

Many thanks for having the pleasure of responding to your 'Future of FM Radio' consultation. I have kept an eye on the development of DAB since its original incarnation back when the BBC launched their initial, then only London-wide, service in 1995. At the time, the technology behind Eureka 147 was all new and cutting edge and the use of the MPEG I layer II algorithm for encoding was the standard as no other more advanced coding technology or algorithms existed.

In 1999 when Digital One launched, the BBC's National DAB multiplex was still very much 'experimental' and they were swapping and changing different services to test bitrates and other enhanced DAB only services. What was most important though at this time was that the sound quality of all 4 main BBC FM services was identical, if not in some circumstances better than their FM counterparts. DAB was meant to be an evolutionary technology for what the public should perceive as having better sound quality than current analogue formats but in recent years the consumer has been let down by the technology.

What has happened now is basically that the regulator (yourselves and your predecessor the RAU) have allowed bitrates to drop to a level where in my personal opinion DAB sound quality is much worse than ever perceived. FM audio quality now sounds much better than that possible by 99% of current DAB services, encoded using MPEG II at 128kbps.

I'm a believer that evolutions in technology should bring a perceived improvement. In the example of Digital Radio this means better audio quality, something that simply isn't the case with DAB as it stands at present. Some people in the defence of Digital Radio use the argument that 'people don't notice degraded sound quality' and if that is the case then we might as well keep AM in its present form as quality to the average consumer isn't therefore important! The whole basis for this discussion would also be pointless if these advancements are seen as an improvement!

I do agree that AM doesn't have a future in the long term for music radio. Technologies like DRM should be seriously considered for AM broadcasting in the UK but I don't see why some speech based analogue stations (e.g. Talksport and BBC Five Live) could not still co-exist alongside DRM ones. Higher power transmitters, such as those used by BBC 5Live, are better able to combat continental interference during darkness and also being only speech based the limitation of 4.5 kHz maximum audio bandwidth is not too much an issue.

FM broadcasting in the UK is now the benchmark for 90% of UK radio listening, it is also the band currently offering the best audio quality (for a field strength exceeding 60+dBuV/m). Since FM radios were first introduced wide scale to the car audio market in the late 1980's, manufacturers have gradually improved technology to overcome issues like multipath distortion. RDS is now widely available and pretty much standard on all car receivers, plus many home Hi-Fi component receivers and tuners.

When you consider that it took over 10 years for RDS to become fully established I realised back in 1999 that DAB would take a very long time to also become an established medium. The commercial radio groups who between them have invested very heavily in the medium thought that by now we would all be listening mostly to services on DAB receivers, I predicted only too well that people in the industry who thought this would be the case were in for a surprise.

DAB has not taken off like the industry has hoped, firstly due to partly misleading statements about its audio quality but also because the UK is pretty much alone in adopting the format. Denmark is our only European neighbour who has also licensed multiple DAB ensembles and gone full-throttle ahead with the medium; meanwhile the rest of Europe still sees Eureka 147 as 'experimental'. Germany, Holland, Belgium, France, Sweden and countless other European countries have only licensed Ensembles in major towns or capital cities, each carrying mainly public service broadcasters and expansion has been seldom if non-existent in some cases.

You may think that whatever Europe wants to do doesn't necessarily concern us here in the UK. Where the problems really lie is that major world electronics corporations are not

interested in putting all the R&D necessary in to developing new DAB receivers purely for potentially 50+ million people in one or two European countries. If the whole of Europe embraced the technology then with 800+ million estimated people at the manufacturer's helm, Japanese corporations would show more of an interest in the medium, which in turn would push sales of receivers up. In the car audio market, which is seen as the major area for radio listening and DAB take-up, Kenwood and Clarion have both pulled out of Digital Radio production due to falling sales.

Getting back to the RDS example and as we are now going in to 2007, DAB has been commercially available for over 6 years and car manufacturers are still not installing them as standard! In fact, I've just bought a new car myself and at no point either in any literature or from any salesman was there any mention of a DAB receiver option. The only winners from DAB are small-scale manufacturers like 'Pure Digital' and most Digital Rx's I see are manufactured by them. I personally believe that people buy these 'Pure' Evoke receivers as they look neat and stylish, not because they are Digital Radio receivers. Interestingly, most of these are also mono anyway!

There are still around 30% of Commercial Radio Stations in the UK (some of which are in major market conurbations) which are unlikely to get carriage on any DAB multiplex, put together with a new tier of community stations and countless RSL broadcasters who use and will continue to use Band II FM for short term broadcasts and other trial services. These licensees are unlikely to ever get DAB carriage due to high multiplex operator costs and also the fact that unlike an RSL, a DAB multiplex cannot just cover a single geographic area like a community or RSL station does!

In conclusion it is my opinion that with 100+million FM receivers in the UK, I see no reason why VHF Band II FM cannot co-exist alongside DAB. Just because FM is using analogue technology doesn't mean it's 'out of date' and from points raised above I hope I've managed to convince some of you that in terms of audio quality, VHF FM sounds miles better! Until DAB embraces new encoding algorithms (such as AAC+) I personally believe the technology has let the majority of people down, at least those who appreciate quality along with technological improvements.

Regards

Neil Clark