
WorldDAB General Assembly

Digital Radio and the Connected Car - *The Expectations, Challenges and Opportunities*

November, 2018

Joe D'Angelo
Senior VP, Broadcast Radio

Who is Xperi?



Audio Technology Solutions



Imaging and Computer Vision Solutions



Automotive Audio, Data, and Digital Radio Broadcast Solutions

XPERI



Semiconductor and Interconnect Packaging Technology & Solutions



Intellectual Property Licensing



50 million cars

Automotive Business Unit

+6,000 Stations








Digital Radio – Changing the Face of the Medium



AM/FM
Radio



Percentage of New Car Sales

	United Kingdom	91%
	Australia	60%
	Norway	98%
	Germany	39%
	Italy	46%

Discovery • Choice • Branding • Engagement

Driving Consistency **digitalradio** 

© 2017 Xperi. Confidential. Do not distribute.

XPERI

Digital Radio – Changing the Face of the Medium



AM/FM
Radio



Discovery • Choice • Branding • Engagement

Driving Consistency **digitalradio** 



© 2017 Xperi. Confidential. Do not distribute.

XPERI

Connected Platforms Provide Unique Opportunities



BROADCAST & IP

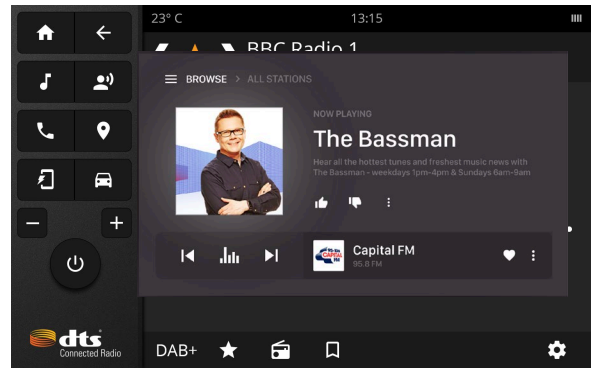
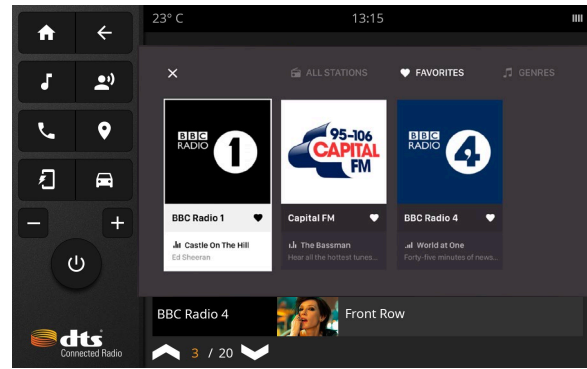
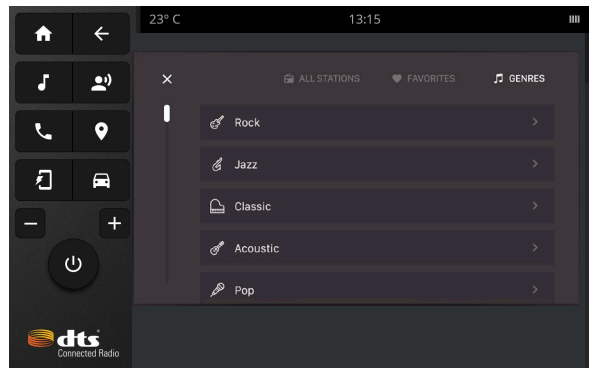
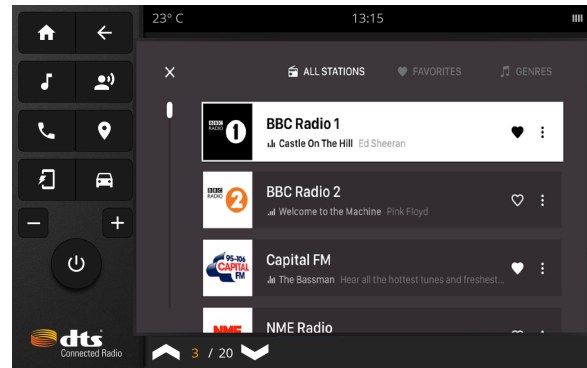


