

"Working for quality  
and diversity in  
British broadcasting"

Founded in 1983 by Jocelyn Hay CBE



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## **Response from the Voice of the Listener & Viewer to Ofcom's Consultation on Broadcast Digital Radio Technical Codes and Guidance Consultation on updates and amendments**

*Voice of the Listener & Viewer (VLV) is an independent, non-profit-making association, free from political, commercial and sectarian affiliations, working for quality and diversity in British broadcasting. VLV represents the interests of listeners and viewers as citizens and consumers across the full range of broadcasting issues. VLV is concerned with the structures, regulation, funding and institutions that underpin the British Broadcasting system. VLV is a charitable company limited by guarantee.*

### **Summary:**

0.1 We note the proposals described in this consultation and are broadly supportive of them.

0.2 We welcome the opportunity to comment on the future use of DAB+ and are fully supportive of its future use. Its inclusion on the Minimum Receiver Specifications produced during the Digital Radio Action Plan [DRAP] offers a good basis for its promotion and exploitation.

0.3 We welcome the proposals to amend the coverage planning criteria to be more appropriate in the light of the findings of the DRAP. We note the consequential impact on transmitter specifications.

0.4 We welcome the proposed amendments to include traffic and travel announcements.

### **1 Section 1 Introduction:**

1.1 We welcome the opportunity to respond to Ofcom's consultation on changes to Digital Radio Technical Codes and Guidelines.

1.2 We note the specific issues raised by the potential use of DAB+ and the revision of transmission and coverage specifications. Our responses are focussed primarily on these issues as detailed below.

### **2 Section 2: Introduction of alternative audio coding: DAB+:**

2.1 We concur with the comments in Clauses 2.1 to 2.8. DAB+ coding allows better audio quality for a given bit rate and so, considering the age of the original audio coding standard, should definitely be permitted as an option for the future

deployment of DAB technology. The relatively poor performance of this original audio coding method DAB has contributed to some of the past criticisms of DAB and may have contributed to its slow take-up by the public.

2.2 Because of its better audio performance DAB+ allows better use of spectrum and the limited capacity available in the DAB multiplex structure provided that the capacities allocated per service are not reduced to maintain existing audio quality. A substantial part of the benefit of DAB+ should be used to improve quality for at least the music services. Alternative sources of high quality audio, such as CD, SACD, DVD-A etc., as well as download formats that now offer very high quality audio, often in surround sound, now leaves DAB very uncompetitive. The BBC itself operates a high quality on-line version of Radio 3 which has been well received by audio enthusiasts; it uses a bit rate in excess of 300 kBit/s and state of the art coding similar to that used in DAB+.

2.3 Whilst better audio quality is highly desirable for its own sake it must be recognised that radio listening takes place in a wide variety of environments and locations from vehicles to kitchen portables [typically in mono] and personal radios with earphones. Listening on high quality audio systems is a minority activity. Nevertheless the traditions of sound broadcasting established in the FM era are to provide a service of high quality in all respects even though many listen in less than ideal surroundings. The present analogue FM stereo service is still highly regarded by some audio enthusiasts [its distribution network is provided by digital circuits] although the bandwidth and stereo separation are somewhat limited now – compared to CD for example - and use of dynamic range compression [eg Optimod] is criticised. Given that FM coverage is to be emulated by DAB so should the shortcomings of FM stereo and current DAB be addressed through DAB+ for high quality music services; Joint Stereo should be avoided.

2.4 Whilst it is accepted that the choice of DAB+ rather than original DAB coding is best left to the operators there is a longer term spectrum efficiency benefit to be obtained and so Ofcom should be as active as possible in promoting DAB+. It may be useful to set a draft timescale for the expected migration to DAB+ across the whole DAB system so that the public can be assured of its benefits in a reasonable time and so be encouraged to seek suitable reception equipment in anticipation. It is important that if DAB+ is to be the long term future for DAB radio then a migration path should be formulated to support stimulation of consumer interest.

2.5 The Digital Radio Action Plan [DRAP] developed Minimum Receiver Specifications that include DAB+ and so have put in place a basis for a future migration. However these specifications will not be enforced until a decision on Switchover is made or until industry itself implements these standards supported by a “Tick” scheme that advises consumers to purchase approved devices.

2.6 Whilst the most immediate opportunity for choosing DAB+ is for a new commercial licence, the BBC and others as existing licence holders should also be encouraged to implement DAB+ and so the comments of Clauses 2.9-2.10 are welcome. The proposal to limit the amount of capacity allocated to DAB+ to 30% seems sensible but care must be taken to avoid stifling the potential for DAB+ services and risk low take up for lack of choice, quality and interest. It would probably be more effective if high quality music services were offered in DAB+.

2.7 As has been traditional with the introduction of new technical standards the BBC has been vital in seeding the market by providing new services thereby encouraging listeners to purchase new receivers. The proposals in Clause 2.8 are very welcome.

