
world dab
SUMMIT
From Asks to Implementation
INITIATIVE TO ENHANCE BROADCAST RADIO IN
ANDROID AUTOMOTIVE

Broad Global Coalition Assembled in 2020

Strong WorldDAB Representation

Direct Participation by 4 WorldDAB Steering Board Members

Project Objectives

- Educate
- Advocate
- Prototype
- Implement
- Accelerate

android Automotive

Focused Working Groups

WG1: Communication & Engagement Team

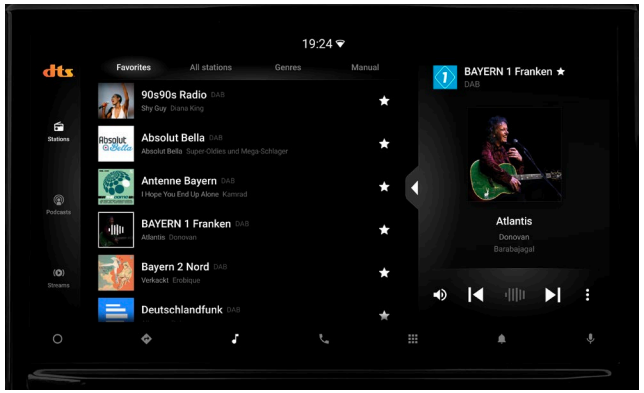
WG2: UX Design Team

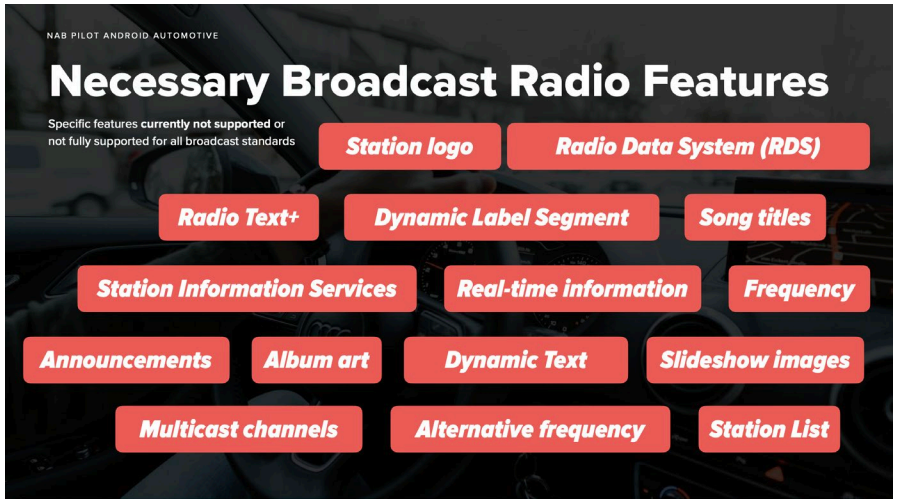
WG3: Implementation Software Team/Reference Hardware

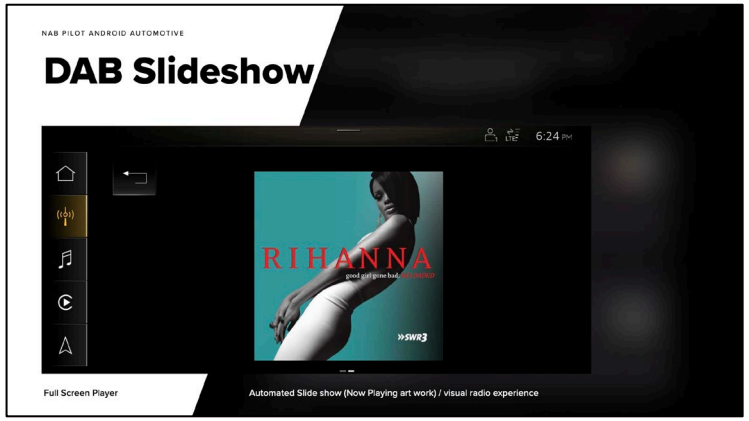
Analog

dab+

HD Radio®







Working with Google

- Complex
- Controlled
- Sequential
- Selective
- Driven by market position and opportunity

