Entertainment Working Stream

Bi-weekly

05.09.2024

COVESA

IBC 2024 Workshop: The Car as a New Entertainment Platform

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IBC 2024: The Car as a New Entertainment Platform

Workshop Objectives

Connect leading car OEMs with Content Providers

Discuss the role of the car as the next platform of entertainment

Identify ways to remove friction to accelerate content adaptation in the car

Freely exchange views on the main use cases and onboarding bottlenecks between Content Partners and car OEMs

Attendees

Multiple leading global and local content providers

COVESA Car OEM members and non-members

General Information

Friday, September 13th, 2024 (onsite + remote)

2:00 pm - 4:00 pm CET

Meeting Room G107 at RAI Amsterdam
On top of the main/central halls (Hall 2)

Online: The link to be sent prior the event

Beach Party: 5:00 pm CET after the workshop
(Drinks & Snacks) → Details to be shared

Participants (onsite)

OEMs:

- Mercedes
- BMW
- Lotus
- Kia
- Hyundai
- Tata

Content Partners:

- YouTube
- Spotify
- RTL (Bedrock Streaming)
- BBC
- Xperi
- Bloomberg
- Videociety
- TV2
- TF1

Note: Still waiting for response from other Content Partners

IBC COVESA - Agenda

Presenter	Description	Time	Status
3SS	COVESA Entertainment Intro & Goals	15 min	Confirmed
YouTube	Automotive Industry Strategy – Content Distribution Strategy, Future Codes & Bandwidth Optimisation + QA	30-45 min	Confirmed
BBC	Broadcaster view on automotive (audio & video content)	30 min	Pending
Panel discussion	Joint discussion panel with Forvia, BMW, Mercedes, BBC and Bloomberg (TBC) on content distribution	45 min	Confirmed

*Exact agenda will be shared soon

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How to attend remotely?

Date: 13.09.2024

Time:

- **CET: 2:00 pm – 4:00 pm** (EU)
- **EDT: 8:00 am – 10:00 am** (Detroit)
- **PDT: 5:00 am – 7:00 am** (Bay area)
- **JST: 9:00 pm – 11:00 pm** (Tokyo)

Note: Presentation will be shared afterwards

Want to Join Virtually?

Be part of this unique event only following two steps:

1. Please register in 3Ready+ from here.
2. Join the workshop via **Live-stream** from here.

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Ideas for other topics? Please complete the survey

2-3 min to complete

COVESA - Video Initiative - Main challenges for video app in non-GAS

That survey aims to identify the most important pain points when bringing more video apps to the automotive environment (AAOS non-GAS).

The survey results will be a base for onsite discussion and workshop in upcoming COVESA IBC event in Amsterdam on 13th September. The workshop will involve various OEMs and Content Partners (e.g. YouTube, Spotify, TikTok and many more).

The overall goal of COVESA Video Initiative is to reduce access barriers for content providers by standardizing the technical implementation in the car.

Please specify the main challenges from each area (Hardware, Software, etc.) that you encountered or forsee when testing/deploying new video apps on Non-GAS environment

* 1. Challenges around **Hardware** (examples: Performance, CPU, GPU, Trusted Execution Environment TEE, codecs etc.)

* 2. Challenges around **Software** (examples: OS version, OS release cycles, OS updates, codecs etc.)

Thank you

Backup

Geolocation & Geofencing

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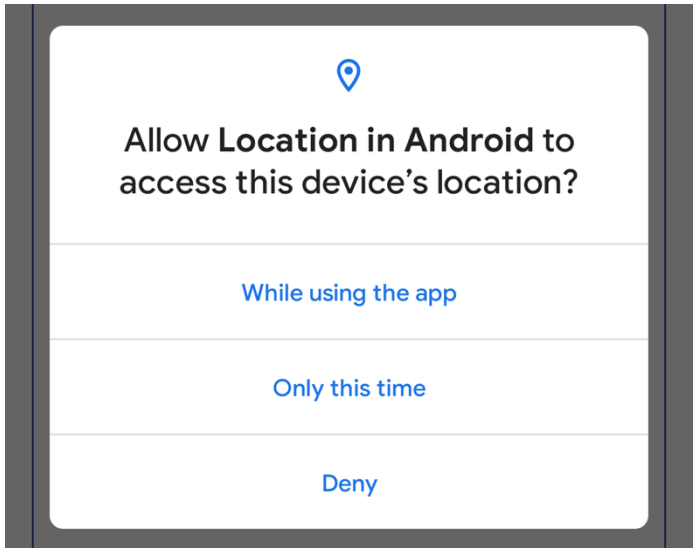
Geolocation (and Reverse Geocoding)



Source: Receive location updates in Android with Kotlin (google.com)

Geolocation is the process of identifying the physical location of a device or user based on data like GPS coordinates, IP address, or Wi-Fi networks.
Reverse geocoding is the process of converting geographic coordinates (latitude and longitude) into a readable address or place name.

GAS / non-GAS gap identified:
While Geolocation and Reverse-Geocoding **APIs** are part of AOSP, on non-GAS systems, the actual **Geocoding service** which translates GPS into addresses, is typically missing.

Open Questions:

1. Which OEMs do have the need for providing Geocoding to 3rd-party apps?
2. Would you be committing using a solution developed by the COVESA members?
3. Would you want to host this service on your own or centrally provided by COVESA?

