Automotive Workshop IX

8th June 2021, 14:00 UTC

The meeting started with Nick Piggott giving an overview of the importance of these workshops; about issues affecting broadcasters and manufacturers right now that we can find fixes to improve experience for people using radio in vehicles quickly, or if there are bigger issues we can address them by spending more time to find solutions.

Automotive Receiver Functionality / Features Research - 10 minutes (14:05)
Nick introduced the research he and Rosemary Smith have been working on with vehicle manufacturers. The purpose of this research is to help broadcasters understand what has been implemented on the receiver in the car so they can review their current functionality and make any additions or adjustments to ensure a better user experience.

The questionnaire has been structured to ask about each class of receiver and its functionality. The deadline for the preliminary results is June 18th as the findings will be shared at the WorldDAB Automotive Event on 25th June. The questionnaire was shared in the meeting and demonstrated how easy it is to complete. Rosemary said this research is following on from research on logos in the car and that there has been a good response so far. She said this research will help direct future plans and discussions on radio in the car and to see where some of the holes are in the market and how we can fix them.

This is another way in which we are trying to help understand each other's businesses and this kind of data allows us to tell a much more compelling story to the broadcasters. It also ties in with the research that surprised broadcasters regarding the support for EPG info DBSPI over the air, it was only after we crunched some numbers and gave to the broadcasters that they realised how many vehicles had so much functionality.

Nick Humfrey asked on chat if the questionnaire will discover why the implementation of RadioVIS isn't happening, and it was confirmed that we should be able to find that out

The next step is if manufacturers can help WorldDAB and RadioDNS to create a structured questionnaire for broadcasters so it can be turned into support for development for manufacturers. Contact the WorldDAB Project if you would like to be involved.

Android Automotive

The aim for this meeting was to have a discussion on activities to improve the support for digital and hybrid radio. Laurence Harrison shared Radioplayers current situation with Android Automotive including sharing their report and Christian Hufnagel from SWR shared the work he has been doing with Android Automotive.

There was a discussion about the speed this is happening, the complexity of it and potential problems that have already come up - for example imagery, is the display square like an app, or like it currently is in DAB which is rectangular. Issues like this need clarity.

Hadi Mazzawi asked if it would be better to form a group to work with Google rather than each working individually. Nick Piggott said a commonality of voice might be more effective.

Laurence Harrison highlighted that there had been some input from OEM partners, car manufacturers and broadcasters from initial discussions with google a while ago. It was clear that any feedback on Android Automotive needs to include broadcasters and manufacturers. There was some divergence of views and it is important to highlight those and make sure we understand where the differences are. We need to share these views as widely as possible and raise issues now.

Nick Piggott stated a specific example, that Android Automotive assumes broadcasters only use one logo, some of the feedback from manus was they didn't want to use more than one logo to minimise payload. What we don't understand is if there is one logo, how is it presented and what is that one logo? We need to fInd a consensus and then do we ask google to provide the consensus on the documentation?

Hadi Mazzawi questioned if we knew what the timeline was. Nick replied he was unsure, but it feels like it is imminent and we should think of solutions to problems by the end of the year. Christian Hufnagel agreed, saying in 6 years more than 60 percent of cars will be equipped with Android Automotive. Nick Humfrey said it seems that Android Automotive sees the manufacturers as their clients so they would be the ones needing to request the features. Nick Piggott agreed saying it is the manufacturers who are paying so they are the client. Controversially we know some manufacturers who have done a great job of implementing radio and others that have the best intentions, but from a listener and broadcaster point of view their product is frustrating, so we do need to work out that this is something we agree on and I am not sure if we are there yet.

A reminder that there is a working group, contact Christian Hufnagel if you would like to be involved plus Radioplayer is also championing a line of communication should anyone want to get involved.

Alarms and Announcements
Lars Peder Lundgren introduced himself and Paneda who are one of the main suppliers for tunnel and break-in announcements, based on an RF signal and that system carries alarm announcement signalling. It is used to force a receiver to DAB to hear important messages.