Working with Google - Motivation

- Driven by market position and opportunity

Since Android Automotive's Launch in 2017

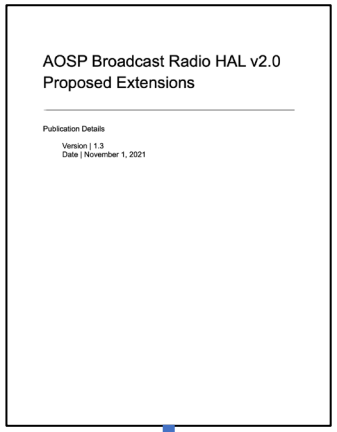
VOLKSWAGEN GROUP CARIAD A VOLKSWAGEN GROUP COMPANY	Ford	XPERI
59.02	30.37	57.78

Millions of Cars Manufactured or Deployed*

** Public reports through 2022*

NAB Pilot: Timeline and Delivery

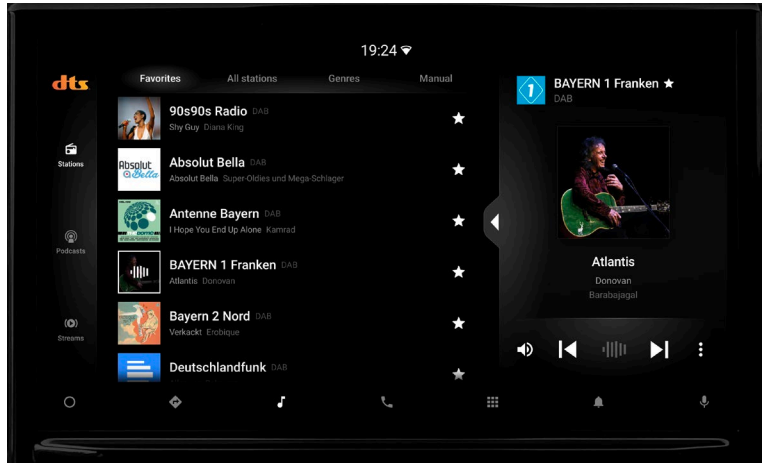
2020 – Project Formation


AOSP Broadcast Radio HAL v2.0
Proposed Extensions

Publication Details

Version | 1.3
Date | November 1, 2021

2021 – Project Execution & Delivery



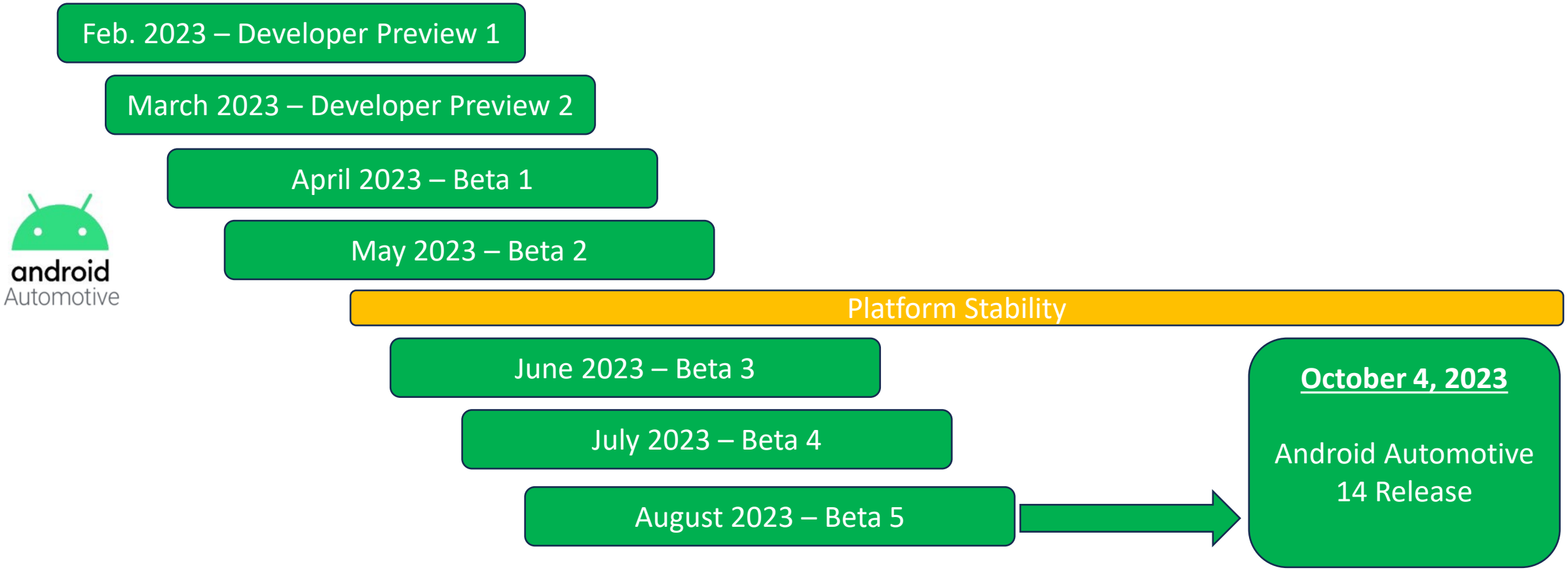
2022 – Engineering Support and Validation

