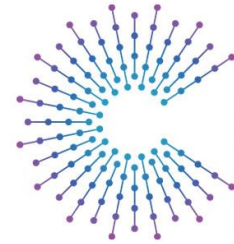


# Android Automotive Emulators

Ignite

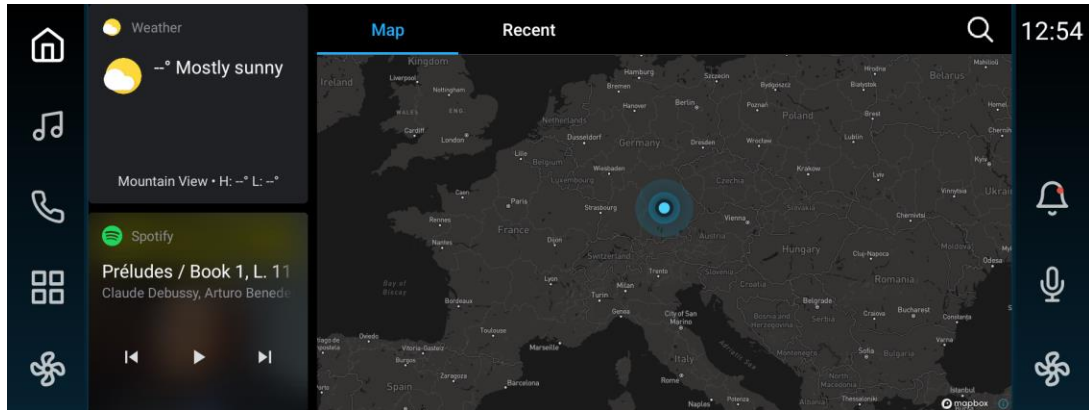
23rd October 2023



# COVESA

Accelerating the future of connected vehicles

# IGNITE EMULATOR FEATURES

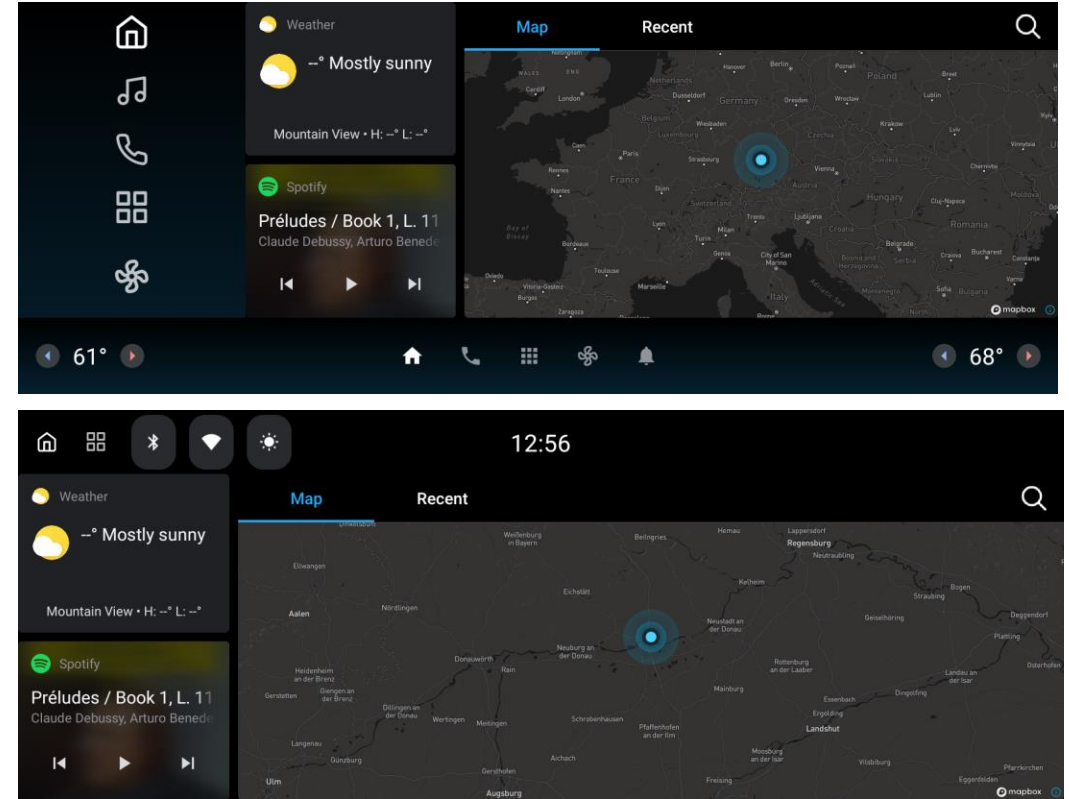
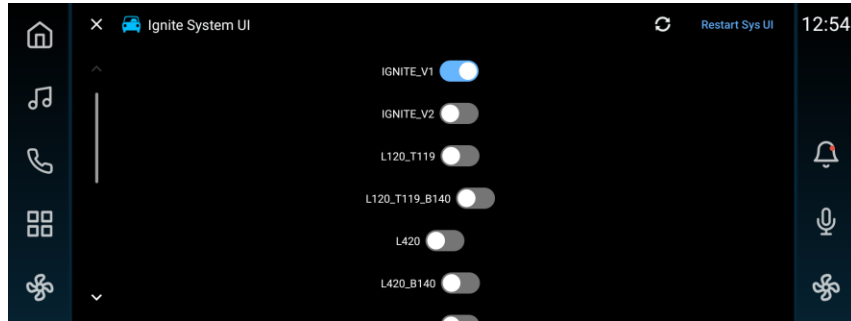


