

Radio – Preparing for the future

Consultation response by Paul Groves

Background

I have no professional connection with the radio industry and work as a research scientist. I run a radio website, Frequency Finder (http://mysite.wanadoo-members.co.uk/freq_find/index.html) as a hobby. I am commenting, mostly on technical issues, from the perspective of the ‘citizen/consumer’.

DAB Spectrum Allocation (Question 8)

I agree with the proposal to allocate more band III spectrum to DAB compatible use with the following provisos. I believe that providing universal coverage of the third national multiplex (counting the BBC and Digital One multiplexes as the first and second), using supplementary frequencies where necessary, should take priority in terms of frequency allocation over further local multiplexes in order to maximise programme choice for the maximum number of listeners, given that local multiplexes do not tend to cover all of the area licensed to them. I also believe that a fourth national multiplex should take priority over a third additional channel for local multiplexes as it would provide a net increase in programme choice even for those areas which would have to share a local multiplex. However, I do agree that local multiplexes should take priority over a fifth potential national multiplex.

National DAB Licensing (Question 9)

Regardless of the licensing mechanism, I believe the operators of the third and fourth national multiplexes must be obliged to meet a number of public service obligations. Even with 12 channels available, DAB spectrum will be scarce compared to that available to radio via satellite, cable and the internet and there will not be sufficient spectrum to accommodate all local and community stations currently and potentially broadcasting on FM. As such, it is Ofcom’s duty to ensure that the DAB spectrum is used efficiently and for the benefit of the “citizen/consumer”.

Public service obligations for the third national multiplex should include:

- Universal coverage, with supplementary channel allocations where necessary (for example channel 12A along the South Coast).
- Reserved space for the BBC to improve audio quality, extend data services and provide one additional music service. The new music service would cater for a wide range of genres poorly served by radio at present, such as jazz (of all types), country, musicals, pre 1960 popular music, folk, blues, world music and reggae. It would cater for different audiences at different times.
- Complementary radio services to those on Digital One. This is necessary as, even with more local multiplexes licensed, a significant proportion of the radio audience will only be able to receive the national multiplexes for many years due to local coverage limitations.

The public service obligations for the fourth national multiplex could be lighter, but there should still be a requirement to maximise coverage within the available frequency allocation and to extend programme choice.

I don’t believe that the market fundamentalist approach to national multiplex licensing that Ofcom is currently considering will ensure any of the above or even that the multiplexes will carry any radio programme services at all.

DAB Data Services (Question 12)

I believe the 20% non-programme related data service limit should remain as spectrum demand for radio programme services is very likely to exceed supply in the medium term. Instead, use of L band spectrum and/or backwards compatible multi-layer modulation techniques should be considered for expanding data capacity.

Digital Terrestrial TV (Question 13)

I believe that Ofcom should encourage the introduction of more capacity for radio services on DTT. However, rather than raising the data limit, I believe radio should be reclassified as programme data on the same terms as television.

DAB Audio Quality (Question 14)

Current regulation of audio quality based on bit rates alone has clearly failed as most UK DAB stations offer audio quality inferior to that available from FM with a good signal. Poor engineering, such as transcoding (use of multiple audio coders in sequence in the broadcast and transmission chain) and unsuitable audio processing has adversely impacted audio quality as much as inadequate bit rate allocations. I therefore welcome the move to regulating audio quality directly. However, I have a number of concerns. Firstly, the audio quality requirement in terms of 'diffgrade' points must apply to the received broadcast, not to what the audio coder can achieve under ideal conditions with the bit rate allocated, as there is often a major difference between the two. Secondly, as the audio quality of a DAB station varies continuously according to how easy the programme material is to code, definition of the proportion of time that the 'diffgrade' limit must be adhered to is critical. In my view, this should be at least a 3σ limit (i.e. 99.9% of broadcast material must be within the 2.0 diff-grade limit). Thirdly, I believe it is important that the audio quality regulations are properly enforced. I accept that regular monitoring by Ofcom is expensive. Therefore, there must be a mechanism for the 'citizen/consumer', other broadcasters and receiver manufacturers to raise a complaint with Ofcom where a broadcaster is violating the audio quality standard.

My last concern is that the audio coders currently in use at 128 kbit/s do not on average meet FM audio quality standards even with good engineering practices. I would therefore like to see the audio quality requirements raised in line with the improvements in coder technology. A compromise option would be to apply a higher 'diffgrade' limit, together with a 15 kHz minimum audio bandwidth, to those stations that are also available on FM within the relevant multiplex's coverage area. This would at least ensure that listeners to a given station switching from FM to DAB would not be disappointed by the audio quality on DAB. The higher audio quality standards should also apply to the third and fourth national multiplexes.

MW Frequency Allocation (Question 15)

Frequencies should be made available to both commercial and community stations. A good rule for major cities might be that the commercial radio has priority for the first MW frequency, with community radio taking priority after that. Outside the major cities, there is likely to be less competition for MW frequencies, so a first come, first served basis should be adequate.

To make the most efficient use of the MW band for both commercial and community radio, Ofcom should consider the use of frequencies in addition to those listed in the consultation document. In particular, 1503 kHz offers good night-time reception and is available in most parts of the UK. Other good frequencies are available in limited locations and their use would enable the more widely available frequencies to be used in other places. For details, please see http://mysite.wanadoo-members.co.uk/freq_find/fx_am.html.

For community radio stations with small coverage areas and fillers for current commercial stations, Ofcom should consider allocating frequencies which are subject to more night-time interference and allow the licensee to increase their transmitter powers after dark to compensate. This would free up the better frequencies for use in larger coverage areas.

Lastly, there are a number of MW frequencies used by BBC local radio stations effectively to plug holes in their FM coverage. In most cases, only one or two FM fillers would be needed to make the MW transmitter redundant. Therefore, there needs to be a mechanism for Ofcom to requisition such frequencies from the BBC with sufficient notice for the BBC to improve its FM coverage prior to closing the MW transmitter concerned.

Commercial MW Licensing (Question 16)

Where practicable, MW licenses for major cities and regions should be advertised and awarded at the same time as corresponding FM licenses for the same area. As well as being more efficient for both Ofcom and potential applicants, it should reduce the number of scarce FM licenses that are awarded to formats that would be equally viable on MW, such as talk, effectively depriving listeners of a new station that would only have been viable on FM.

FM simulcasting for rural MW stations

Although this issue is not covered by the consultation, now is an appropriate time to address it. Four stations (Fresh, Maldwyn, Sunshine and Valleys) currently broadcast on AM, not because there are insufficient FM frequencies available, but because of the large number of transmitters required to serve their areas on FM. Given that FM spectrum is plentiful in these areas, partly due to the nature of the terrain, I believe these stations should be permitted to broadcast on FM to the main population centres, whilst retaining their AM transmitters to serve outlying areas. This is in the interests of the 'citizen/consumer's in these areas, who currently receive no local commercial FM service as well as in the interests of the broadcasters. Fresh Radio could give up its small MW transmitters when those areas are switched to FM.

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