Android Automotive SIG - VHAL

Stefan Wysocki, TietoEVRY

GENIVI All Member Meeting | May 2021
Source code management: 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 (e.g. External Data Server in https://github.com/GENIVI/vss-graphql).

1. App requests the token
2. Auth. Service querying PM for granted permissions and includes it into the token
3. App sends a query for VSS leaves
4. Server checks which permissions are needed for given leaves and compares it with the ones provided in token

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

NEEDS FURTHER DISCUSSION
Android Automotive SIG - Vehicle Data APIs
- VHAL – Report

• Source code management:
  • 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

Android defined properties + VSS as "vendor property"

AOSP format

VSS format

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Android defined properties + VSS as "vendor property"

VSS format

AOSP format
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