- 
- 1 System UI RROs and Settings Manager
  - 2 Multidisplay and Cluster
  - 3 Camera Enablement
  - 4 Voice API Services
  - 5 Automotive Video Library
  - 6 Unbundled Apps
  - 7 Car Companion Device + Phone Companion App
  - 8 Additional Features and Fixes
  - 9 Future
-

- System UI RROs and Settings Manager

# IGNITE EMULATOR FEATURES

- System UI RROs for System Bars and Navigation Bars
- Settings Manager



This allows, with one emulator, to simulate various OEM UIs

- Multidisplay and Cluster

# IGNITE EMULATOR FEATURES

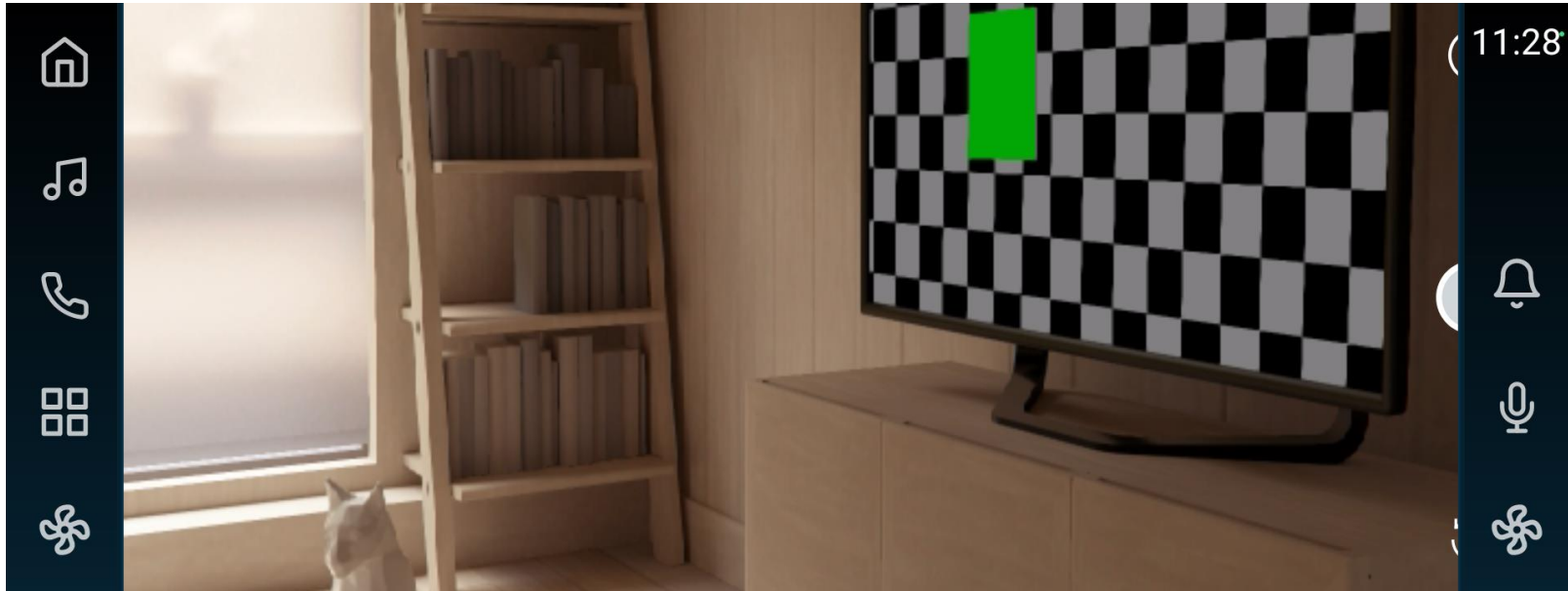
- Passenger Display without CAR UX restrictions
- Instrument Cluster
- No Emulator downgrade to < 30.8.4.0 needed