Prices for Geocoding services:

Cost per 1,000 Geocoding API requests	
$5	Google APIs
$0.50 - $1	Other APIs

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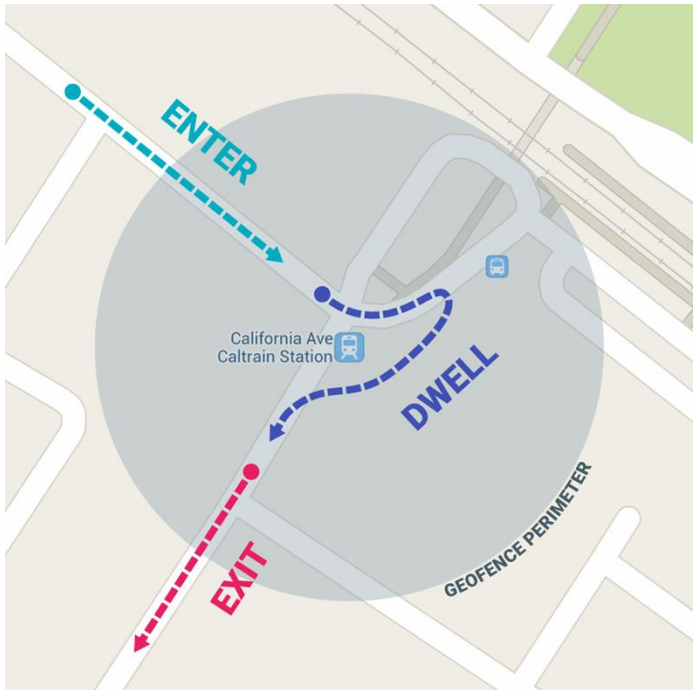
Geofencing



Source: Create and monitor geofences | Sensors and location | Android Developers

Geofencing is a location-based technology that creates a **virtual boundary** around a specific geographic area, triggering actions or notifications when a device enters or exits that area.

GAS / non-GAS gap identified:

Geofencing is not part of AOSP. It is only defined through Google Location services:

https://developer.android.com/develop/sensors-and-location/location/geofencing
https://developers.google.com/android/reference/com/google/android/gms/location/GeofencingClient
https://developers.google.com/android/reference/com/google/android/gms/location/Geofence.Builder.html
https://developers.google.com/android/reference/com/google/android/gms/location/LocationServices

Open Questions:

1. Which content providers are requiring geofencing?
2. Who could support creating a Geofencing API for the COVESA SDK?
3. Which OEMs are committing to testing the COVESA Geofencing APIs?

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Reverse Geocoding

Definition	Reverse geocoding is the process of converting geographic coordinates (latitude and longitude) into a human-readable address.
Why?	**Why is it important for non-GAS vehicles?** Non-GAS vehicles lack Google Maps, which includes reverse geocoding. Consequently, while these vehicles can retrieve GPS coordinates, they typically cannot convert them into the current country or state. To comply with content license restrictions, vehicles must identify their current driving country to enable video playback.
What?	**COVESA Video Expert Group to find a solution to substitute Google Reverse Geocoding APIs with another service independent of Google.**

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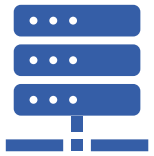
Reverse Geocoding – Technical Flow

Vehicle



Geocoder API*

Geo Database

`48.7790911, 9.0120675`

Input: GPS coordinates

Geocode request

Geocode lookup

`48.7790911, 9.0120675`
`= Stuttgart, Germany, DE`

Location processor **

`countryCode: DE`
`countryName: Germany`

`Germany [DE]`

Output: Country info

3rd-Party App

* paid services, billed per request
or (expensive) self-hosting is possible

** minimize response data to comply with privacy laws.

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Reverse Geocoding Service – Your Inputs

Requirements:

1. Which of your apps or features would require Geocoding?

2. Do you want to host such a service on your own?

3. Would you be using a solution developed by the COVESA members and hosted centrally somewhere?

4. Do you have budgets planned for geocoding services?

Identified topics to solve

How could the COVESA initiative help OEMs to get global streaming providers implemented?

1. DRM – closing the gap between GAS Systems with Widevine DRM L1 vs. non-GAS
=> defining the minimal requirements and standardizing the certification process

2. GEOLOCATION – using IP for geo-blocking streaming content is not feasible when using local IP hubs
=> standardize non-IP based location sharing in accordance with privacy laws

3. CERTIFICATION – => introducing a standardized way to certify entertainment apps for automotive readiness on non-GAS systems (streaming technologies, codecs, frame rates, …)

4. ANALYTICS – => standardization of streaming analytics data and reporting formats to easily track the quality of experience across all automotive platforms (average bitrate, error rate, …)

5. TECHNOLOGY – => defining the minimum requirements on hardware performance and software testing to become attractive for global streaming providers*

*Netflix for example requires more than 15 low-level interfaces to be implemented by the OEM. Others have similar requirements.

Roles & Responsibilities

Company	Who	Role
BMW	Melina Mascolo	Chair
GM	Richard Fernandes	Chair
Forvia – Faurecia Aptoide	Jose Freitas	Chair
3SS	Tomasz Dzikowski, Robert Glas	Contributor

Roles
Chair
Contributor
Consumer