Digital Radio and the Connected Car

A Powerful Combination for Broadcast Radio

26 January 2018

Joe D’Angelo
Senior VP, Broadcast Radio

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Dynamic 18 Months

DTS acquires iBiquity
Oct. 5, 2015

DTS acquires All in Media
Sept. 2016

Tessera acquires DTS
Dec. 1, 2016

XPERI, Inc. Launched
March 6, 2017

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XPERI

Interconnect Technologies

SiP

Image Sensor

Wafer Bonding

Machine Learning

Connected Radio

Virtualization

Biometrics

Semiconductor Technologies & IP Licensing

Product Licensing

Semiconductor Packaging

Wireless Audio

Memory Stacking

MEMS

2.5D/3D IC

Iris

Recognition

DMS

Digital Radio

Audio Compression

Imaging

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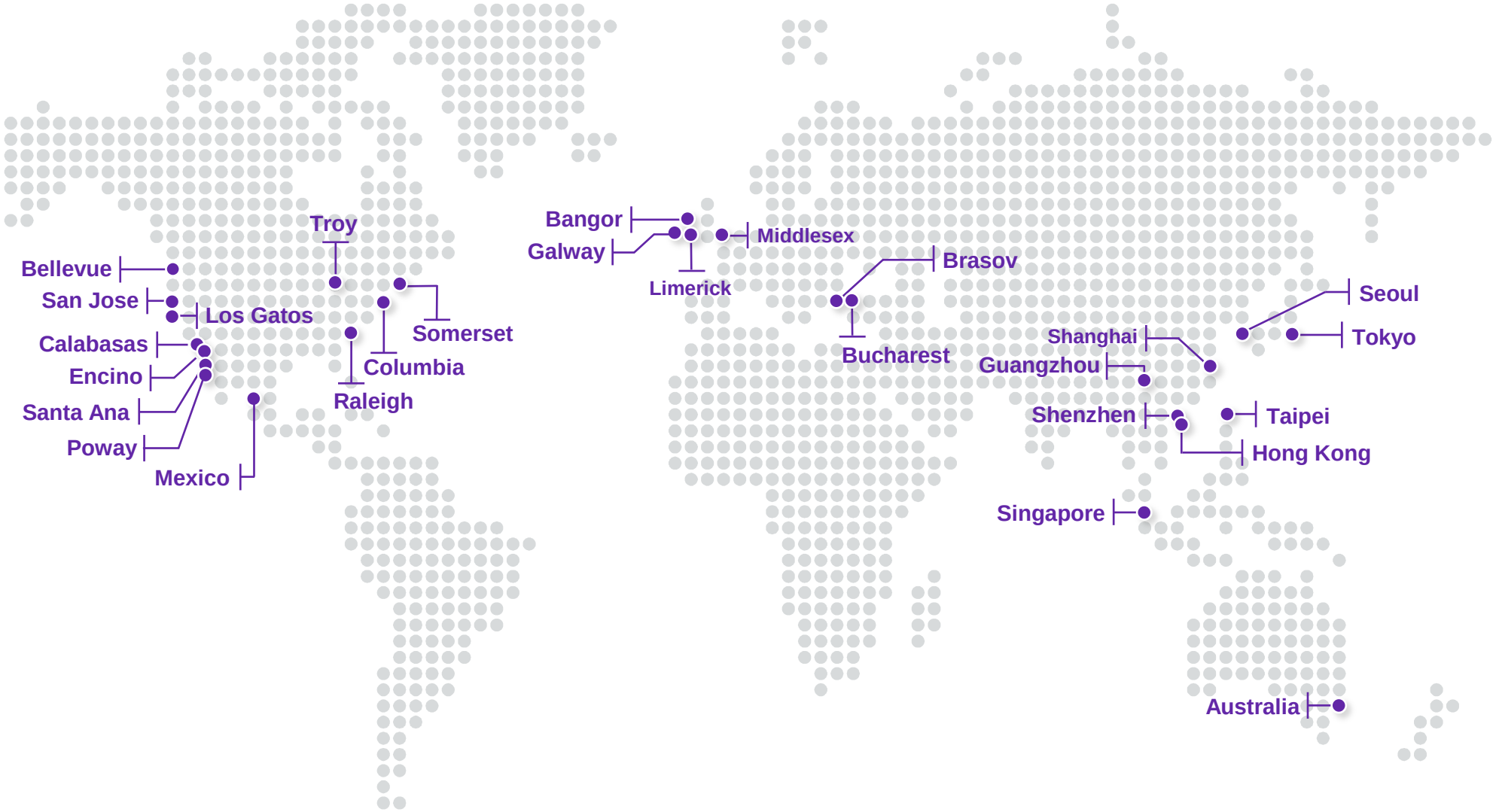
XPERI

