

Digital Radio UK

Written Evidence to House of Lords Select Committee on Communications

Inquiry into Digital Switchover of Television and Radio –February 2010

TECHNICAL APPENDIX

INTERNET RADIO

1. The radio industry recognises the importance of internet radio, and has recently announced the UK Radioplayer, a new way for listeners to get the best out of up-to 400 of the UK's national, local, community and student radio stations online, and which will be launched in 2010 (subject to regulatory approvals).
2. But important as it may be as a complementary platform, internet radio is wholly unsuitable as a primary platform for radio. Firstly, it is not free at the point of use, secondly it is not mobile and thirdly, it cannot support the levels of simultaneous listening that takes place to UK radio. For example, at 8am on a typical morning, 17m people are listening to the radio but the UK's broadband network could support less than a quarter of this, even if no-one was using the internet for anything else at all, and the costs for both the radio industry and ISPs would be prohibitive.
3. The additional environmental costs of running and listening to internet radio reinforce that it would not be a suitable primary platform for radio.

DTT

4. DTT, Digital Terrestrial Television, gives another way for listening to the radio, already accounting for 3.6% of radio listening. However, household penetration is high (at 90%) and so relative to this, the radio listening delivered by DTT is low.
5. This is undoubtedly due, in part, to the fact that television is atypical of how radio is consumed. Most radio consumption is 'secondary' in that it takes place when listeners are doing something else e.g. having a shower, making a meal, driving a car, and televisions do not exist in the locations of these activities.
6. DTT is also severely capacity constrained, with limited space on EPGs and no means of getting even the majority, let alone all, radio services onto the platform.
7. However, DTT undoubtedly has a role to play. It is already clear that, for some people, listening to the radio via their TV is an attractive option, particularly where it allows them to access services not available via their existing (analogue) radio. In addition, it may be a solution in some extremely remote areas where even FM radio does not reach.

DAB is the right digital radio broadcast choice for the UK

8. The UK uses the DAB digital radio standard, part of the Eureka 147 family of standards. Other members of the same 'family' include DAB+ and DMB. Worldwide, countries are increasingly choosing one or other of the DAB family of formats, ahead of other digital broadcast technologies.
9. The UK, alongside Germany, China, Denmark and others, uses the DAB format, while Australia, Italy and Switzerland use DAB+. France is planning to adopt a version of DMB used in South Korea. However, an international agreement signed earlier this year means that all digital radio technologies within the DAB family will be receivable by one

standard radio chip (known as 'Profile 1'), making it easier for both consumers and manufacturers.

What is DAB+

10. DAB+ is an upgrade to the Eureka 147 standard. DAB+ uses exactly the same transmitters and broadcast technology as DAB, it simply converts sound to digital in a different way (via a different type of codec¹). A DAB+ signal can be transmitted alongside existing DAB signals, using the same network infrastructure. However it cannot be received by first-generation DAB receivers.
11. Specifically DAB+ consists of:
 - A more efficient audio codec (HE-AAC v2, or AAC+) than that used in DAB transmissions (MPEG 1 Layer II)
 - The MPEG Surround audio format
 - Improved error correction coding

There would be no significant benefits from a move to DAB+ at this point

12. The main benefit offered by a move to DAB+ at this stage would be additional capacity on multiplexes. This could mean more services could be added. However, there is no immediate need for any additional spectrum for digital radio at this stage. It is true that some local multiplexes are full and, as a result, some local analogue services cannot move to digital. However, the industry anticipates this problem will be addressed as part of the re-planning of local DAB (note, this re-plan requires Clause 35 of the Digital Economy Bill).
13. Some supporters of DAB+ also point to the improved 'error correction' which can help with coverage problems, especially in marginal coverage areas. However, in order to take advantage of this feature, multiplexes would have to transmit fewer services, thereby all but negating the additional capacity offered by DAB+.
14. It is true that many countries who are moving to digital now, are choosing DAB+ (a recent development of the DAB family of standards) but this does not mean that DAB is outdated or unusable. Digital radio technology is constantly advancing and this is to be welcomed. Other sectors also experience this:
 - Today's top-of-the-range PC will quickly be followed by an enhanced (and probably cheaper) model, but this does not mean that all previous computers are defunct.
 - Similarly, Freeview does not use the most up to date version of digital TV technology, but it works well, is popular, and has delivered enormous benefits for consumers.
15. The potential benefits to UK radio listeners of DAB+ would be relatively marginal, while it would have a significant disadvantage as the vast majority of the UK's 10m DAB sets would become obsolete.

DAB+ could be introduced in the future

16. However, DAB+ is compatible with DAB and, at a later date, DAB+ could be introduced seamlessly alongside existing DAB services. Crucially, nothing in the legislation prevents the industry moving to DAB+ in due course, if this is felt to be the right thing for listeners as well as the industry. Similarly, all the work being undertaken by the industry, including the promotion of the 'Profile 1' digital radio chip, enables such a move in due course.

¹ A 'codec' is the means by which audio is converted into data