Discovery

Engagement

Enhanced Content

Insights & Metrics



One Car Company's Requirements for Connected Radio



Automotive Expectations



280+ Functional & Performance Requirements



System, Content and Network Security



Coverage in 68 countries



Product Development & Certification Support



Support for all Broadcast Frequencies



Field & Bench Test Support



GDPR & OEM Privacy Compliance



Service Support and Issue Resolution

One Car Company's Requirements for Connected Radio



Automotive Expectations	
280+ Functional & Performance Requirements	System, Content and Network Security
Coverage in 68 countries	Product Development Support
Support for all Broadcast Frequencies	Field & Bench Test Support
GDPR & OEM Privacy Compliance	Service Support and Issue Resolution

What's it going to take...



280+ Functional & Performance Requirements



- ✓ *Deliver live “now-playing” guide in 500 ms*
- ✓ *Provide complete station information for all stations in market – bandwidth optimization*



Coverage in 68 countries



- ✓ *45,850 radio stations*
- ✓ *Representing +85% of annual car sales*

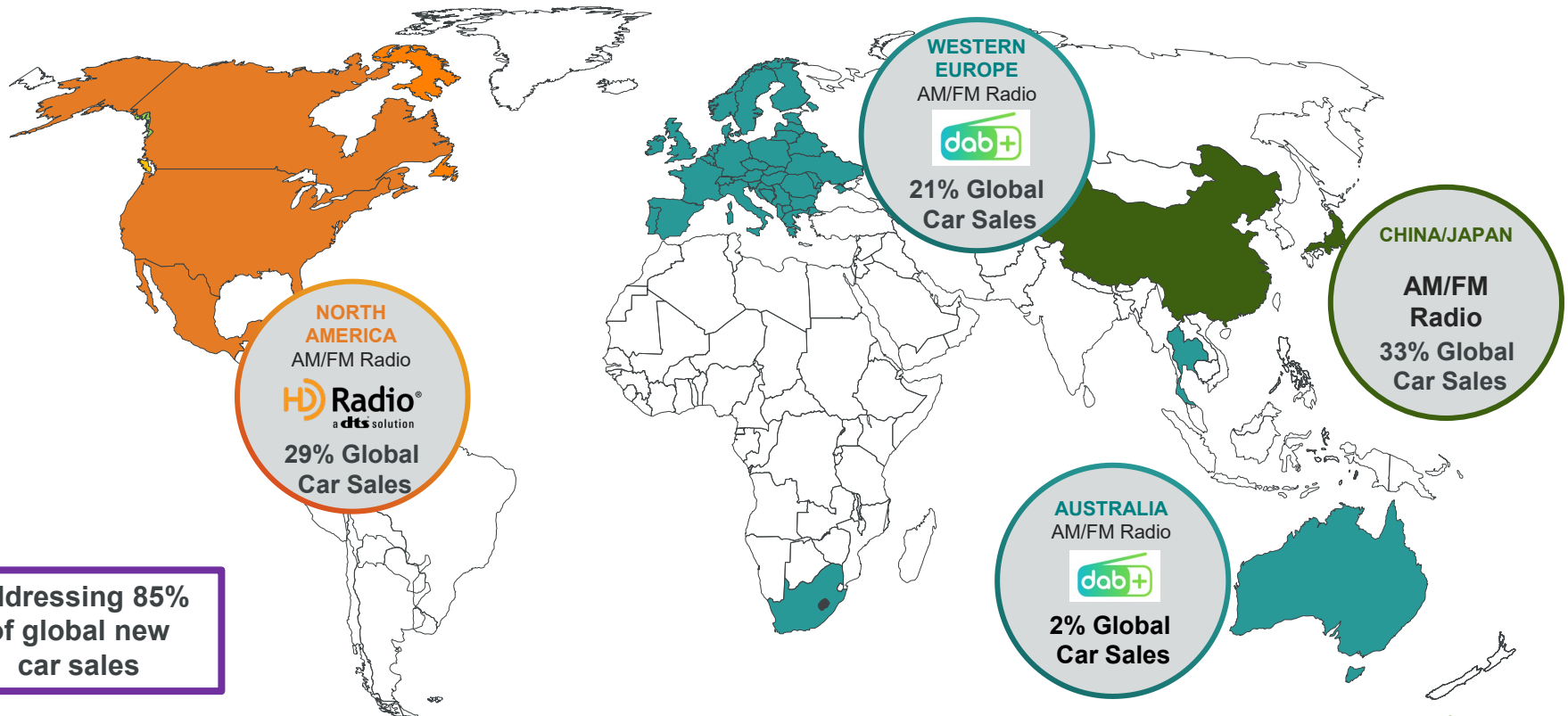


Support for all Broadcast Frequencies



- ✓ *135,777 transmissions*
- ✓ *Analog, DAB+ and HD Radio*

68 Countries Account for 85% of Global Car Sales



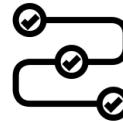
Connected Radio Keeps Broadcasters in Control