Global Footprint



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Broad Technology Portfolio

Automotive

Xperi Broadcast Technology

aim all in media

dts Connected Radio

HD Radio Digital AM & FM

Over 6,000 Radio Stations Globally

DAB+ Digital Audio Broadcasting

HD Radio Digital AM & FM

+40,000,000 Vehicles

BENTLEY, BMW, Ford, JAGUAR, Mercedes-Benz, Cadillac, HYUNDAI, ACURA, Chevrolet, INFINITI, GMC, Porsche, NISSAN, MINI, VOLVO, LAND ROVER, LEXUS, TESLA, SCION, RAM, DODGE, LINCOLN, Alfa Romeo, HONDA, KIA, FIAT, mazda, Subaru, TOYOTA, Volkswagen, Audi, Rolls-Royce, MITSUBISHI, Jeep, Lamborghini, CHRYSLER

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Evolution of In-Vehicle Broadcast Radio

Then

Now

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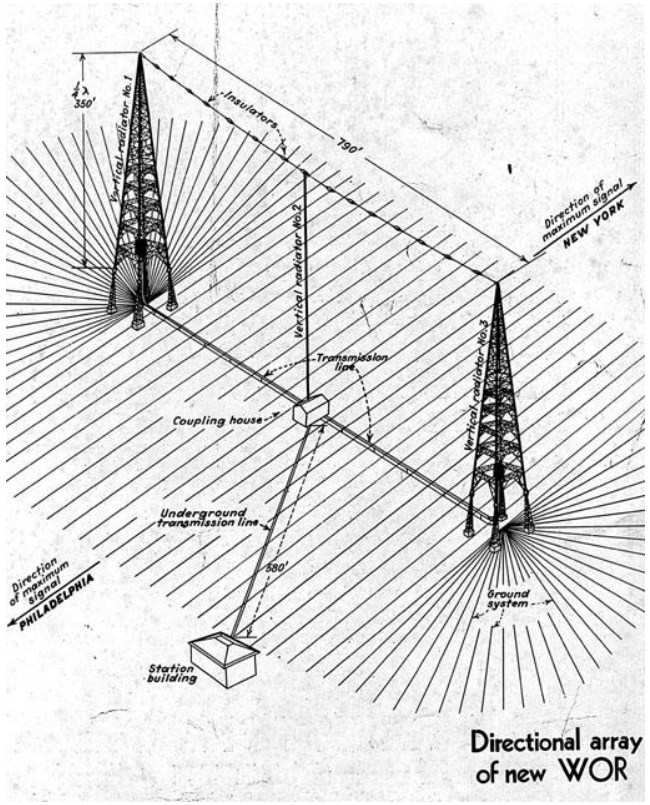
Evolution of Broadcast Radio – The Good Old Days



Broadcast

Then

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Evolution of Broadcast Radio – The Move to Digital