- Camera Enablement

# IGNITE EMULATOR FEATURES

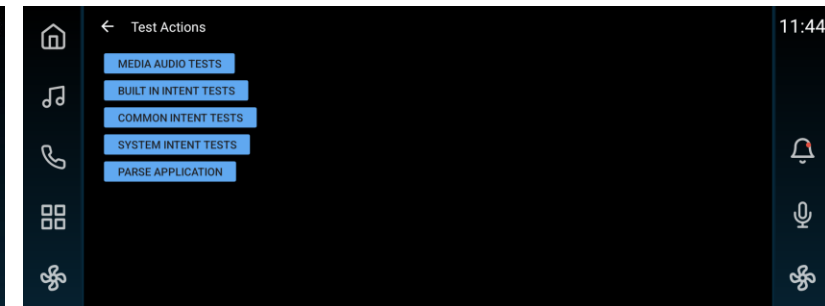
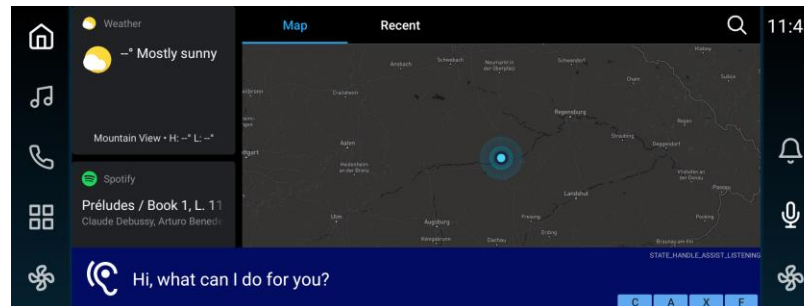
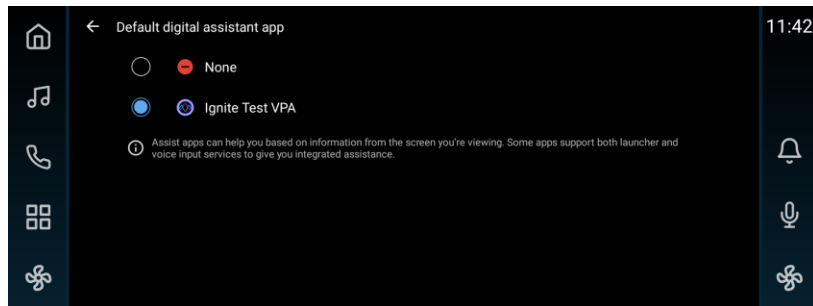
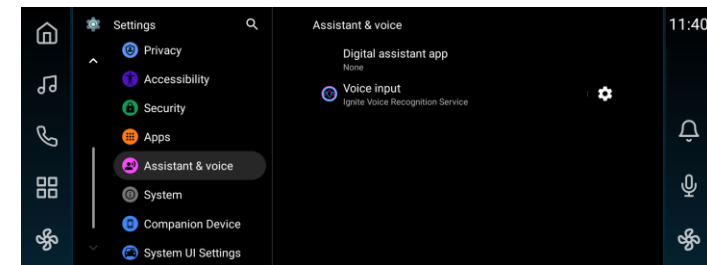
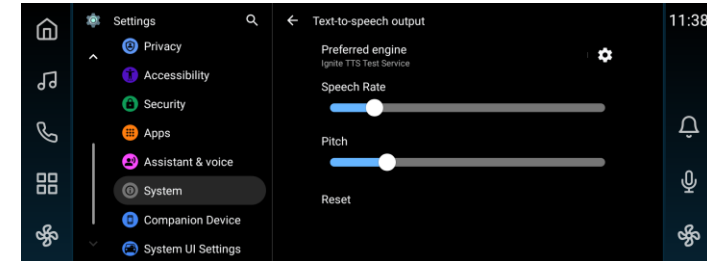
- Emulator Virtual Camera
- Support CameraX and Camera2 API with LENS\_FACING\_FRONT and LENS\_FACING\_BACK



