Automotive / Broadcasters Workshop 2016

Theme Conclusions

On-Demand Audio

Links to on-demand audio of each Theme are provided under each Theme title. The summary section is here.

Theme 1 - Fair Use Policies

On-Demand Audio

Synopsis

“What constitutes fair use of a broadcaster’s assets and meta-data by a manufacturer? How is this communicated in a hybrid system that has no centralised control?”

Background

Broadcasters are providing meta-data such as logos, genre information and station descriptions for manufacturers to use.

Manufacturers aren’t sure exactly how they’re allowed to use that information, and don’t want to invest in developing systems that broadcasters don’t agree with and they end up in dispute over.

RadioDNS has introduced a way for broadcasters to provide manufacturers with a unique identifier, so that they only release “valuable” metadata to people they have agreed terms of use with.

Conclusion

This is not a technical problem, but a business issue. Each broadcaster can implement their own terms and conditions for using their meta-data.

Whilst RadioDNS can’t write a legal document that could be uniformly adopted, we can work to produce a view of what Fair Use would be, that could be widely supported and adopted as a guide.

Theme 2 - Recommended Listening

On-Demand Audio

Synopsis

Manufacturers want to make better listening recommendations to their drivers. What data and services do they need to do that, and is it a good thing for broadcasters?

Background

Manufacturers would like to help drivers find radio stations that are providing content they want to hear right now. The previous PTy concept of RDS is too broad to be useful, and driver expectations are set by streaming music services which can match mood and interest.

Doing this well requires broadcasters to provide much more accurate information to describe their radio stations, and may encourage drivers to switch stations more frequently. On the other hand, it could keep drivers within radio rather than having them move to streaming services.

Conclusion

The quality of data from the radio stations is very important in producing the best experience for the driver. Manufacturers want to provide better ways of navigating very large amounts of radio content (live and on-demand), and recommendations are one way of doing this.

Broadcasters that provide better quality data (accuracy and quantity) will be benefit with better recommendation positions than those who don't.

Theme 3 - Which data channel is best

On-Demand Audio

Synopsis

Meta-data can come through multiple channels. Should broadcasters make sure the data from them is consistent, and in which order should manufacturers refer to them in?

Background

The diversity of distribution systems means that similar information can come to car from diverse routes. For instance, text information can come via FM RDS RT (RadioText), DAB DLS (Dynamic Label) and via IP using RadioVIS's text mode.

This diversity complicates the decision on where to find information. For example, if the current DAB radio station isn't transmitting DLS text, some manufacturers will display the RadioText from that stations FM transmission instead. This was almost certainly as a reaction to some broadcasters back in the early 90's providing dynamic text on FM, but no DLS on DAB. German public service broadcasters currently provide text on DLS, but not on IP.

The same situation applies to EPG information and Visual Slideshow.

Conclusion

IP is the best way to deliver data to the car, so get your IP delivered meta-data to the best standard that you can.

Don't forget about broadcast delivery for vehicles where IP isn't present, as they can still enjoy some benefit of a better experience (usually using digital radio systems).

Theme 4 - Proprietary Systems v Open Systems

On-Demand Audio

Synopsis

Why are some manufacturers attracted to proprietary systems for solving their problems, and why are broadcasters wary of them?

Background

Manufacturers want to minimise the number of places where problems can occur, and one way of doing that is to use a technology supplier (a kind of OEM) to aggregate and manage services on their behalf. Often these suppliers will establish their own proprietary technology platforms, which ultimately restricts the freedom of manufacturers and broadcasters to change. Some suppliers charge less than expected because they have an alternative business plan.

Broadcasters are concerned at a burgeoning number of proprietary data interchange formats they have to support, and the risk of access to a platform after a dispute with a technology provider. They're also concerned that the supplier may change or adapt broadcaster content to commercialise it with or without their permission.

Conclusion

The use of proprietary technology in a hybrid radio system is fine as long as the principles of interoperability established by the RadioDNS Technical Standards are protected.

That means broadcasters and manufacturers can buy in proprietary systems as long as those systems have compliant interfaces and they're able to swap that system out for a different one without disturbing the experience elsewhere in the chain.

Theme 5 - Real-time Content

On-Demand Audio

Synopsis

What content should broadcasters produce and how should manufacturers show it to drivers? How can content reflect what's on-air, including editorial and commercial messages?

Background

Producing real-time content is complicated for broadcasters to do well, and there are concerns that it's not being used by drivers because it's too complicated to access.

Manufacturers are frustrated that they can give drivers accurate information about what they're listening to on pre-recorded media, and on music streaming services, but not for radio.