**Question 1: Do you agree with our proposals for amending the Digital Radio Technical Code in relation to DAB+? Do you have any views on how we propose its use will be permitted?**

Q1.1 Broadly we agree with the proposals subject to the caveats described above [see also Section 5 below]. We would not wish to see the additional multiplex capacity generated by DAB+ used to add more services rather than improve quality. An example is BBC Radio 3 which is currently restricted to 192 kBit/s and occasionally reduced to 160 kBit/s with Joint Stereo; use of DAB+ would enable a substantial improvement in quality at lower bit rates than these and will go some way towards emulating the on line High Definition audio version of Radio 3.

Q1.2 We welcome the opportunity for all DAB operators to migrate eventually to DAB+ if they consider it appropriate. Whilst migration issues are important to the listening public in the impact of such a move, perhaps implying a simulcasting period, Ofcom should be ready to take a lead in formulating a migration strategy sooner rather than later.

### **3 Section 3: Planning standards: wanted coverage and interference protection.**

**Question 2: Do you have any comments in relation to our proposals to amend the planning standards?**

Q2.1 We note the coverage planning principles outlined in previous consultations and discussed during the proceedings of the DRAP and now offered in the draft new Code. With the prospect of a Switchover it was vital to secure a sound planning basis. The revised proposals that have arisen from the DRAP seem appropriate for future planning purposes. We note the content of Annexe 7 Section 3, in particular the process by which operators are obliged seek Ofcom consent to their technical proposals.

Q2.2 We note that in addition to revised technical planning rules there may be changes to editorial regions so that general coverage can be improved. The re-planning process derives from the prospect of a switchover such that services delivered by FM/AM would be replaced by DAB. We understand that, for a number of technical reasons, the FM/AM and DAB networks have different coverage and so the need for changes to licensed editorial areas for the current FM services when they are delivered by DAB is clear. We expect that at least the intended original FM coverage will be replicated with DAB.

Q2.3 We support such changes provided the public remain served well and appropriately at a local level. The comment in Clause 3.9 and also in Clauses 4.11 – 4.13 of Annexe 7 Section 4 are welcomed.

3.1 Choice of Error Protection level:

**Question 3: Do you have any comments on our proposed approach to Unequal Error Protection and Equal Error Protections?**

Q3.1 Given that there is a reciprocal relationship between the level of Error Protection [EP] and net multiplex capacity as well as a coverage trade off, the choice of the Protection Level for a service is an important parameter. Given the pressure on capacity noted in Section 2 above, and considering the need for adequate geographical coverage and interference protection, an open review of the EP settings is appropriate.

Q3.2 If DAB/DAB+ is to be allowed the choice of UEP and EEP settings respectively for each should lead to the same or very similar coverage. However given the better performance of DAB+ audio coding there is the option of improving coverage by using some of the savings in net capacity for error protection as well as some for improved audio performance, thus providing a better and more robust service. Given the past criticism of DAB coverage perhaps this should be considered.

Q3.3 The use of UEP3 in most current DAB transmissions has proved to be a good balance between coverage and capacity and so, with agreed exceptions on a per case basis [as suggested in Clause 3.13], is appropriate for future general use on the assumption that a large majority of receivers is able to manage the selected parameter settings. The Minimum Receiver Specifications developed during the DRAP require full compliance but early legacy receivers and any not satisfying these specifications may not respond to unusual settings. If comparable DAB+ coverage performance is required using EEP3 is appropriate.

#### **4 Section 4: Approval of transmitter proposals**

4.1 We note the comments and consequential proposals in Clauses 4.1-4.12. They seem consistent with a plan to secure the best coverage management possible.

4.2 We also note the proposed draft new Code of Annexe 6 and the Guide for Multiplex Operators in Annexe 7 Section 3.

**Question 4: Do you agree with our proposals in relation to management of Adjacent Channel Interference?**

Q4.1 Yes. We appreciate the need for close attention to interference issues in the management of coverage especially as the number of transmitters increases. The Minimum Receiver Specifications agreed in the DRAP for Switchover provide for a defined practical resilience to interference and this must be the basis for a network planning approach that protects consumers' interests.

## 5 Section 5: Capacity allocation

**Question 5: Do you agree with our proposals for amending the Digital Radio Technical Code in relation to multiplex capacity allocation? Do you have any alternative suggestions?**