Broadcaster Expectations



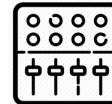
Editorial Control



Limited Impact on Workflow



Content Integrity



Limited Impact on Production



Content Protection



Speed to Market

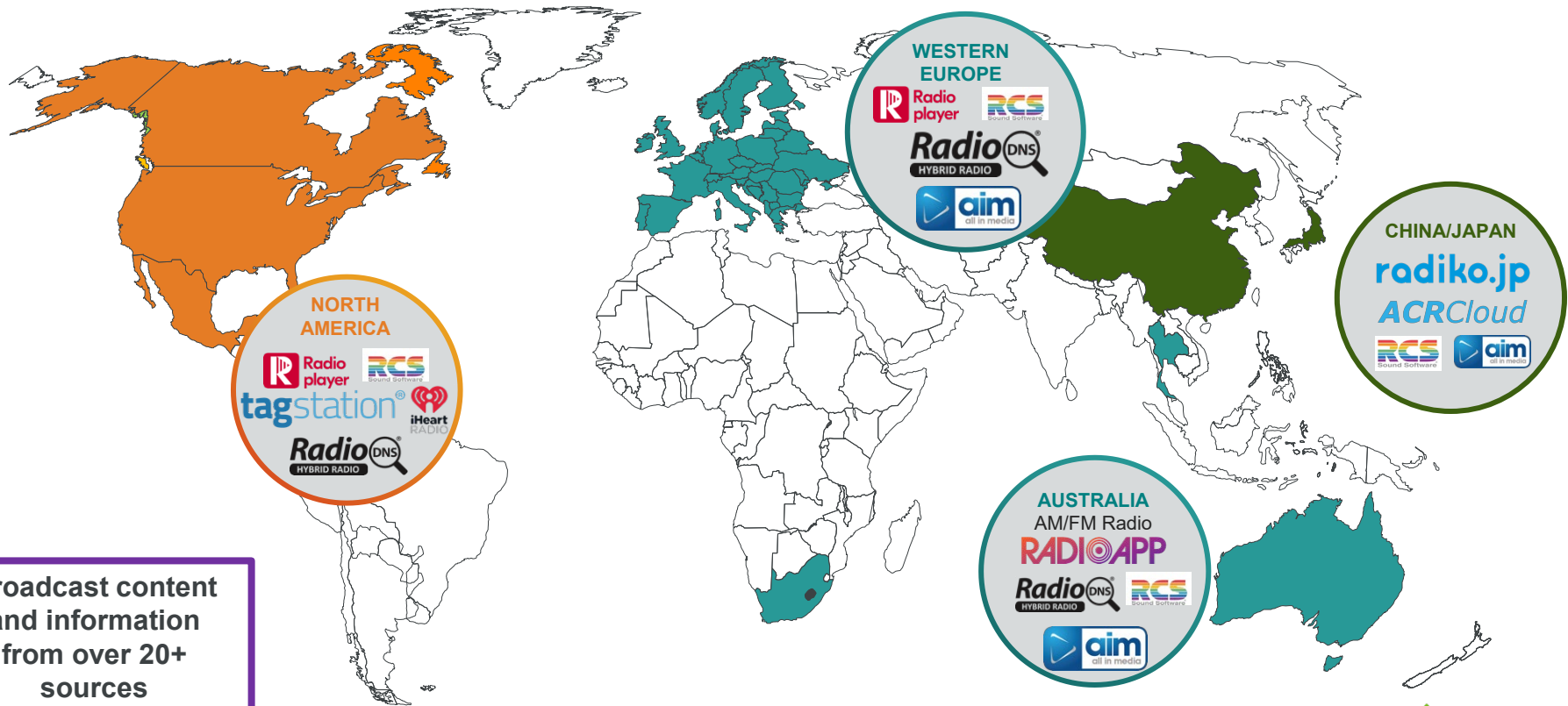


*Enhanced Listener
Insights and Metrics*



Enhance Radio's Prominence

Leveraging Existing Platforms for Coverage



Broadcast content and information from over 20+ sources

Xperi's Content Acquisition Approach

Leverage all available content sources – ensure broadcast control



Engaging with Broadcasters on Their Terms



XPRI
 March 15, 2018

Xperi Announces DTS Connected Radio Platform Accessibility Compliance Radioside Certification

DTS Connected Radio is a Super-High-Fidelity (SH-FID) and Super-Low-Latency (SH-LL) audio streaming service. SH-FID provides superior audio fidelity, while SH-LL provides superior audio latency. The SH-FID and SH-LL audio streams are delivered to the listener's device via a secure, encrypted connection. The SH-FID and SH-LL audio streams are delivered to the listener's device via a secure, encrypted connection. The SH-FID and SH-LL audio streams are delivered to the listener's device via a secure, encrypted connection.

RadioDNS

XPRI CORPORATION
 1000

March, 2018

XPRI

Xperi Announces DTS Connected Radio License Agreement with RadioPlayer Worldwide

DTS Connected Radio is a Super-High-Fidelity (SH-FID) and Super-Low-Latency (SH-LL) audio streaming service. SH-FID provides superior audio fidelity, while SH-LL provides superior audio latency. The SH-FID and SH-LL audio streams are delivered to the listener's device via a secure, encrypted connection. The SH-FID and SH-LL audio streams are delivered to the listener's device via a secure, encrypted connection.

RadioPlayer

XPRI

April, 2018

XPRI

