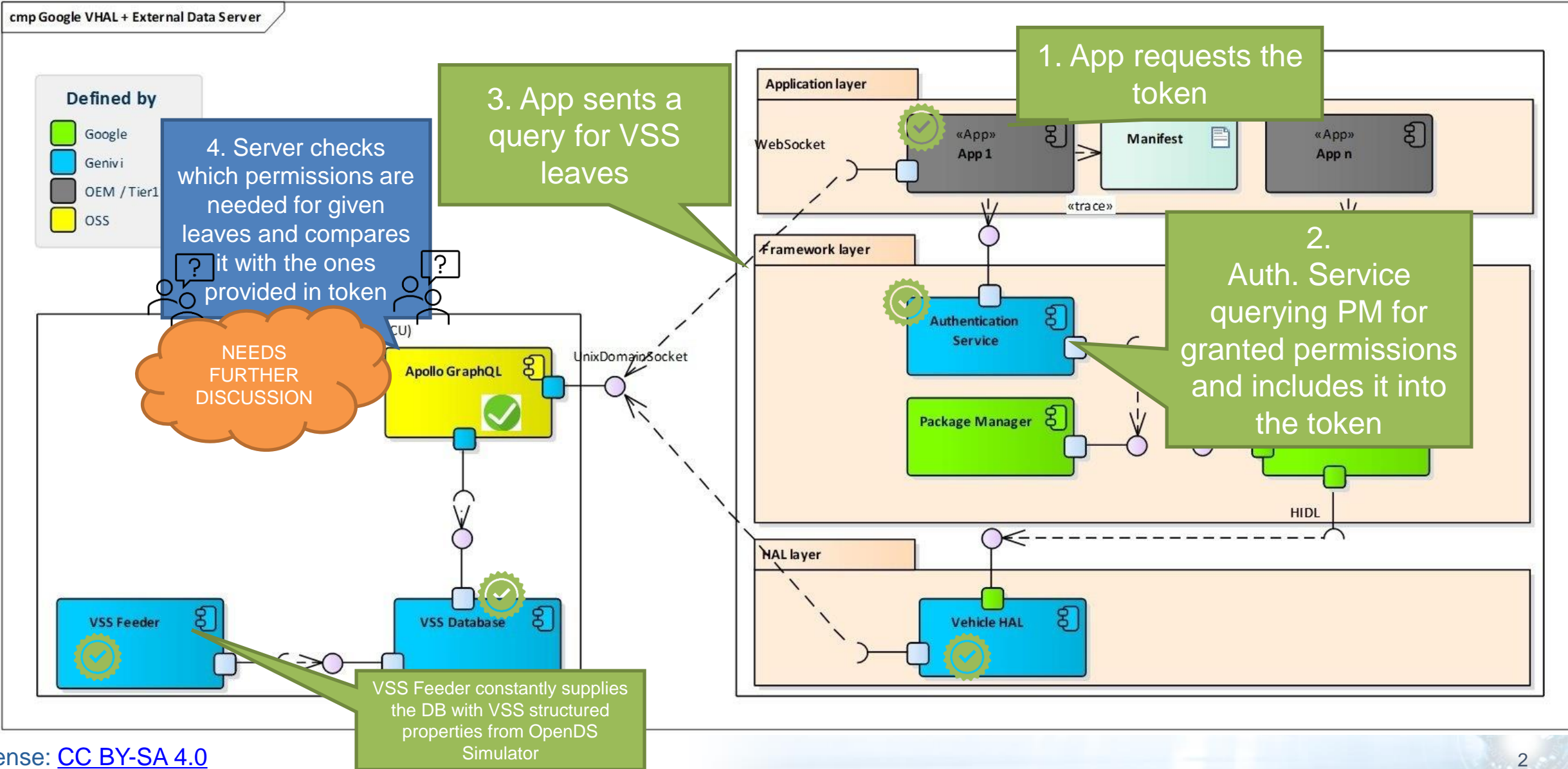
Stefan Wysocki, TietoEVRY

GENIVI All Member Meeting | May 2021

Track 1 – External Data Server

cmp Google VHAL + External Data Server

Defined by
- Google
- Genivi
- OEM / Tier1
- OSS

4. Server checks which permissions are needed for given leaves and compares it with the ones provided in token

NEEDS FURTHER DISCUSSION

3. App sents a query for VSS leaves

1. App requests the token

2. Auth. Service querying PM for granted permissions and includes it into the token

Application layer
WebSocket
«App» App 1
Manifest
«App» App n
«trace»

Framework layer
Authentication Service
Package Manager
UnixDomainSocket
HIDL

HAL layer
Vehicle HAL

Apollo GraphQL

VSS Feeder

VSS Database

VSS Feeder constantly supplies the DB with VSS structured properties from OpenDS Simulator