Nov. 2021

android Automotive

2022/23 – Google Validation, Testing & Release

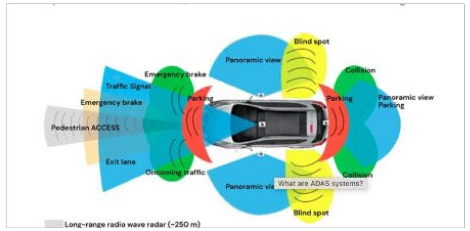
Google's Development & Release



android Automotive

Android Automotive 14 Complexity

android Automotive



ADAS – Driver Assist Systems

- ✓ AEB: Automatic Emergency Braking
- ✓ FCW: Forward Collision Warning
- ✓ BSW: Blind Spot Warning
- ✓ LDW: Lane Departure Warning
- ✓ ACC: Adaptive Cruise Control
- ✓ HOD: Hand on Detection

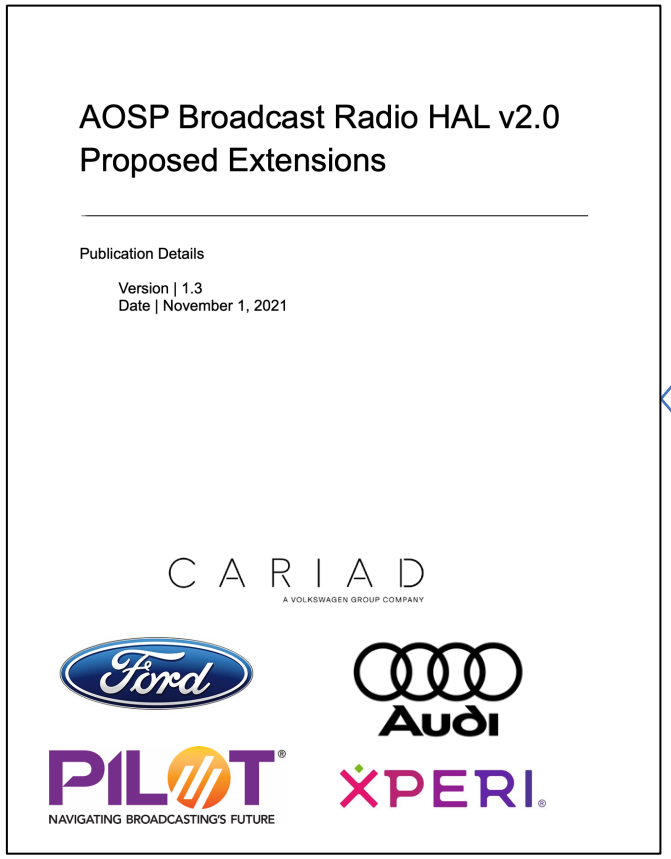
Non-ADAS Systems

- ✓ Steering Wheel Status
- ✓ EV: Braking, Acceleration & Battery
- ✓ Engine Idle
- ✓ Transmission Profiles
- ✓ Window, Mirror & Door properties
- ✓ Tire Pressure Status
- ✓ Seat & Headrest Configuration

Cockpit Control – Climate, Media & Navigation

- ✓ System Optimization
- ✓ Multi-display Mirroring
- ✓ Dynamic audio Zones
- ✓ Camera frames and metadata
- ✓ HUN: Heads up notifications
- ✓ Audio sharing
- ✓ Concurrent media sessions
- ✓ HVAC - Seats

The Asks…The Implementation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Ford