High level of support in car receivers. There are currently some issues such as not all receivers support alarm announcements (although it is the majority) and very few support graphics, instead using a generic screen, plus it can be cancelled so the radio will not switch when there is an alarm. We think these actions are against the standards. The alarm system is a brilliant way to reach more listeners but we need to agree on some improvements as it potentially saves lives.

Harvard Wien said NRK have had traffic announcements on air on DAB since 2017 and it works fine - most cars have solved this the right way and we haven't had any major issues. Nick Piggott made an observation about why there might be the opportunity to cancel as some countries misuse this functionality, but it is great in a market like Norway where it is regulated.

The question as to why visuals are not being used was asked as well as if the alarm is sent on both FM and DAB. The recommendation in the standard is that the DAB signal is used rather than the FM one and the onus is on the broadcaster to make sure they are sending the alarm, although in Norway the road and tunnel authorities are responsible and can break in across all ensembles that broadcast to that tunnel.

One of the visuals issues is metadata, as there is more detail available in visuals, but quite often get just a generic message. Same with traffic announcements. They get sent as DLS but it is being blocked by generic graphics. What is expected when an alarm happens is that the radio tunes to this service and back again when it is finished but what happens is it just switches the audio and puts a visual message up saying there is an alarm.

It was asked if a list of broadcasters who support traffic announcements could be found. Also for examples (ETI files) to be sent to Rosemary Smith of what the announcements look like in a tunnel and Rosemary will get them uploaded to the WorldDAB ETI library.

Other Items Update (Part 1)
Analytics - Ben Poor (EBU)
The RadioDNS Technical Group helps to shape the standards and also helps with implementation, they work on questions from members and specific requests from the RadioDNS Steering Board. The group has been working on analytics in order to standardise a simple method to allow a connected device to send back some simple listening info for radio services, both live and on-demand. It is a ping from a device to a broadcaster or nominative representative.

Some important concepts involved such as making sure that user IDs are not exposed to anyone beyond the device, so it is just generalised info that is gathered and we are making sure this is useful for broadcasters as well as a third party to handle this info.
There is now lots of detail in specification and we have a draft we sent to RadioDNS Technical Group in April which has received comments. We are working towards the next draft to be ready for the meeting at the end of June, and then test in real world situations, so looking at broadcasters and manufacturers that will help us find bugs.

Gunter Lorenz asked if the info will be geo-referenced, Ben replied that it has been discussed and there are opportunities for additional info to be included. There is a container for geo data but it isn't specified what that might be.

Voice Control
There is a draft specification for this that has been created in the RadioDNS technical group. Proposals from Christian Winter and his colleagues on how phonemes are handled in the spec.

Christian Winter introduced this subject by saying he worked with the team at Cariad and now think it should be easy to implement on the broadcaster side. They would like to use this data, and hopefully broadcasters will participate.

Nicholas Humfrey remarked there has been a lack of support for synonyms or alternative names for radio stations to aid with speech recognition and search. Examples for BBC services: BBC Radio 5 Live is sometimes called radio 5; BBC Essex might be called Radio Essex; BBC 1xtra might need the correctly spelt version.

Nick Piggot said that NRJ is a good example too: 'enn-are-jay' sounds different to 'enn-air-jee' and so different languages to the broadcast language are included in the mark-up. Having this in your metadata is really helpful for search in any device. Nicholas Humfrey reminded us that there is concern that stations could hijack other radio stations through using their aliases.

Realtime Metadata
This was introduced by Nicholas Humfrey, who said that realtime metadata is a requirement coming from the BBC, they would like to be able to syndicate realtime metadata, as a B to C, but also as a B to B. For example sending the metadata used to describe the current music being broadcast. Nick Piggott updated the meeting to say that Andy Buckingham has done a lot of work on this, looking at it as transport so HTTP to push realtime that would also serve as alternative transport for slide show (as and alternative to stomp) and then using the same transport to push the raw metadata through instead so manufacturers and aggregators can receive the metadata. How we describe that metadata is to reuse the DL+ field names so we could also have a hybrid set up and could push the URL on DL+ and download it over IP as it has greater bandwidth. It has been interesting whilst doing the questionnaire with manufacturers to see how widely used IP is.

