

AASIG (Vehicle-HAL) Workshop at 20th All Member Meeting

Workshop agenda for: [GENIVI 20th All Member Meeting a Digital Experience](#)



Here's the status report slide deck draft: [GENIVI-AASIG-VHAL-status-1.1.pptx](#)

Here's the workshop content draft slide deck [GENIVI-AASIG-VHAL-workshop-draft.pptx](#)

Workshop content - Stefan's input [GENIVI-AASIG-VHAL-workshop-draft-stefan-input.pptx](#)

Merged workshop content: [GENIVI-AASIG-VHAL-workshop-final.pptx](#)

Friday 30 October (one track)

Status report & Workshop timeplan

3:00 PM - 3:30 PM CET (broadcast through Swapcard)	AASIG - Vehicle HAL	Status report	Stefan	3:00 PM - 3:20 PM
		Vehicle data model alignment - a short intro	Gunnar	3:20 PM - 3:30 PM
3:30 PM - 3:45 PM CET	Networking break	—		15min
3:45 PM - 5:15 PM CET (Working session – join by Zoom link. Zoom link provided in detailed agenda found in Swapcard)	DEMO - recap	Implementation of „Modern approach“ Implementation of „VHAL adaptation“ <ul style="list-style-type: none"> • Configuration of TietoEVERY's VHAL • Workflow, sequence diagrams • Plugin in JAVA to use GraphQL 	Stefan	3:45 PM - 4:20 PM
	AOSP 11 - permission customization	Android 11 way of grouping the vendor properties	Stefan, Alex	4:20 PM - 4:40 PM
	Security aspects	GraphQL query has a token with permissions included How secure is the token? Is it possible to verify the signature? Signed with shared key? Use asymmetric encryption? How much privilege should have the legacy solution?	Stefan, Alex	4:40 PM - 5:00 PM
	CVII workshop insights	Take-aways from CVII workshop and VHAL impact	Gunnar	5:00 PM - 5:10 PM
		Q&A		5min
5:15 PM - 5:30 PM CET	Networking break	—		15min
5:30 PM - 7:00 PM CET	First session recap	Follow-up on questions on topics from the first block	Kevin	5:30 PM - 5:35 PM
Working session – continues		Conclusions, future plans & repo structure	Stefan	5:35 PM - 5:40 PM
	GraphQL Concept	Discussion about if it is the right way to go. Searching for alternatives No library for native services Implement or research for other similar solutions	Stefan, Alex	5:40 PM - 5:45 PM
		Q&A		5min
	Testing	Lava Test Farm satus	Stephen	5:50 PM - 6:00 PM
		Q&A		5min
	Alternate architectures for vehicle data access	Internal Data Server	Stefan, Alex, Gunnar	6:00 PM - 6:05 PM
		Q&A		5min

		Vehicle Data Access via Customized HAL - Google VHAL + OEM Extensions inside	Stefan, Alex, Gunnar	6:10PM - 6:15 PM
		Q&A		5min
		Vehicle Data Access – via Some/IP Service - SomeIP stack inside the Framework	Stefan, Alex, Gunnar	6:20 PM - 6:25 PM
		Q&A		5min
	Data Models	Alignment of Android and non-Android data models	Gunnar	6:30 PM - 6:40 PM
		Q&A		5min
	Outlook	Discussion and closing topics to plan next activities	All	6:45 PM - 7:00 PM

Here follows historical planning information, higher level abstract, etc. It is enough that you to refer to the detailed table above. ^^^

Friday 30 October (one track)

Times are in CET (= UTC + 1) (note, that is now "winter time", not daylight savings time)