Xperi and the BBC Collaborate to Enhance In-Car Radio Listening Experience

Xperi and the BBC have entered into a license agreement for the use of Xperi's SH-FID and SH-LL audio streams in the BBC's in-car radio service. The agreement allows the BBC to use Xperi's SH-FID and SH-LL audio streams in the BBC's in-car radio service. The agreement allows the BBC to use Xperi's SH-FID and SH-LL audio streams in the BBC's in-car radio service.

BBC

XPRI

September, 2018

XPRI

National Association of Broadcasters and Xperi Announce DTS Connected Radio Development and Evaluation Program

The National Association of Broadcasters (NAB) and Xperi have entered into a development and evaluation program for the DTS Connected Radio platform. The program will allow NAB members to evaluate the DTS Connected Radio platform in their own broadcast environments. The program will allow NAB members to evaluate the DTS Connected Radio platform in their own broadcast environments.

NAB

XPRI

September, 2018

Progress in 2018 – November, 2018



FOR IMMEDIATE RELEASE

XPERI

XPERI and Commercial Radio Australia Collaborate to Enhance Radio Experience in Connected Cars

CRA joins the BBC and the NAB to develop industry best practices for next generation car radios

FOR IMMEDIATE RELEASE

XPERI

XPERI and Commercial Radio Australia Collaborate to Enhance Radio Experience in Connected Cars

CRA joins the BBC and the NAB to develop industry best practices for next generation car radios

CALABASAS, Calif. (Nov 6, 2018) – Xperi Corporation (Nasdaq: XPER) ("Xperi"), is pleased to announce that Commercial Radio Australia (CRA) will join its growing list of broadcast radio

ER) ("Xperi"), is pleased to list of broadcast radio experience. Xperi's wholly owned smartphone apps, has a recently supported the streaming radio platform, will also content into the DTS®