Joe D'Angelo asked about copywriting issues? There has recently been a shift in liability from the broadcaster to the service provider or car manufacturer. Nick Piggott replied that this is just a standardisation of pushing DL+ over IP so there are no changes to any of the risks. It is still published from an identifiable source, so inherent in the way the standard works.

Dave Walters said he thinks the BBC would like to get some pilot examples out with an aspirational timescale of Aug/Sept to have some publishable code and then potentially there is a plugfest to hopefully engage at that level. Signalling from the BBC that they would like to move with it, this is unofficial, but that seems to be the direction of travel at the moment.

Driver distraction update

Nick Piggott began this by saying there needs to be some discussion and consensus. RadioDNS and WorldDAB have been speaking with Ruediger Hentze, Gregor and Frank Novack to come up with the slides for this part of the meeting.

Driver distraction is anything that takes the drivers attention away from the road and we want to put together some recommendations on how to implement existing standards so they don't cause distraction. We think this is by addressing legibility, relevance and frequency of update.

Illegibility is usually because most broadcasters don't understand how the content will be displayed and manufacturers need to understand the content they are receiving so they can work out how it will look. There are lots of things to consider such as too much text and how it is scrolled, will it be displayed full size or zoomed down, how far away from the driver is the screen and altogether impact legibility. This is not necessarily a function of the standard, but also how broadcasters understand how their info is going to look.

Every time a screen changes, it creates a distraction, and so is it necessary to change the screen and frequently, is the information provided all of value? Sometimes a screen will change, but it is the same message - in this case should the screen even change? Is the message relevant?

We have these 3 areas to discuss and we would like to reach a consensus on parameters.

RadioDNS is creating a library of how content will look once implemented in different vehicles. There will be examples of good and bad execution to create less distraction were shared at the meeting.

We need to know what size the screens are, where they are in relation to the driver, text size, how text scrolls, screen brightness at night time, reasonable update rate so we can put some guidelines together. This means manufacturers can put some restrictions to protect against bad actors trying to abuse the system. RadioDNS and WorldDAb will be writing up a recommendation for all broadcasters from these discussions.

Beatrice Lethielleux said maybe we could start by reminding radio stations what can be distracting. Laurence Harrison asked if frequency of updates was due to research or or common sense and if OEMs have some research they don't want to share that they could help us out with input.

There followed a discussion on trigger time and the difficulties due to there being no global regulator and therefore it can be different in different regions. Dave Walters suggested asking the UK regulator for their advice on best practice.

Others Items Update (part 2)

Receiver Testing Advance Features Group

Nick Piggott said that one of the outputs from WorldDAB is a minimum receiver spec, which is a way of putting expectations on receivers to make sure they can perform well. We need to do the same with some of the advanced features on hybrid. This group is for things beyond audio - slideshow, DL+ etc. It is a group run by Gregor Poetzsch from Cariad, please get in touch if you would like to be involved.

Hard Coded Logos
Håvard Wien from NRK said that they have received reports from listeners with brand new electric cars to say the logos are old. There is a database of logos that the manufacturers have collected and are not interested in using RadioDNS.

Nick Piggott asked what are we not communicating to car manufacturers to get them to change their behaviour of where they are getting their logos from. Jean-Marc Dubreuil asked if the main problem was old receivers (or old receiver technology in new cars.) but Håvard said the problem is with both old and new receivers.

Lars Peder said they use hard coded logos even though there is an SPI service and that he has also seen receivers mixing sizes of logos, but Håvard said he has also seen this and been in touch with the brand and it was a software issue which they have now fixed.

Nick Piggott concluded that this topic keeps coming up and we are still receiving evidence that it is still happening. This should be rolled as an agenda item to the next meeting to be discussed further.

Vehicle support for DASH/HLS streaming
Nick Humfrey said the BBC is recognising new streaming formats, but to what extent is that being supported in vehicles? We will be updating the SI to help with implementation. As there was little time for this topic it should be discussed in full at the next Workshop.

Hybrid Radio/ 4Q Quality of Reception in Vehicles
Beatrice Lethielleux is interested to know if there has been a significant change in quality of coverage in 4G? Also replacing broadcast radio, has anyone noticed any experiences of health implications of 5G? This has been held back for discussion at the next meeting.