- Voice APIs services

# IGNITE EMULATOR FEATURES

- Ignite TTS Test Service
  - Extends the TextToSpeechService interface and provides Text-To-Speech capabilities
- Ignite Voice Recognition Service
  - Extends the RecognitionService interface and provide Speech-To-Text capabilities
- Ignite Test VPA
  - Extend the VoiceInteractionService and VoiceInteractionSession interfaces and provides Voice Interactor capabilities
  - VPA capabilities for Common, System Intents and Media APIs
  - VPA Test Interface for Built-In Intents
  - Message notification reply



- [Automotive Video Library](#)

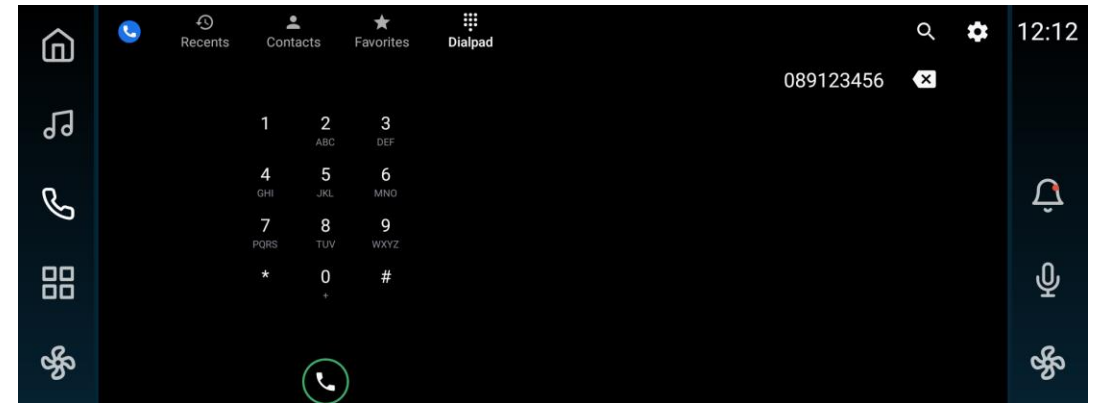
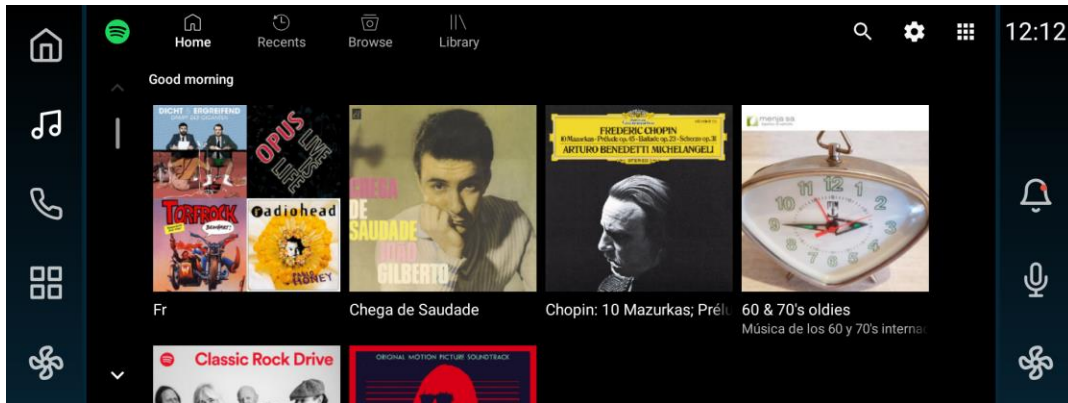
# IGNITE EMULATOR FEATURES