- Q5.1 Broadly, we agree and accept that the ultimate assessment of audio quality by listeners will depend on factors other than bit rate [please see our response to Question 1 above and also 8 below]. However, the inclusion of a large number of services in a multiplex, thus reducing the bit rate available per service, has contributed to past criticism of DAB, particularly of high quality music services such as BBC Radio 3 or Classic FM, when compared, for example, to their respective FM equivalents. When these are carried at higher bit rates by other means eg Freeview, the higher bit rate available is notable suggesting that DAB rates are lacking in some cases.
- Q5.2 However, we do not consider that mandating bit rates is necessary but some statement of principle that, for example, discourages degradation of high quality music services to allow additional low rate ones would be helpful. Clause 5.12 suggests audio quality criteria consistent with consumer expectations. Clause 5.13 offers a regulatory statement that will require operators to follow guidelines regarding quality criteria. In Annex 7 Section 2 of the multiplex operator Guide more detail is provided about the regulatory approach and the statements in Clauses 2.1 to 2.4 are to be welcomed.
- Q5.3 It may be argued that predominantly speech based services do not need high coding standards and that intelligibility is the essence of quality especially for those with hearing difficulties; at present, many non-music based services do operate predominantly in mono and at rather low bit rates. However, the loss of stereo [compared to FM] on BBC Radio 4, for example, leaves the DAB version at a disadvantage for certain speech programmes such as drama or discussions and when musical items are included. Changing the multiplex contents to include sporadic sports and other channels takes capacity away from high quality music services which should be avoided and DAB+ gives an opportunity to do this.
- Q5.4 It is suggested in Clause 5.11 that competitive forces will deal with sound quality issues [see Clause 2.2 above]. Whilst we accept that in general competition in markets can have a beneficial effect for consumers, in the case of audio quality in radio services we disagree:
- that can only happen in an appropriate and supportive regulatory environment and where the technical means to remain competitive are made available equitably to all players,
  - competitive forces will not deliver better sound quality unless this is seen as a positive market benefit to the operators and such that

quality is directly related to the revenue stream of the broadcasters concerned, especially if those broadcasters are commercial,

- when the proposed changes are introduced there will, presumably, be two categories of broadcaster: (a) the BBC - if it gets its charter renewed - which is responsible for delivering programmes to listeners as a public service, and (b) the commercial broadcasters, who have a different concern, which is to deliver audiences to advertisers and dividends to shareholders.
- The BBC has additional and wider responsibilities to the public and so competition between it and the commercial sector can never be totally equitable. Nevertheless they compete for listeners and regulators and government appear to require the BBC to be all things to all men by delivering audiences as if they were a commercial operation. In these different cases access to technology and the means to deploy it must not be constrained even though some natural inequalities may result,
- finally, it is arguable that sound quality means different things to different listeners [see 2.3 above] and is not the highest priority for the majority of the listening public and so competition on this basis will not necessarily be a major market driver. However, as has been traditional in British broadcasting, broadcasters should offer services at technical quality standards that offer the potential for high quality audio, competitive with other sources of quality audio, so that the consumer has the choice to pursue it.

## **6 Section 6: Multiplex management – supplementary signalling**

**Question 6: Do you agree with our proposals in relation to the management of TA/TP features on DAB? We are particularly interested to hear any views on issues that could affect implementation of these proposals.**

- Q6.1 Considering that a considerable amount of listening takes place in vehicles it is important to support those listeners with useful system features such as Traffic and Travel within DAB. Service Following is also important in this context and receivers need the appropriate data to perform this function.

**Question 7: Do you have any additional comments on either the draft Digital Radio Technical Code or Technical Policy Guidance note?**

- Q7.1 We have no comments.

**Question 8: Do you have any other comments to make on any of the matters raised in this consultation?**

Q8.1 Whilst recognising the context in which Digital Radio operates, including a mix of commercial and public service elements, we have some concerns about migration and evolution, some of which are outlined above. In a world of rapidly moving technologies in this sector DAB systems need to be able to respond to both market and technological changes. Without an adequate evolution plan together with the implied resources the DAB platform cannot achieve its potential. Furthermore, leaving the adoption of DAB+ to the market and then requiring DAB+ in the minimum receiver specifications might confuse consumers when there is no prospect of services in a reasonable time scale. Some better certainty would be helpful in preparing the market for DAB+.

Q8.2 Whilst not part of this consultation we take this opportunity to comment on an essential part of listeners' perception of sound quality not covered here, namely the significant variance in the audio delay among current DAB receivers and between those and FM. Previous discussion [during the DRAP process to develop minimum receiver specifications] has revealed the difficulty in dealing with this subject and especially the reluctance of manufacturers to address it.

There is enough anecdotal experience to suggest that consumers find it one of the most annoying aspects of DAB reception, far worse than low bit rate, and a possible major reason for the slow uptake in digital listening via DAB. This is particularly noticeable because FM receivers do not generally exhibit this feature and newcomers to DAB expect similar behaviour.

Another issue of a similar kind is that of disparate audio volume levels between normal programmes and advertisements and trails – the latter two are often much louder than they should be. Historically this has been a matter for complaint yet the practice continues.

Q8.3 Whilst also not part of the consultation we take the opportunity to raise the matter of Scottish independence and its impact on radio services in the regions. It has already been declared that Scotland wants its own BBC, but any plans for commercial radio broadcasting have not been made public. We believe that Ofcom should make public its views on the technical and editorial options and their impact of separating the Scottish network of transmitters and services from the current system, especially when the award of licences for the new D2 multiplex, presumed national, is announced. Will D2 be licensed for the whole UK or will there be provision to have separate licences and network facilities for the Scottish and English regions?

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