AVL AGL Alignment

07.12.2023

Virtualization via XEN Hypervisor

- Current Status: Running XEN Hypervisor on Renesas devices, based on AGL distribution
- AVL could publish current development code base to AGL open-source community

- Enhancement towards VirtIO needed?
  - E.g. contributing to driver development to enhance current functionality

- F2F Meeting (07.12.2023) Notes:

  Jan: contribution is welcome

  Jerry: Linaro virtIO work on Xen backend drivers could have overlap

  Scott:

  backport xen-recipe would be easier

  Multi-config to build the guests of hypervisor, instead of using moulin

  meta layer for hypervisor work to be decided till next meeting

  Further alignment in the next SDV EG call   §

FEDERATE project:
European public funded project to coordinate SDV activities

- The FEDERATE project aims to bring together all relevant stakeholders of the mobility industry, the open source software community, the semiconductor industry, and public authorithies to accelerate the development of an SDV Ecosystem to foster a vibrant European society and to orchestrate the SDV R&D, Development and Innovation activities (reference: www.federate-sdv.eu)

- 29 companies from 7 countries (OEM, Tier1, Tier2, Silicon supplier…)

- FEDERATE is coordinated by AVL

Open source in EU funded project

- European Public Funded Project

- Target: Abstract HW from Software

- Participations: 52 companies

  - Big European OEMs: e.g. BMW, Mercedes Benz,
    VW (CARIAD), Renault, Volvo,…

  - Big Tier 1: Bosch, Conti, ZF, …

  - Tier 2, uC Vendor, Tooling Vendor,…

  - AVL is coordinating the Project together with TTECH

- AVL Use-case: HW-abstraction for mixed critical Server application which includes ADAS, V2X, IVI, OTA application (i.p. AGL applications)

  - Open-Source solutions plays a very important role

  - Alignment between AGL Interfaces and developed Middleware

  - Promotion of AGL´s virtualization approach

Ajunic meets AGL

- Ajunic as a possible reference HW for AGL SDV activites?
- AVL could provide some kind of Ajunic BSP for as an contribution to AGL open source community
  - Detailed content tbd.

- <mark>F2F Meeting (07.12.2023) Notes</mark>
  - Two ways to introduce Ajunic in AGL
    - To Submit the bsp, AVL to take care of CI,
      It is the easier way, no extra requirement
      Example: there is bsp of a board similar to Beaglebone in the source tree
    - As a Reference board
      - AGL requires 4 boards: One for BSP, one for CI, etc.
      - AGL will take care of test cases for CI

AN ADAS ECU SOLUTION FOR AUTONOMOUS DRIVING

AVL Ajunic

THE CHALLENGE
We were looking for an open hardware solution that is adaptable and fits our customers' needs. Now we are the first provider on the market with this kind of solution.

THE SOLUTION
AVL's Ajunic is an open development platform which is customizable for your application. It ensures a shorter development time while being safe and secure.

Furthermore, it is adaptable for prototype and series production. The platform includes ADAS/AD perception, fusion and motion control, ground truth data recording and life object detection.

ADDED VALUE
- Robustly built with automotive qualified components ready to be installed in your vehicle
- Fully customizable hardware and software
- Use it for your prototype, adaptable as needed according to your requirements for a series solution
- Ready for ISO 26262 conformant solutions. Independent dual channel processing and up to triple power supply possible
- Software options include Linux, ROS, (classic) AUTOSAR, adaptive AUTOSAR
- Solutions for safety and security enabled operating systems available

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Other potential collaboration topics

- Container Orchestration
  - More Background needed to find out whether AVL could support here
- Vehicle2Cloud (V2C)
  - Could be a topic for AVL as well (Digitalization department)