AM/FM Radio

DAB+ Digital Audio Broadcasting

HD Radio® Digital AM & FM

Broadcast

Now

IP

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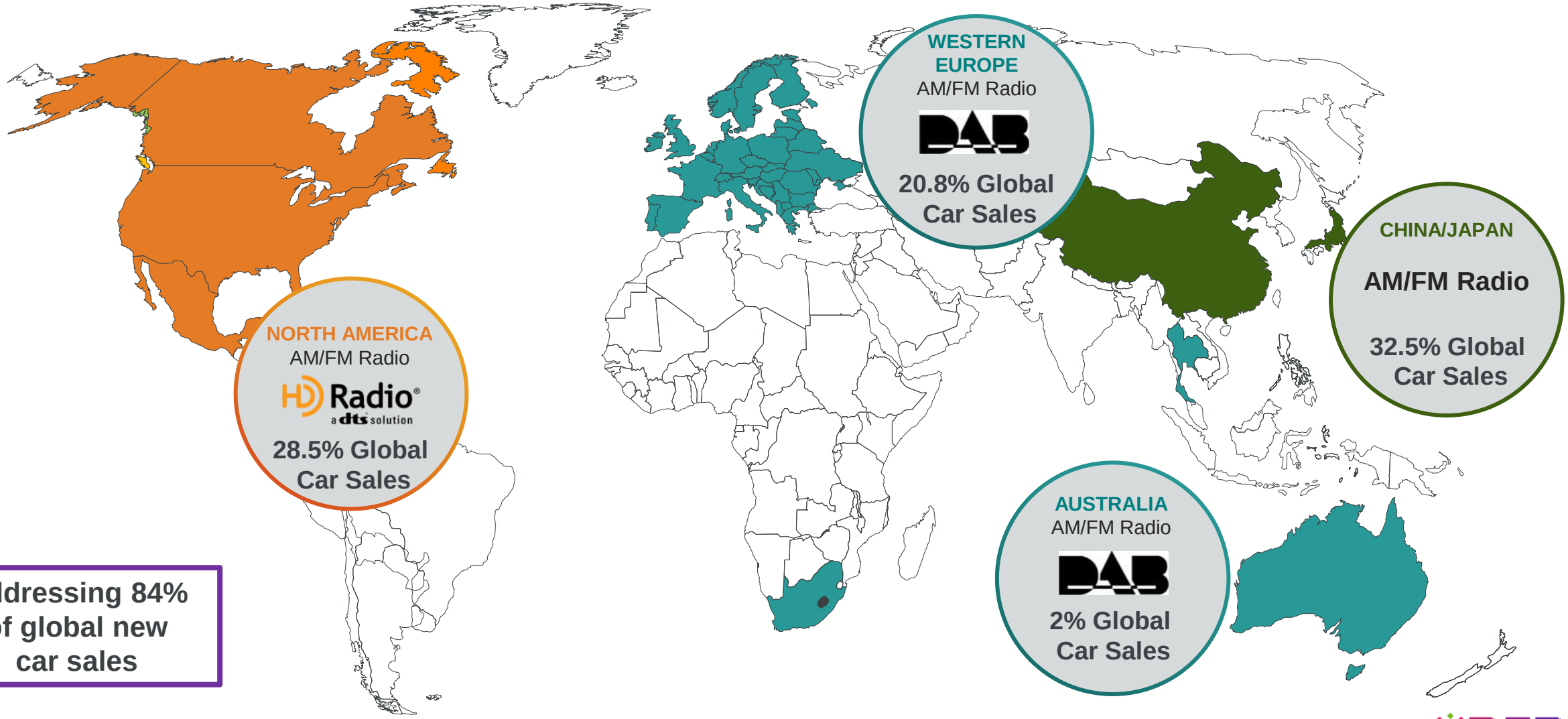
Evolution Broadcast Radio – The Global Challenge



Addressing 84% of global new car sales

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Evolution Broadcast Radio – The Solution for Cars

Deployed Broadcast Systems

AM/FM Radio

DAB+ Digital Audio Broadcasting

HD Radio a dts solution

Analog

DAB/DAB+

HD Radio

Silicon Vendors

Texas Instruments

NXP

Silicon Labs

…and more

Global Solution

Tier One Suppliers

HARMAN A SAMSUNG COMPANY

ALPINE Driving Mobile Media Innovation

BOSCH

LG

HYUNDAI MOBIS

…and more

Global Platform

Car Manufacturers

A Global Solution

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Evolution Broadcast Radio – The Solution for Cars