Conclusion

Broadcasters are often motivated to invest in new production systems by competitive threats. Often the display of real-time content (text and visuals) is difficult for the driver to find, so it is not

very prominent, and so it doesn't feel to broadcasters that many drivers use it or for it to be a problem if they ignore it.

Manufacturers are changing this, so that real-time content is more immediately visible. That means radio stations that produce good content will have a visible competitive benefit over those that don't, and this will hopefully justify greater investment.

Maybe we turn this into a specific workshop around user interfaces for radio content.

Theme 6 - Capturing Interactivity

On-Demand Audio

Synopsis

How can a driver safely interact with radio services? What data-sharing has to happen between manufacturer and broadcaster to meet driver expectations of accuracy and usefulness?

Background

Drivers hear things on the radio that they would like to find out more about. This can be any kind of radio content, not just music.

Functionality like RT+/DL+ exists, but it requires broadcasters to provide sensitive metadata over the air, and doesn't provide any control or insight on how it's used. The metadata is also quite basic and doesn't allow for a very customised experience.

Broadcasters would like to provide better meta-data, but would like to know who is using it and what it is being used for.

Manufacturers don't want to implement this functionality if it isn't being supported by a majority of radio stations.

Conclusion

The threat here is not from other radio stations, but from third parties like Shazam taking up this functionality and the data information that it provides.

Doing RadioTAG may not be as hard as it seems, and it doesn't necessarily require implementation of an authentication system behind it. It does, however, require good quality, accurate, data from radio stations.

The growth of autonomous driving may increase the opportunity to interact more with radio stations.

Theme 7 - Navigating the radio dial

On-Demand Audio

Synopsis

What are the differing views on how drivers should find radio stations, and what meta-data is

required to power different navigation models?

Background

Many drivers are familiar with finding radio stations by tuning up and down a dial, and receivers have always shown all the radio stations they are able to receive here and now.

Manufacturers want to provide the easiest way for drivers to find radio stations and can deal with the increasing number of digital radio services, but they're devising navigation methods which need more information than is currently available by a simple scan of frequencies.

Sometimes assumptions are made about the organisation of radio services which are true in one country, but different in others, which leads to an inconsistent and confusing experience. (for example, sorting stations by their hidden identification codes, rather than their alphabetical names).

Broadcasters don't help the situation by abusing the functionality designed to help station navigation -for example, scrolling the station names on FM which means that manufacturers can't use names from any radio station when assembling lists of stations, and forces them to maintain their own databases of station names against station ID codes.

As manufacturers rely more heavily on proprietary databases to create station lists or "clean up" information about radio, the risk that broadcasters will be removed from the list of stations, accidentally or deliberately, increases. Evidence shows that the databased information can become incorrect very quickly.

Conclusion

No radio broadcaster wants to be left off the dial. Scanning frequencies is the best way to discover radio services, although in some limited cases (single-ended tuners), a database solution which is updated in real-time from other sources might be appropriate.

Manufacturers require that broadcasters correctly identify their radio stations to make any of this new functionality work correctly. Broadcasters must not abuse or misuse the technical standards.

Voice recognition will be a useful navigation method if it's properly supported by the radio stations, and that the risk of encouraging alphabetical station listings is that some broadcasters may try and force their way to the top by renaming their stations.

Theme 8 - Accessing On-Demand and Non-Broadcast content

[On-Demand Audio]

Synopsis

What happens when broadcasters provide access to all their on-demand and live streaming content? How is it all presented to and navigated by the driver?

Background
The traditional list-based navigation model of radio worked successfully when the average station listing as less than 50 stations (on analogue).

The arrival of digital radio has increased that list to closer to 100 in many places.

The addition of streaming-only radio services (from existing broadcasters and new entrants), plus the ability to access catalogues of on-demand content creates a list with a length that is almost impossible to predict, but will certainly be over 200 items.

Conclusion
Manufacturers don't want broadcasters to limit the amount of on-demand content they are making available in cars. They would prefer a complete catalogue and they will use search and recommendation systems to help drivers navigate it.

Theme 9 - Programme Information
On-Demand Audio

Synopsis
How important is programme information to drivers, and what makes it useful? If a radio station doesn't have "programmes", should it be expected to provide "programme information"?

Background
Electronic Programme Guide functionality exists in digital radio systems, but it's rarely used by broadcasters.

Some manufacturers have implemented it in the vehicles, but it can be hard to find and navigate, and confusing for drivers.

The programme information, where it exists, is often only a very basic description and very little detail that would be helpful to drivers.

