



WorldDAB Automotive 2021 Event Summary

Disclaimer: This report is intended as a quick overview of the event. Before quoting any of the speakers we recommend that you refer to the original presentation and check with the speakers themselves.

Session 1 - Radio's future in the car - the big picture





Digital radio - a global overview Patrick Hannon, President, WorldDAB

- DAB+ is now firmly established as the primary platform fro radio in new cars in Europe: in H2 2020 over 80% of new cars in Germany, UK, France and Italy had DAB+ as standard.
- DAB+ in cars is set to grow further following the introduction in December 2020 of the European Electronic Communications Code (EECC), requiring all new car radios to have digital terrestrial radio.
- The focus is to optimise the in-car radio experience creating more intuitive user interfaces, offering more attractive visuals (e.g. station logos) and leveraging the respective benefits of DAB+ and IP for smart (or hybrid) radio.



What's driving the automotive industry

Martin Koch, Head of Development Entertainment & Car Functions, VW Group

- The position of DAB+ in the car is more solid than ever due to the EECC.
- In the car more and more entertainment options fight for attention of drivers and passengers (e.g. video, games).
- Radio should provide more than "audio only", in order to entertain their audience on large screens (for example an online slide show).
- Android Automotive provides broadcasters with the opportunity to extend their offers by developing their own in-car apps.



Public broadcast media today Antonio Arcidiacono, Director of Technology & Innovation, EBU

- Multi-tuner management is needed to take advantage of different tuners: Cellular, DAB+, 5G broadcasting, Satellite.
- Broadcasters can create shared and personalized experiences by combining distribution paths. Broadcasters' own apps, can provide archives, past shows, podcasts, dynamically-generated content, personalized playlists etc.
- Content can be adapted according to the length, traffic level and location of the journey, plus whether it is an individual or group experience.
- Your car needs to speak your language when travelling abroad: local news and content.



Using new technologies to keep radio strong

Caroline Beasley, CEO, Beasley Broadcast Group Interviewed by Joseph F. D'Angelo, Senior Vice President, Broadcast Radio, Xperi Inc

- Radio should look as good as it sound sounds, broadcasting visuals such as song titles, artist info, advertising over the air and displayed on dash board.
- It is important to communicate more visually with the audience and provide more return for advertisers.
- Technology is evolving and changing, meaning radio broadcasters cannot stay as traditional broadcasters - we have to see what opportunities and technology are out there so we can compete with big tech and keep our own data.
- The industry should unite with a common voice to achieve the best future for radio. $\hfill 2$

Session 2 - Creating a seamless listener experience





BBC research: in-car ethnography Aleksandra Gojkovic, Researcher, BBC

- In February 2020 the BBC studied the in-car behaviour of 20 participants, to understand the opportunities and threats presented by connected cars.
- The research discovered a complex ecosystem of factors driving people's incar audio choices such as journey length, purpose and company determine in-car need states, while perception, availability, discovery and investment influence content choice.
- More so than other media, audio choices in-car tend to be fast, instinctive and always gravitate towards the path of least resistance. Catering for a range of our audiences needs and occasions will allow them to be as confident as they can be in their choice.



France: auto makers and broadcasters' preparations for national DAB+ Jean-Marc Dubreuil, Manager - France, WorldDAB and member of French joint broadcaster and vehicle manufacturer working group

- The industry is talking in France to solve end user experience issues in cars.
- The diversity of receivers, designs and generations, combined with the complexity of the landscape, can lead to a poor end user experience add to that France test routes (urban, coastal, mountain and borders) and the diverse typography is a great field test.
- Vehicle Manufacturers and broadcasters need to work together early to ensure that the features promoted by one or the other are supported by both industries (including services and metadata).



Broadcasting station logos - technology, bandwidth and cost Glyn Jones, Digital Radio Commercial and Operations Manager, Arqiva

- Arqiva trialed a method of ensuring broadcasters' up-to-date logos are displayed on in-car systems.
- In-house trials of the technology started the process using the latest specification, Step two identified a cheap and low-effort way to source logos and know that they are up-to-date.
- Station logos were broadcast on a particular local MUX and checked plus a logo for a station not on the local MUX was added for continuity. All of the logos of stations were added on D1 and SDL.
- The next stage is step by step implementation plan with VMs & their supplies.