~60,000,000 CARS

DAB+ Digital Audio Broadcasting

HD Radio a dts solution

BENTLEY · BMW · Ford · JAGUAR · Mercedes-Benz · Cadillac · HYUNDAI · ACURA · Chevrolet · INFINITI · GMC · Porsche · NISSAN

MINI · VOLVO · LAND ROVER · LEXUS · TESLA · Scion · RAM · DODGE · LINCOLN · Alfa Romeo · HONDA · KIA · FIAT

mazda · Subaru · TOYOTA · Volkswagen · Audi · Rolls-Royce · MITSUBISHI · Jeep · Lamborghini · CHRYSLER

All Major Brands Are Committed to Digital Radio

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Digital Radio – Platform Differentiation*

** Examples shown are HD Radio receivers*

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Digital Radio – Apps Competing for Audience

Delivering Choice, Control, Engagement and Discovery

PANDORA®

Slacker RADIO

iHeart RADIO

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XPERI

New Technology Impacting the Dash

Commoditizing and crowding the digital dash

Apple CarPlay

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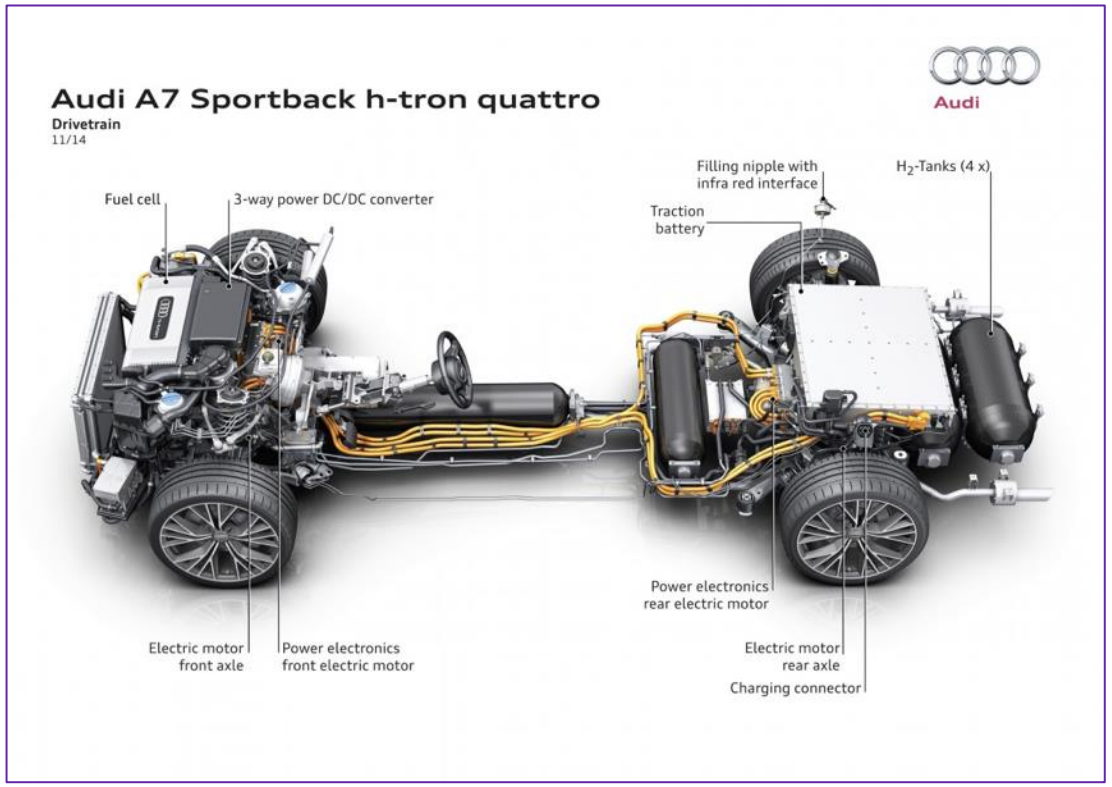
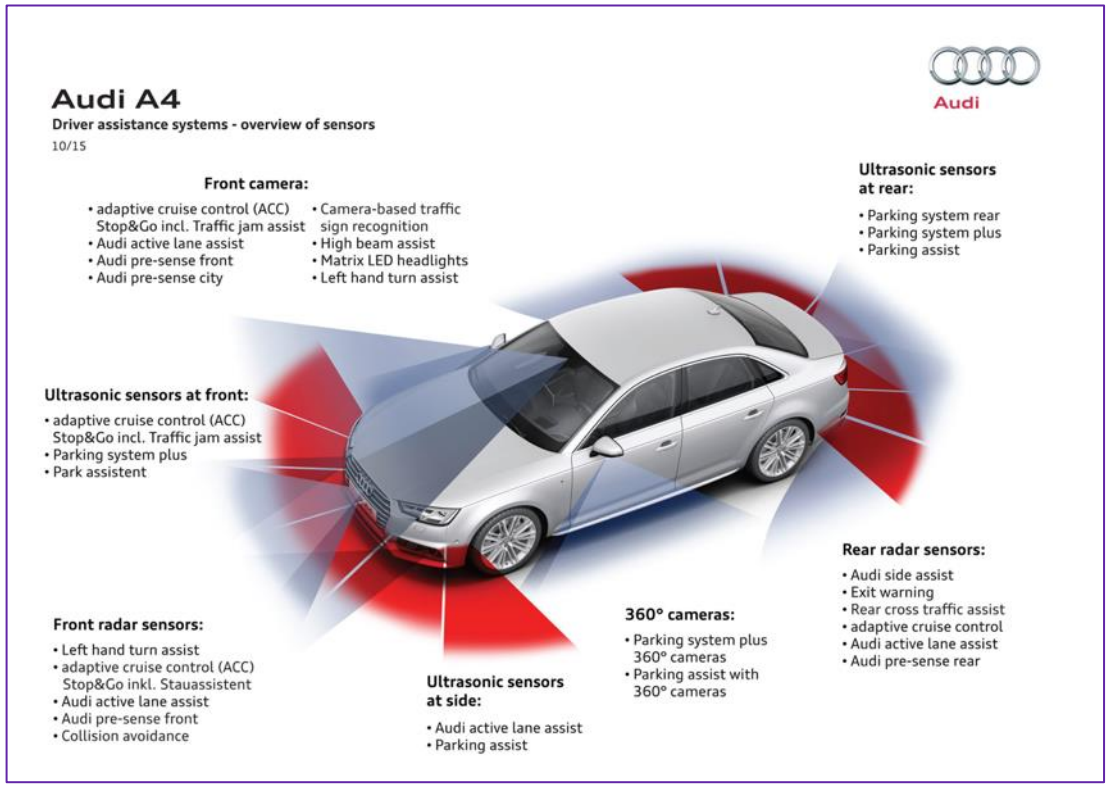
Automaker Innovation and Investment

Drivetrain



Advanced Driver Assistance



Competition for investment in entertainment and content delivery

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Worth protecting

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Because this is coming (it’s already here)

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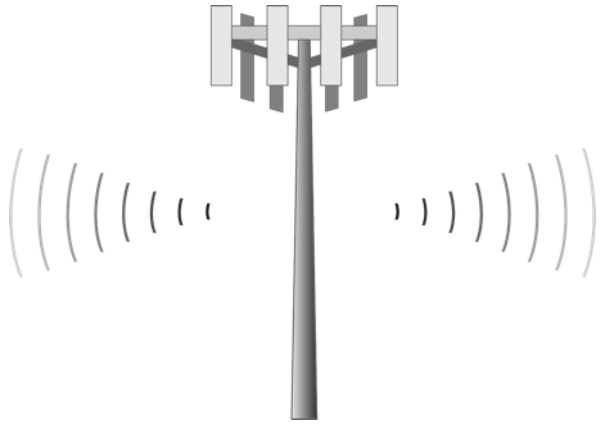
Connected Digital Radio – Dominating in the Dash