Audi

PILOT
NAVIGATING BROADCASTING'S FUTURE

XPERI

DOCUMENT REFERENCE

3.0 | HD Radio Extensions – *In Process*

4.0 | DAB Receiver Extensions - *Accepted*

5.0 | DMB Receiver Extensions - *Accepted*

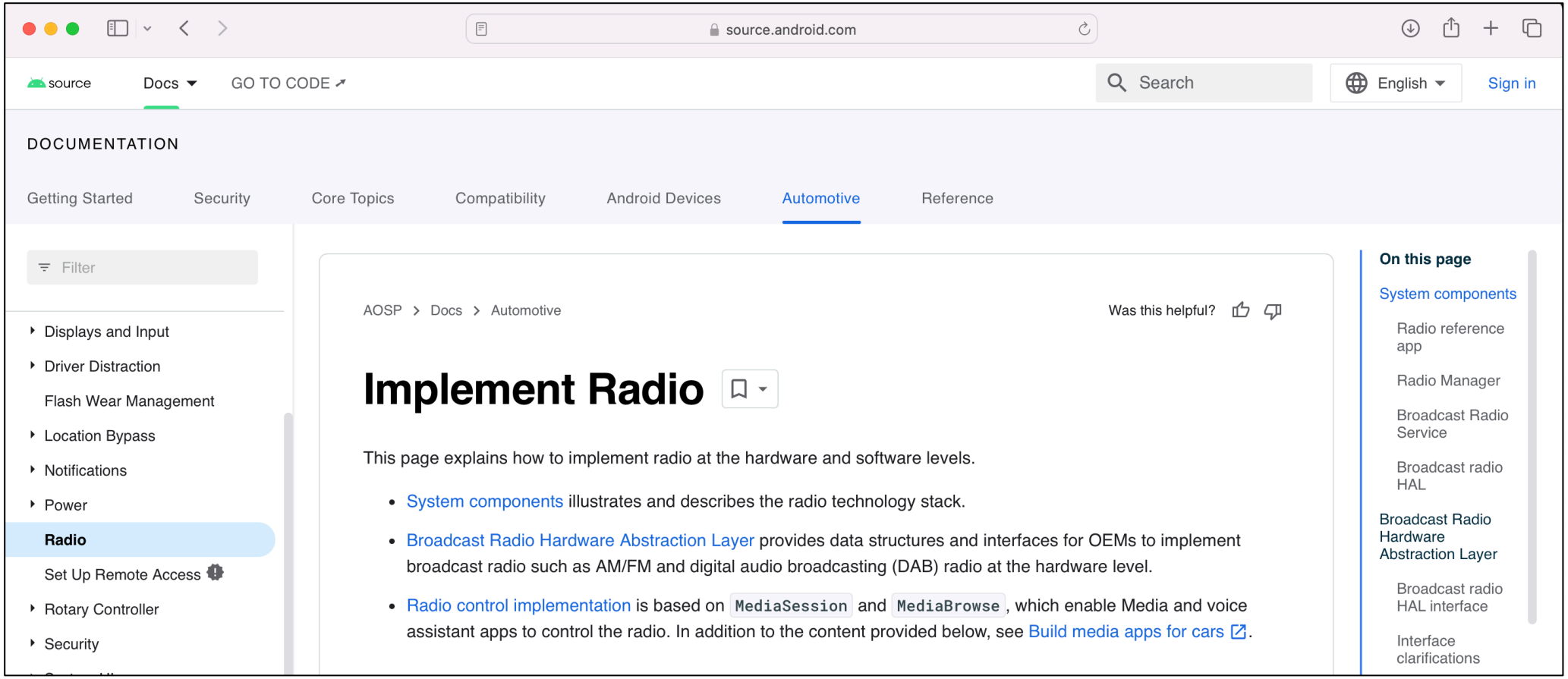
6.0 | Metadata Key Extensions – *In Process*

7.0 | Vendor Extensions – *Status Quo*

8.0 | API Extensions – *Accepted*

RADIO REMAINS A PROTECTED SYSTEM APP

The Implementation – Supporting Documentation



The Implementation – The Impact

- Ensures interoperability, portability and commonality across platforms, implementations and brands.
- Reduces need for branches and derivative work to support implementations
- Improved station identification, discovery and multiplex management
- Enhanced communication between system and app layers for optimized user experience

Conclusion – Broadcast Remains Relevant, but Requires Effort

- Google's innovation is driven by marketplace, commercial partners and scale
- Together we were able to engage and deliver improvements for radio
- We continue engagement for AOSP 15
- We are assessing releasing the full Phase 1 report

world dab summit 2023

Thank you to those who joined the effort

PILOT® NAVIGATING BROADCASTING'S FUTURE

XPERI®

John Clark

Senior Vice President, Emerging Technology and Executive Director, PILOT

NEW YORK PUBLIC RADIO

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