on-going global automotive implementation and listener

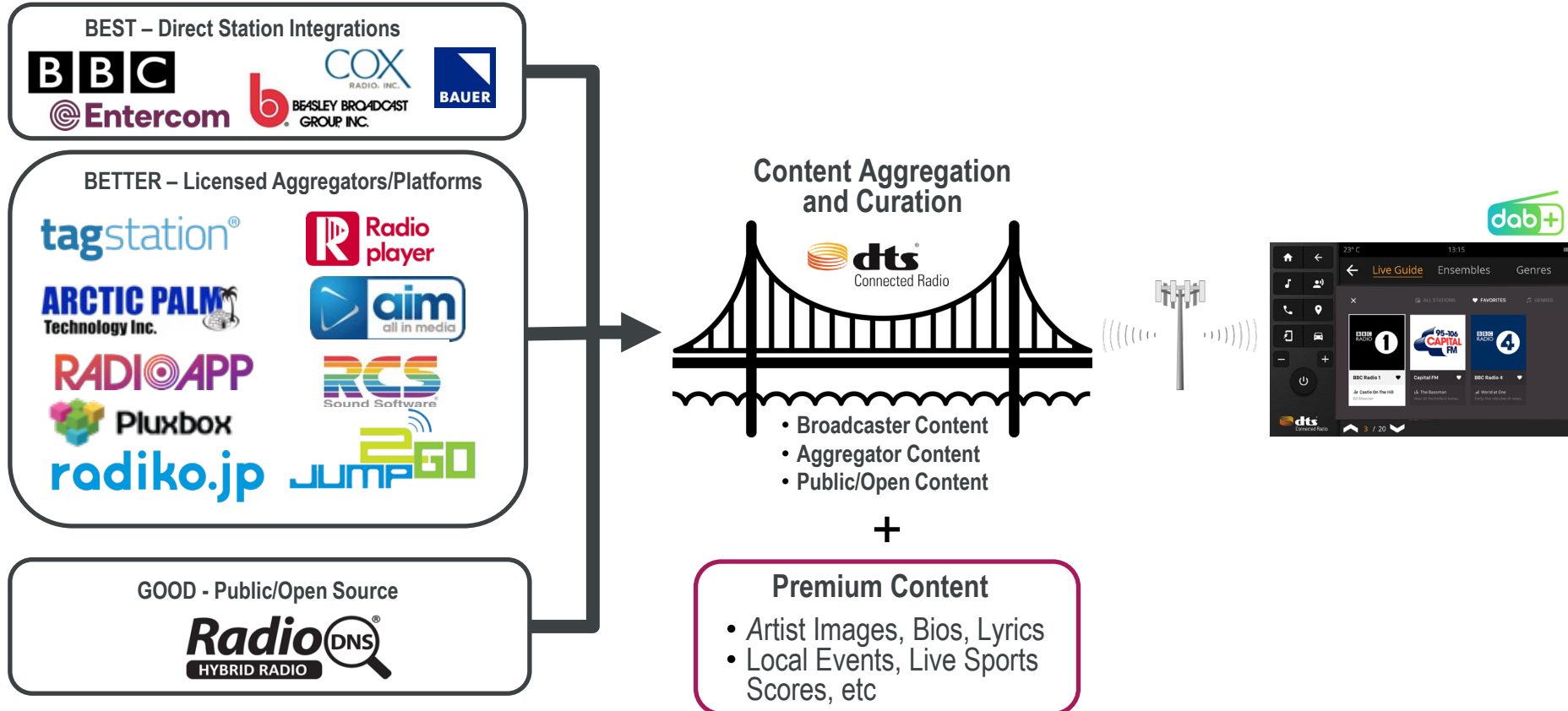
embracing new technology to said Jeff Jury, general manager of launch of DAB+, the industry wide Alexa skill. We believe, have joined Xperi in our efforts.

and internet technologies to," said Joan Warner, CEO of Xperi, representing Australia's first commercial development of the DTS

also delivers an innovative digital content with IP-delivered content. program and talent and more, from broadcasters

visit www.xperi.com/futureofauto and Instagram (@DTS).