Android Automotive SIG - Vehicle Data APIs - VHAL – Report
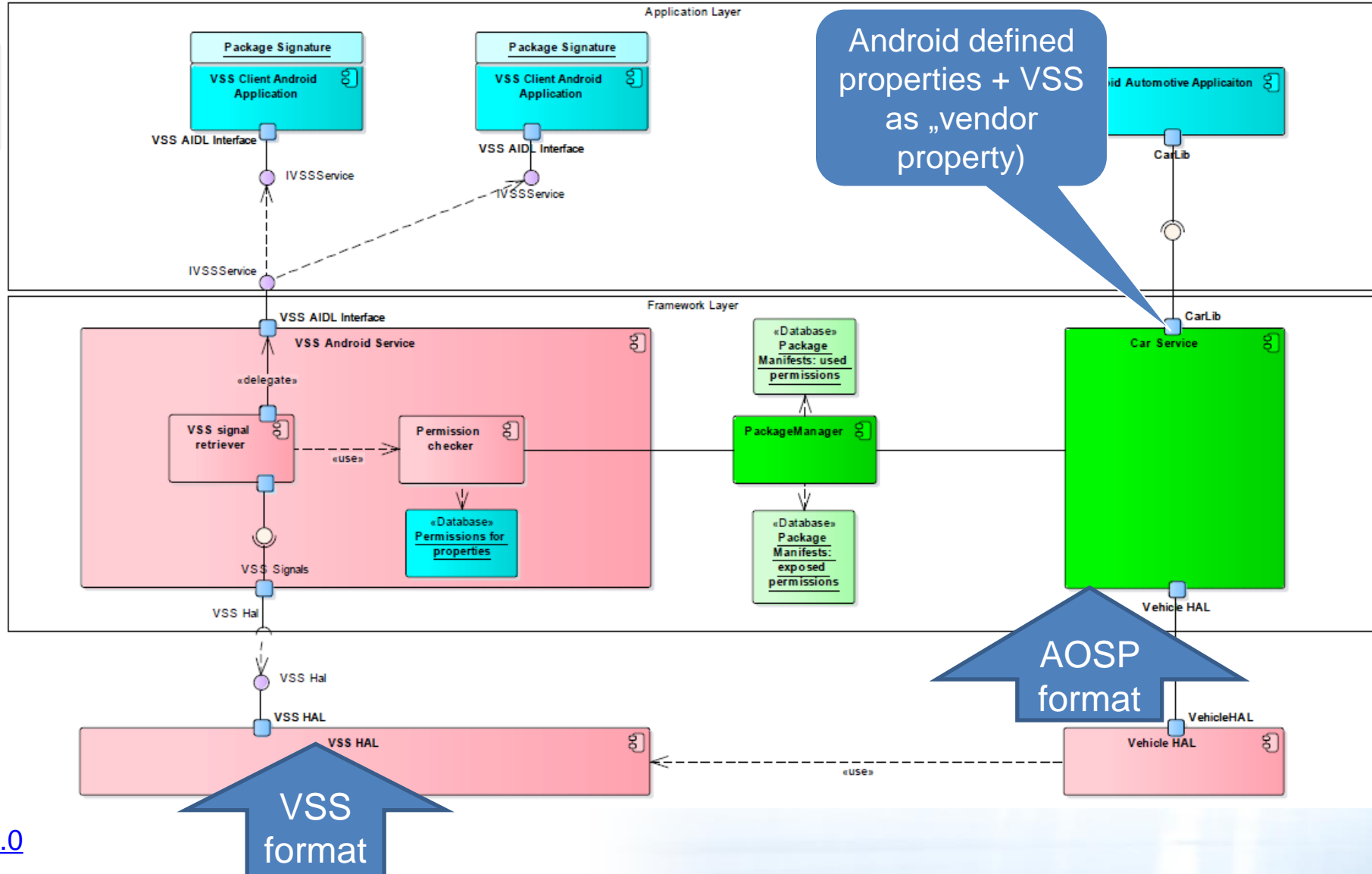
- Source code menagement:
  - Introduced /device/genivi in Android sources for GENIVI features configuration for each device
  - Currently supported device: Android Emulator
  - All GENIVI modules kept as separate repositories and cloned as local_manifest (https://github.com/GENIVI/aasig_local_manifests)
  - Non-Android part kept separately (f.e. External Data Server in https://github.com/GENIVI/vss-graphql)
- Two Architecture Variants
  - Track 1: External Data Server – access via graphql
    - Focused on accessing vehicle data by different mean than AOSP VehicleHAL
  - Track 2: Internal Data Server – access via AOSP VehicleHAL
    - Focused on translation from VSS format to AOSP format in generic way
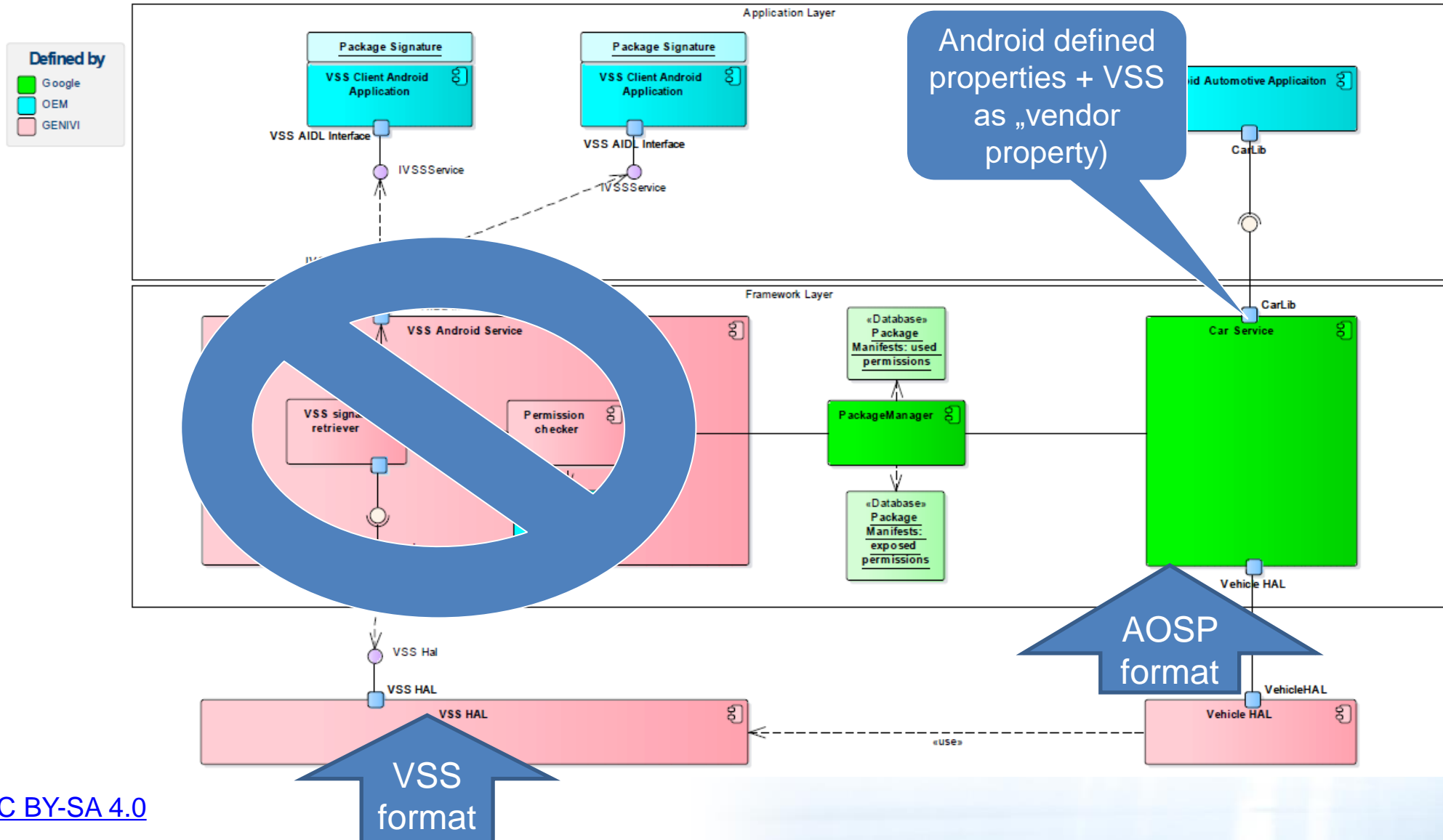
Track 2