Friday 30 October (one track) Afternoon Session				
15:00 - 15:30	Report	30	Android Automotive SIG #1 - Vehicle Data APIs / Vehicle HAL Presenter: Stefan Wysocki (Tieto) Abstract: Pre-recorded Status Report	
15:30 - 15:45	Break	15	Sponsors' Videos	
15:45 - 17:15	Workshop	90	Android Automotive SIG #1 - Vehicle Data APIs / Vehicle HAL Moderator: Alexander Domin (BMW) Abstract: During Q2, 2020, the Vehicle Data APIs / Vehicle HAL team has undertaken the design and implementation of the <i>External Data Server (EDS) proof-of-concept demonstrator</i> that investigates how to extend Android access to vehicle data. The rationale for this work is that the number of vehicle properties currently defined in standard Android is very limited as compared to the thousands of vehicle-related signals OEMs are considering for their connected vehicles. Although the project could propose to expand the standard vehicle property list in Android, the integration of Android into a complex electrical and connected vehicle architecture suggests a bigger picture to consider. Standard data access methods should be applied in the entire vehicle and in cloud-connected services. This EDS proof-of-concept intends to validate the concept of a data server accessing the vehicle dataset as described by VSS (Vehicle Signal Specification standard), which is used also in W3C Automotive Group, and enabling authenticated Android apps to access the vehicle data through a web socket protocol. The actual values of the vehicle signals will be queried/updated thanks to a VSS feeder that will connect to the rest of the vehicle using, for example, Some/IP. The AASIG VEHICLE HAL project team will present a status report of the proof-of-concept implementation and explain the design choices made. The following next steps will be then comprehensively debated: <ul style="list-style-type: none"> • Assessment of proof-of-concept demo implementation TRL (Technical Readiness Level) • Ensure project participants have opened, or are planning, a discussion to achieve synchronization of activities with Google's Android team • Revisit the architecture of other proof-of-concepts identified 	
17:15 - 17:30	Break	15	Sponsors' Videos	

1 7: 3 0 - 1 9: 00	W o r k i n g S e s s i o n	90	Android Automotive SIG #1 - Vehicle Data APIs / Vehicle HAL Moderator: Alexander Domin (BMW) Abstract: continuation of the working session
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Recommendations :

- provide open questions
- enhance with a presentation

(Philippe +Stefan + Alex - draft)

Slide templates

Please fetch a template here. For the virtual tech summit 16:9 version is likely the best.
[GENIVI Standard Presentation Documents](#) (you may need to log in to the Wiki to view this page).

TODO

- The Demonstration needs to be planned – set up a separate call with Stefan & Alex [Gunnar](#)

Reference work

- [External Data Server Proof-Of-Concept - Work Breakdown Structure](#)

Timed Agenda

Session 1 (90 min)

- (30 min) The Demonstration
 - demo presentation (Stefan)
 - [Assessment of proof-of-concept demo implementation TRL \(Technical Readiness Level\)](#) (participants)
 - Q&A (15mn)
- (60mn) topics for discussion
 - interest of the graphql concept :
 - open question to the participants: since there is no graphql libraries, it is the correct path to go ?
 - other architectures are possible, rediscuss the other options, e.g. the internal data server
 - we should go through all of them again
 - there was some changes in aosp 11 to enable more customizable permissions for oems (permission granularity)
 - alignment of android and non android data models
 - Gunnar: from the discussion we are having on CVII, it seems that android will not drive the vehicle data model definition
- ~~Contact with Google : Ensure project participants have opened, or are planning, a discussion to achieve synchronization of activities with Google's Android team~~
 - might be subject to misunderstanding as ongoing work is connected to the daily Android development (directly or indirectly)
 - neutral question about interaction channels
 - interaction with Google's events (Bootcamps,...)
 - contributions to AOSP
 - features request

Session 2 (90 min)

- (10m) Virtualization (need to research more to get specific questions to drive discussion)
- (10m) Containerization (need to research more to get specific questions to drive discussion)

- Put together the slide deck for AMM - [Stefan WysockiUnknown User \(alexander.domin\)](#)
- Slide content -
 - What we've done so far
 - What we plan to do next
 - Marketing of project - invitation to collaborate

- Invite colleagues - @all
- Participants for workshop
 - [Unknown User \(alexander.domin\)](#)
 - [Stefan Wysocki](#)
 - [Unknown User \(johan.strand\)](#)
 - [Piotr Krawczyk](#)
 - [Stephen Lawrence](#)
 - [Gunnar Andersson](#)

Ideas for detailed agenda:

- System Design options
 - Overview system design options
 - Why AASIG does investigation into the VHAL subsystem
 - Virtualization
 - Containerization
 - Is there a design investigation to be made for using AGL components + Android?
 - What problems are we facing where just android is not sufficient?
- Vehicle Data Access ("GENIVI" way using graphql and AOSP way)
- **Testing**
 - Stephen can present 10-15 minutes (including Q&A) on the Lava Test Farm status