Getting vocal - making radio discoverable with voice recognition Joan Warner, CEO, Commercial Radio Australia

- The foundation for radio in-car must be free-to-air broadcast radio, with IP providing richer content, metadata and interactivity.
- Broadcasters need to continue to participate in global efforts to make sure that as connected cars roll out radio is prominent and the experience meets and exceeds what our listeners expect.
- It is an interesting and exciting time and radio broadcasters need to ensure that radio retains a prominent and easily discoverable position in the car. We need to work directly with car makers to ensure radio is in the new car app ecosystems and this is best done at scale through your industry association.

Session 2 - Creating a seamless listener experience





Global, open and available - a broadcaster led initiative for radio on Android Automotive

Guru Nagarajan, Engineering Manager, Android Automotive OS Platform, Google Interviewed by Joseph F. D'Angelo, Senior Vice President, Broadcast Radio, Xperi Inc

- Android is working with broadcasters to create the right ecosystem, to take full advantage of the opportunity for connected cars. The first versions of the android OS were launched this year and we were pleased with the feedback.
- Broadcast radio is very exciting to Android the advancement of the user experience can a provide platform to allow others to innovate and create the best user experience.
- Android Automotive would like to develop and innovate to help broadcasters provide the best radio services to our users.
- Android Automotive has 75 million lines of code (it is therefore a huge system). Similar to what radio is doing they are creating new APIs to localise content and are enhancing the UI for broadcast radio.
- The company is also enhancing the Android Automotive API to customise content, but with security and privacy still being important.
- The NAB Pilot has pulled together a broadcast initiative with WORLDDAB we believe it's the largest global initiative to communicate with Google on broadcast radio.



Session 3 - Designing a listener-centric digital radio experience





DAB+ in the small to mid range vehicle - makes, models and markets

Martin Koch, Head of Development Entertainment & Car Functions, Cariad, Volkswagen Group and Vlastimil Navratil, Group Manager, Skoda Auto AS

- Skoda develops entry-level radio systems for the entire Volkswagen Group.
- VW's entry-level radios provide a rich DAB+ feature-set (e.g. multi-tuner, EPG, slide show, MRC).
- The system allows seamless linking between FM and DAB.
- Customer demand for broadcast radio in the car is high as ever it remains the cornerstone for in-car entertainment.
- The system also caters for Bluetooth, wireless car play, Android and USB-C.



New research: the current status of DAB+ features implementation Nick Piggott, Project Director, RadioDNS

- New research focused on the DAB and hybrid radio features supported vehicles on the road today.
- The research shows the high level of engagement all brands questioned have for DAB digital radio and radio in general.
- The majority of car receivers can show visual information provided by radio stations.
- Many car receivers will show radio station logos, from a variety sources.
- Almost all receivers can show information about the current item on-air in a structured way, using DL+, where the radio station can transmit artist, title, album, etc. as individual elements.



From principle to product – bringing the WorldDAB UX guidelines to life in a hybrid radio app

Laurence Harrison, Director of Automotive Partnerships, Radioplayer Worldwide and Caroline Grazé, Managing Director, Radioplayer Germany

- A perfect hybrid radio (FM, DAB+, IP) is one which meets the WorldDAB UX Guidelines and is the key to great radio design. A simple, user-centric approach to UX design hides the technical sophistication of the radio.
- Great broadcaster metadata powers a great hybrid radio and the sovereignty over the content will always remain with the broadcasters.
- It is vital to ensure a good hybrid radio experience in Android Automotive OS. Radioplayer's learnings have been shared with Google and other stakeholders and our hybrid app is available to car manufacturers to customise as their own "Radio button" experience.



NAB Digital Dashboard - best practices for broadcasters

David Layer, VP, Advanced Engineering, National Association of Broadcasters, United States

- NAB has 'audited' the metadata usage by US radio broadcasters in select markets and summarized the results in the "NAB Digital Dash Best Practices' report. These audits highlighted a number of deficiencies in how broadcasters are using the metadata capabilities of RDS and HD Radio.
- The report found that:
 - Metadata support is more important than ever
 - Many automakers are using in-vehicle databases
 - Using RadioDNS is a good start to enhance a station's image
 - Broadcasters should sign up for DTS AutoStage
 - Broadcasters must develop strategies for supporting non-linear content and interactivity

Session 2 - Creating a seamless listener experience





Case study: Switzerland - getting ready for FM switchoff with the auto supply chain