BROADCAST & IP

Radio's Unique Position



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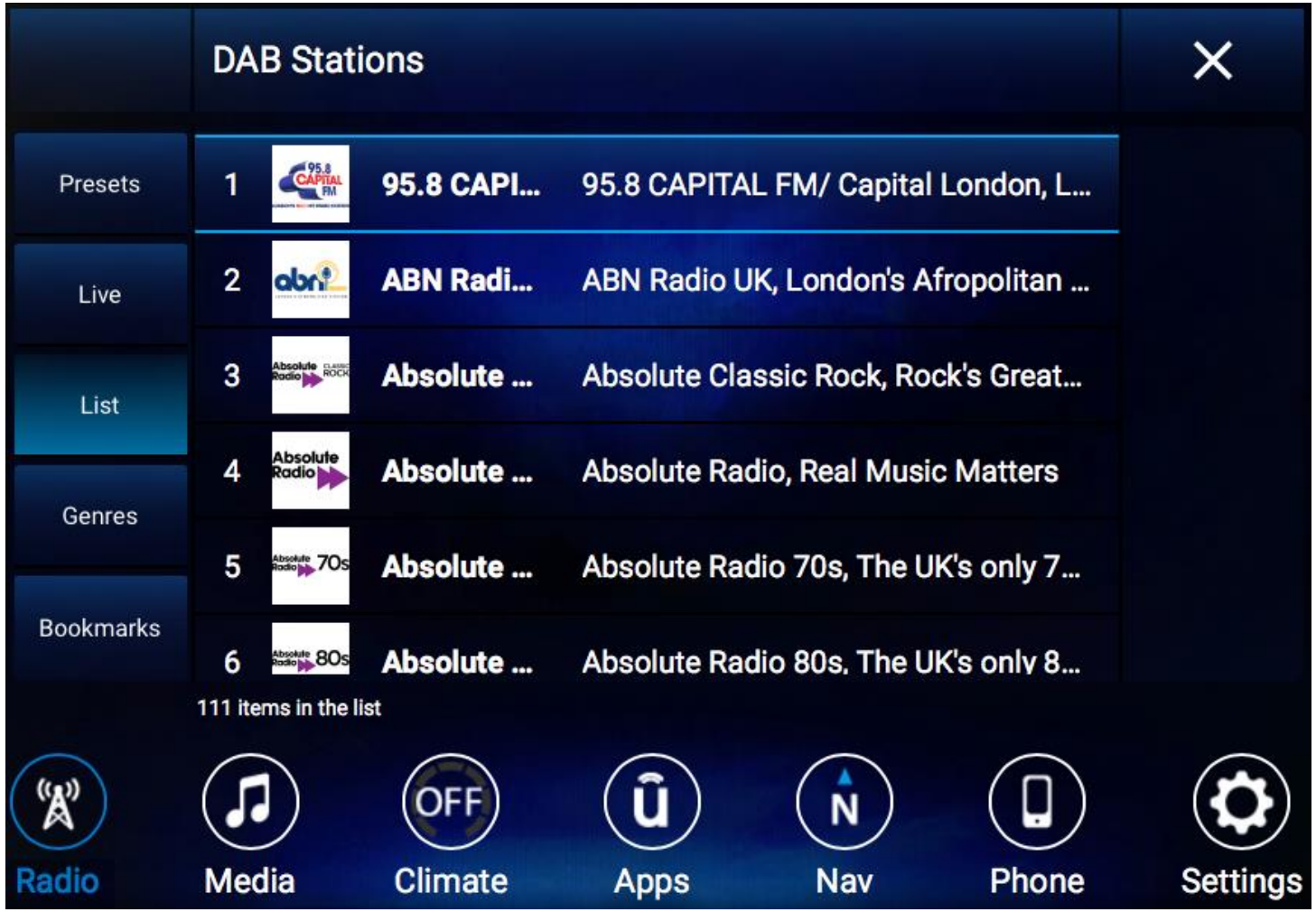
Connected Platforms Provide Unique Opportunities

dts Connected Radio

Enhanced Discovery

- ✓ **Branded Station List**
- Now Playing Live Guide
- Genre Search



DAB+ Digital Audio Broadcasting

AM/FM Radio

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Connected Platforms Provide Unique Opportunities