- Includes the AutomotiveVideoFeatureLibrary shared library for "android-automotive-video"
- Allows to run 3P video applications using `<uses-library name="android-automotive-video" required="true" />`
- NOTE: this has been now deprecated by Google and it will no longer required to push Automotive Video applications on GAS

- Unbulded Apps

# IGNITE EMULATOR FEATURES

- R, S, T and U emulators switched to the [Unbundled Apps](#)
  - Media
  - Calendar
  - Messenger
  - Dialer (emulator + HW versions)
- Based on ub-automotive-master-20230622 + Fixes



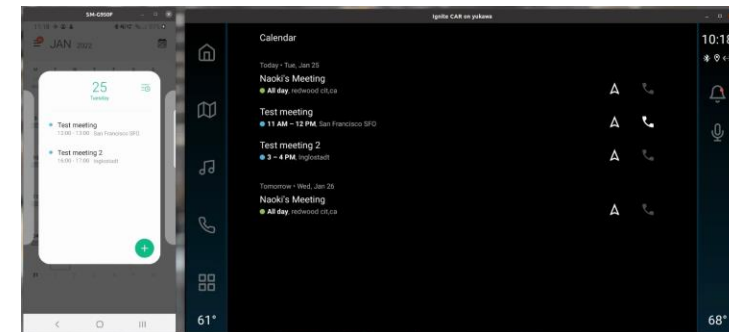
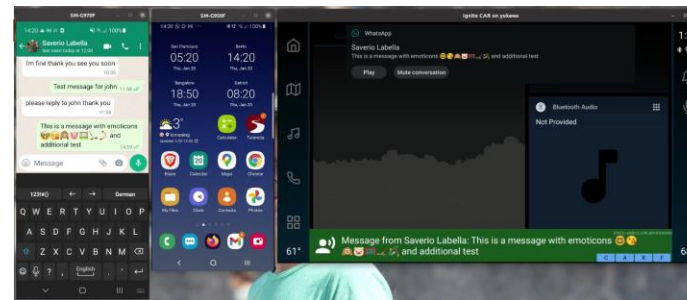
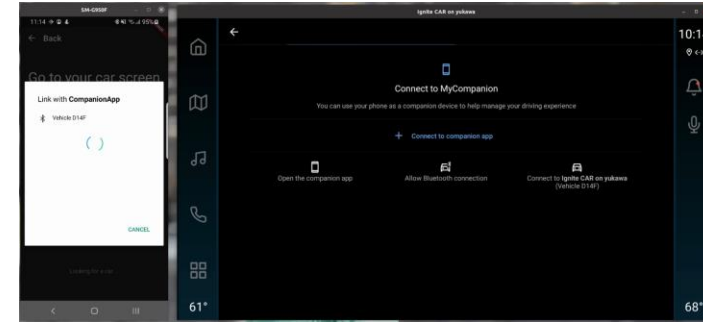


- Car Companion Device + Phone Companion App

# IGNITE EMULATOR FEATURES

## Car Companion Device + Phone Companion App

- Pairing
- Unlock Car profile
- 3P Messages read + reply
- Calendar Sync
- iOS ANCS 3P messages (read only, no reply)
- Car Companion Use cases only available on VIM3, not on RPI4
- Emulator supports standard BT use cases via USB passthrough (association, SMS/MMS notification + reply), a host device supporting BLE could enable other Car companion use cases



# IGNITE EMULATOR FEATURES

## Additional Features:

- Default to WEB LinkViewer, options to set default browser to WebView shell or Car HTML Viewer
- Added support for Home Widgets

## Main Fixes:

- Media Source intent <S
- Media Item Title
- First Boot Automotive User Selection <T
- FusedLocationProviderS fixes
- Audio\_HW S fixes
- Update to c2 codecs
- Unbundled Media Item title

## Scripts:

- Emulator packaging, patches generation, artifactory (private to Harman partners) upload

# What's Next

- TBD