Ensuring Broadcaster Control & Meeting OEM Requirements

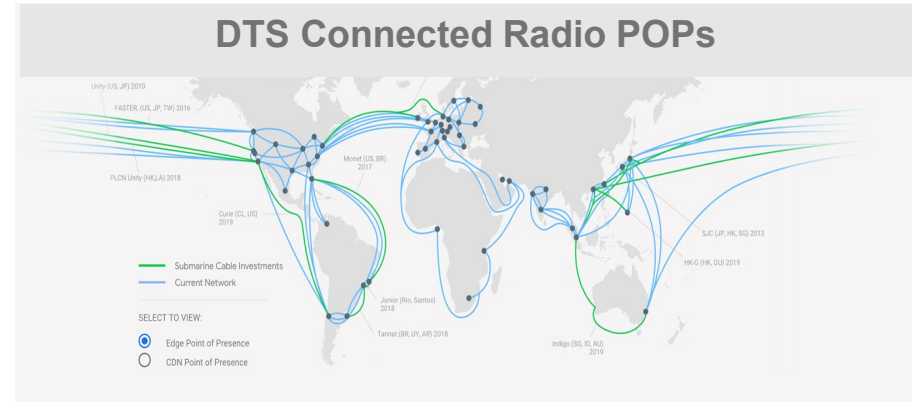
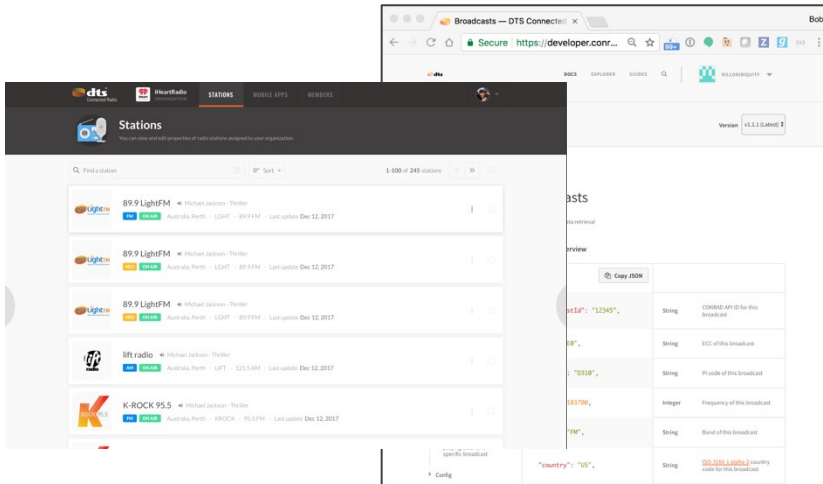


Global Ecosystem and Development Tools



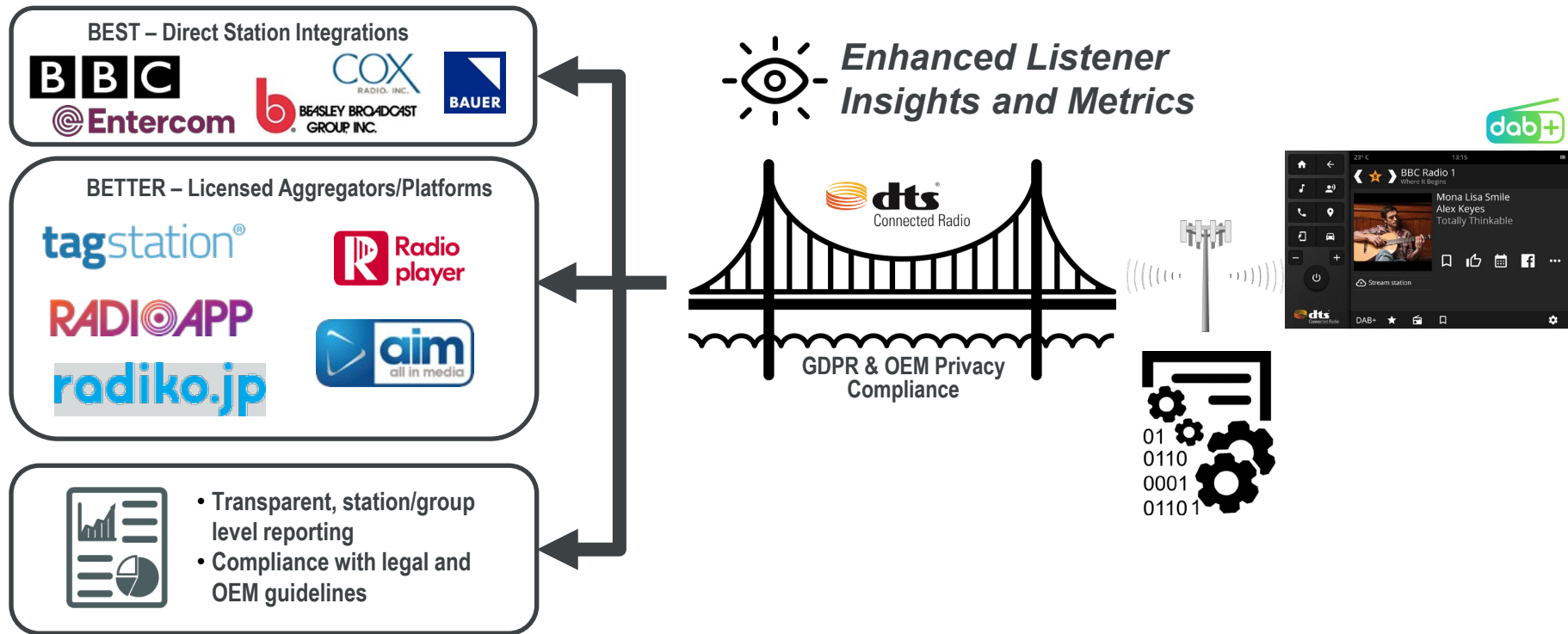
Worldwide Ecosystem, Points of Presence, Hardware Reference and Developer Tool Kit