4

Track 2

Track 2

- Mapping between AOSP defined properties and VSS leaves:
  - Kept as xlsx file, version 1.7 available [AASIG-12](#) and maps:
    - AOSP PropertyId
    - VSS equivalent leaf name
    - Datatype differences between VSS and Android
    - Unit differences between VSS and Android
    - Transformation type (from VSS to Android) and its parameters
      - Linear = Kx + m
  - Is considered to be structured as VSS layer (workshop)
  - ENUM mapping - tricky
- The translation component can be generated based on VSS and AOSP standards and mapping
- Current implementation is based on default Android Vehicle HAL
  - implemented manually to show the concept and is a reference for script output
  - Will be demoed during the AMM
  - Chosen 4 different Android props with different complexity

Workshops

- AA SIG Technical Workshop I – Thursday 15:35 CEST
  - Demo of VSS-to-Android-Properties module
  - Discussion about the mapping standard
  - Automatic translation from VSS to Android

- AA SIG Technical Workshop II – Friday 15:25 CEST
  - Workplan definition for next 6 months

Contributing

- Weekly telcos:
  Tuesdays – 17:00 CET (US friendly time) – Vehicle Data APIs / VHAL

- Android Automotive Project Wiki :
  https://at.projects.genivi.org/wiki/x/XgA4Ag

Thank you!

Visit GENIVI:

http://www.genivi.org

http://projects.genivi.org

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