Ernst Werder, Weer GmbH in conversation with representatives from the Swiss auto supply chain: Jeremy Arztmann, Exclusive Car HiFi and Hans-Peter Saar, Robert Bosch AG

leremv Artzmann

- Products are retrofit and tested in-house to ensure quality to carmakers and consumers. Our relationship with carmakers makes it easy to have access to vehicles to test the products.
- People prefer a fully integrated rather than adapter solution, especially for • vehicles at higher end – the end-user wants equipment as they are used to.
- Full integration tuner will be installed in way that customer can't see it and ٠ controls through the OEM radio.
- Vintage vehicles tuners are discreetly installed so the vehicle does not lose vintage status.

Hans-Peter Saar

- DAB aftermarket devices fit well into Bosch world and that has DAB+ advantages over analogue. FM switch-off would come so we work closely with car partners to plan for it.
- Bosch offers both full integration and adapter solutions prices vary as to whether the equipment is visible or not and which additional functions are needed.
- Good training is very important DAB+ retrofits, especially full integrations, are not easy to install, so great importance is attached to the car service partners & advising customers professionally. Carmaker outlets need to have technical knowledge about DAB installation and DAB network and reception.



Session 4 - It's all about data



Big Tech and the connected car - the case for autonomous broadcast radio Roger Lanctot, Director Global Automotive Practice, Strategy Analytics

- The car has evolved to a platform the fourth screen.
- Google will be both partner and competitor enabling and supporting content but others are also crowding in.
- Auto makers, like digital TV makers, will need to accommodate multiple platform experiences in the car some content-focused, others safety-centric.
- Digital radio technology is the tool that is levelling the field of play new content – new user experiences – more content – audience measurement and attribution in the works.



Targeted advertising on DAB - a total audience strategy

Eugenio La Teana, Head of Research & Development, RTL 102.5 Hit Radio

- In the last decade, radio has naturally evolved its visual identity and has
 proved capable of being multimedia. It is everywhere, on devices with only a
 speaker or on devices (portable or stationary) with screens.
- Currently the DAB receiver screen is being used to show content related images – artist image & artist name, song title, radio station, weather, traffic, QR code.
- DAB can support targeted advertising and increase advertiser opportunities.
- For a commercial ad spot, while it is playing on the radio, a visual asset appears on the car radio display. This is fully synchronized with the audio.



A vision for the connected dashboard and radio Gregor Pötzsch, Product Owner, Smart Functions and Gaming, Cariad, Volkswagen Group

- The focus of the WorldDAB Automotive Working Group is on improving the radio user experience.
- Radio is a versatile, low- medium and is still the biggest player in the car.
- Metadata from broadcasters needs to be improved so that radio keeps pace with other platforms in the car and offers the best experience to drivers now and in the future.

world

Session 4 - It's all about data:



In-vehicle localisation and personalisation – what they mean for radio today and in the future

Francis Goffin, President, European Digital Radio Alliance

RTBF would like to build on this and create more personalisation: together with its

therefore the radio monetisation, particularly in connected cars.

Thanks to this hybrid technology, broadcasters could create further content

partners from the commercial broadcasters in the Belgian French speaking digital radio

alliance "maRadio.be", the idea is to develop addressable (targeted) advertising (hybrid

DAB+/IP), similar to what has been achieved on TV in Belgium with a lot of success. For

DAB+ this could improve the commercial personalisation of the advertising breaks and



Chris Ambrozic, VP of Discovery, TiVo

- DAB+ offers listeners the opportunity to choose which VivaCité's programs they listen to.
 One of RTBF's 8 stations, Vicacité, broadcast on a daily basis 7 FM regional programs while also simultaneously broadcasting sports programs during a football championship.
 A first step in personalisation, which is not something available in FM.
 Xperi is bringing together the best in broadcast radio, in-car, and in-home technologies to tackle the challenge of personalization in the car.
 - Driving engagement, and keeping people engaged, requires proper use of personalization and recommendations to enable delightful discovery experiences.
 - If one can provide the right experience, this engagement can be useful for monetization business models.









WorldDAB Automotive 2021 Event summary

View the presentations and videos

Disclaimer: This report is intended as a quick overview of the event. Before quoting any of the speakers we recommend that you refer to the original presentation and check

with the speakers themselves.