Music radio stations, which make up the majority of stations and listening, say that Programme information isn't useful to their listeners.

Conclusion
Whilst it's recognised that the majority of radio stations won't provide EPG information (or will only provide generic information), but for those stations that can provide EPG information, it should be of high quality (specific descriptions of each programme content) and provide on-demand links.

Backwards / Historic EPG systems can make it easy for people to find on-demand content, so broadcasters should be encouraged to include on-demand links against live radio programmes, and keep +/-14 days of schedule available to help people go back and listen again to previously broadcast programmes.

Theme 10 - Switching to Streaming

On-Demand Audio

Synopsis

How can broadcasters help manufacturers enable a good quality experience when switching between broadcast and streaming? What are the barriers to making this work?

Background

Broadcasters provide streaming audio of their radio stations, which could be used to continue listening to the radio station in the event that broadcast coverage is lost.

There are delays between each distribution method - analogue radio, digital radio and streaming - and the audio can be processed to sound different.

Manufacturers would like to offer streaming as an option to drivers to stay listening to the current station, in the same way as the currently offer switching between analogue and digital radio.

Streaming is more expensive than broadcast. It uses data capacity at both the broadcaster and for the end-user, and can cost the broadcaster expensive music royalty fees.

Conclusion

Experience of trying to do “perfect blending” suggests it’s almost impossible to well. The benefits of a more obvious switch is that it’s easier to engineer for both manufacturer and broadcaster and allows for a more definite indication to the driver that they are now using mobile data to stream (rather than broadcast for free).

Audio delays can be corrected to minimise the jarring of the switch. Broadcasters should try and provide their streams at a perceived quality level that is equivalent to their broadcast quality, to minimise the change in quality.

It’s not clear yet if broadcasters are prepared to provide dedicated streams for this functionality, which would not include additional/different advertising.

The switch back from streaming to broadcast should be done only after being sure that the broadcast signal is robust.

Registered Attendees

4th July 2016 at 08:40 UTC

Name	Organisation
Alan Jurison	iHeartMedia
Andre Bothner	Alpine Electronics
Alexandre Aubry	Les Indés Radios
Arik Azoulay	aird
Bob Dillon	DTS, Inc.
Budianto Liong	Aupeo!
Calvin Fereday	Connects2 Ltd.
Caspar Adriani	Pluxbox
Chris Roberts	BBC
Christian Winter	AUDI AG
Christofer Bustad	Swedish Radio
Daisuke Ozaki	Alpine
David Board	RTÉ
David Fernández Quijada	European Broadcasting Union
David Layer	NAB
David Sice	Intermedia
David Vincent	TDF
Delacoux François-Xavier	RTS (France)
Dietmar Kopitz	RDS Forum Office
Dimitri Fagué	TDF
Dirk Ritters	MEDIACODERS Kiel GmbH
Duy Tran	Renault
Erick Sasse	Cadena Sistemas
Florian Franz	BMW
Frank Bittighofer	Harman
Gerd Gruchalski	Audi AG
Gereon Joachim	DTS Inc.
Hannah Kersten	Panasonic Automotive & Industrial Systems Europe GmbH
Hans-Dieter Hillmoth	Radioplayer Deutschland / RadioTele FFH
Heiko Meertz	Tune In GmbH
Holger Hees	Audi AG
Javed Mohammad Mughal	IP Broadcast Technologies
Joe D'Angelo	DTS

Jorge Montero	COPE
Juan Galdamez	DTS
Kath Brown	CRA
Ken Ohno	Alpine
Kirk Nesbitt	Canadian Association of Broadcasters
Yann Legarson	Les Indés Radios
Lindsey Mack	BBC
Maria Chantal Ellenberger	Mobis Parts Europe N.V.
Mark Sutcliffe	Arqiva
Martin James	Ofcom
Mauro Panarelli	radiosa srl
Michael Hill	Radioplayer
Nicholas Humfrey	BBC
Paolo Casagranda	Rai - Radiotelevisione Italiana Spa
Paul Morrow	Cox Media Group
Peter MacAvock	EBU
Phil Stuchfield	Jaguar Land Rover
Rosemary Smith	WorldDAB
Sam Bonham	Digital Radio UK
Sami Celik	Volvo Cars
Sean O'Halpin	BBC
Sebastian Artymiak	VPRT Germany
Shinichi Mizuno	Alpine
Thomas Hoffmann	Bertrandt Ing.-Büro GmbH
Tom Sandheim	P4 Radio Hele Norge
Ulrich Wenckebach	Panasonic Automotive & Industrial Systems Europe
Vincent Sneed	AER - Association of European Radios