Enhanced Discovery

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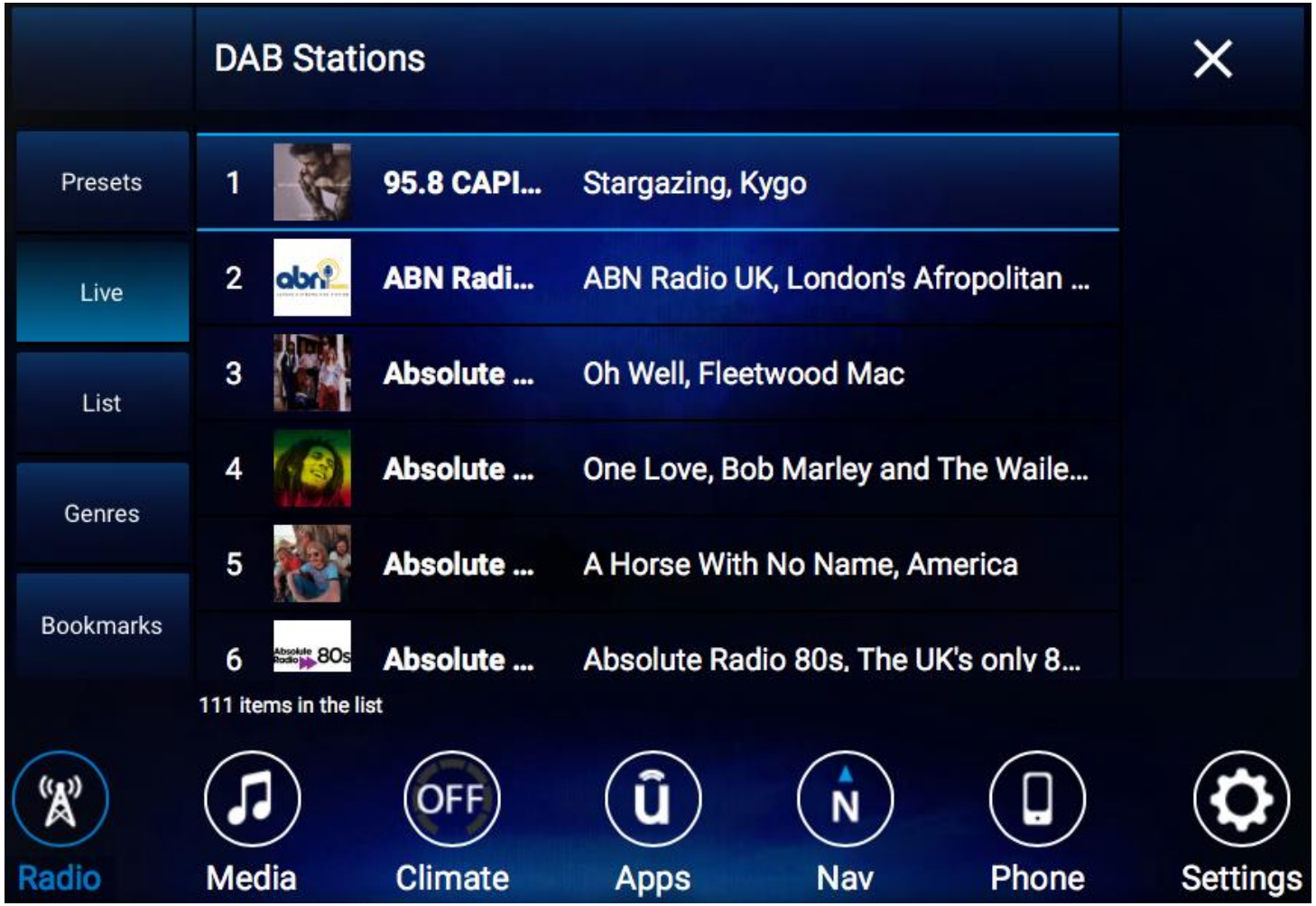