Connected Radio
Evaluation Unit



Broadcaster & Tier One Development Kit

DTS Connected Radio: Ensuring Broadcaster Visibility



DTS Connected Radio: Ensuring Broadcaster Visibility

Audience Measurement

- Current listening
- Peak listening
- Station/cluster/group profile
- Audience heat maps
- Audience flow

Audience Detail


- Start/end of session w/ cause
- Average active listeners
- Average TSL per session
- Total TSL per reporting period
- Number of session starts
- Technology platform - analog/DAB+

Audience Analysis


- Vehicle market proximity
- Vehicle profile
- Platform profile











Delivering Value to Broadcaster, OEMs & Listeners




Broadcaster Expectations












<p> Editorial Control</p> <p> Content Integrity</p> <p> Content Protection</p> <p> Enhanced Listener Insights and Metrics</p>	<p> Limited Impact on Workflow</p> <p> Limited Impact on Production</p> <p> Speed to Market</p> <p> Enhance Radio's Prominence</p>
---	--

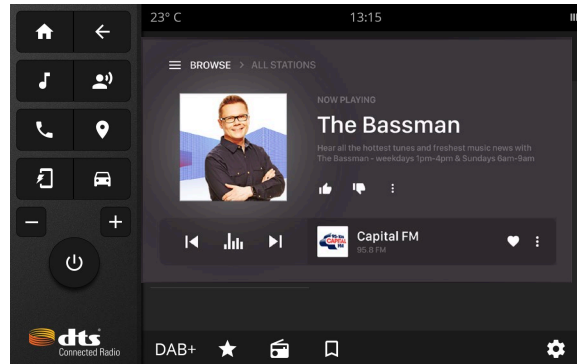




Automotive Expectations



<p> 280+ Functional & Performance Requirements</p> <p> Coverage in 68 countries</p> <p> Support for all Broadcast Frequencies</p> <p> GDPR & OEM Privacy Compliance</p>	<p> System, Content and Network Security</p> <p> Product Development & Certification Support</p> <p> Field & Bench Test Support</p> <p> Service Support and Issue Resolution</p>
---	--

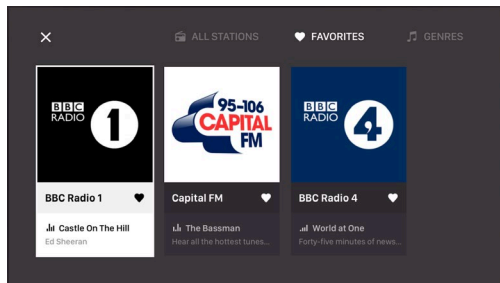



Some Final Thoughts



-
- Broadcasters' investment in DAB+ is driving significant adoption by car companies
 - Connectivity is coming to the car and changing in-car listening
 - Consumer expectations are extremely high driven by smartphone experience
 - Broadcasters can exploit these technologies by using them together to create an unmatched service offering
 - Time to market, consistency and quality services are critical to consumer & OEM acceptance

BBC



BBC  **dts**
Connected Radio

COLLABORATING TO ENHANCE
THE IN-CAR RADIO LISTENING EXPERIENCE

dts.com

XPERI.
Visit Our Stand
to Learn More