DAB+ Digital Audio Broadcasting

AM/FM Radio

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Connected Platforms Provide Unique Opportunities

Enhanced Discovery

- Branded Station List
- Now Playing Live Guide
- ✓ **Genre Search**

AM/FM Radio

© 2017 Xperi.

Connected Platforms Provide Unique Opportunities

Enriched Engagement

- Consistent metadata for now playing programming
- Images, genre, track and show information

DAB+ Digital Audio Broadcasting

AM/FM Radio

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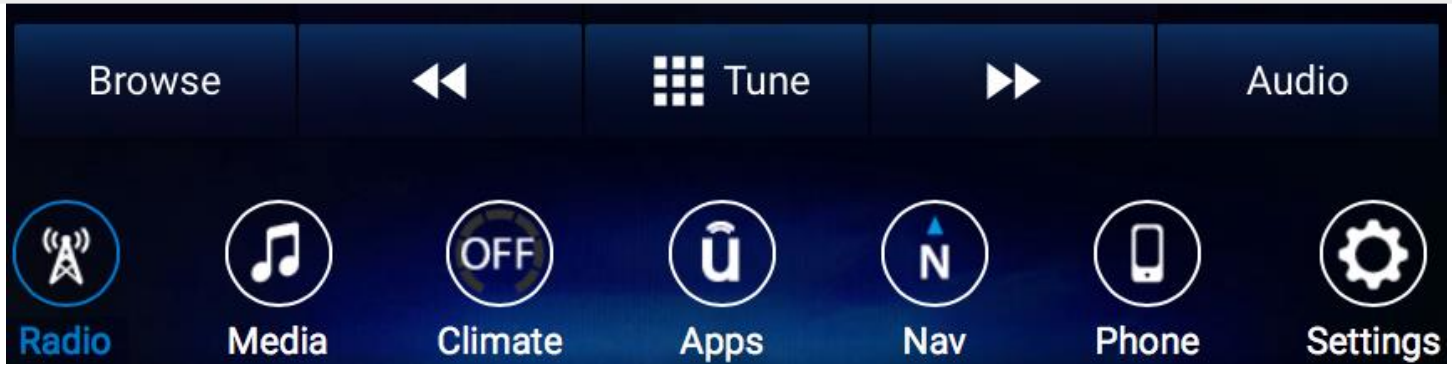
Connected Platforms Provide Unique Opportunities

Enriched Engagement

Metadata is critical to the experience!



DAB+ Digital Audio Broadcasting

AM/FM Radio

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Digital Radio - Adding Value thru Technology & Services

Today

0 - 5 years

Enhanced Broadcast Radio

Maximizing broadcast functionality

- Analog and DAB/DAB+

digitalradio Certification mark Approved Product

+

Tomorrow

1 - 10 years

Interactive + Measurement

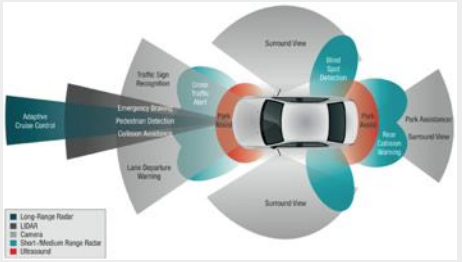
Leverage Connectivity

Drive Digital Bx Future

+

Beyond

5+ years



Leverage Digital Data Services

Deliver Critical Services

- Driver Assistance
- Autonomous Operations

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