

Your response

Question	Your response
<p>Question 1: Do you agree with our proposals for adding requirements to the Television Technical Code and Digital Radio Technical Code relating to resilience of broadcast networks and access services?</p>	<p><i>Is this response confidential? – Y/N (delete as appropriate)</i></p> <p>We have no comment on resilience and access arrangements. However, other aspects are of considerable concern in the context of causing ‘Harmful Interference’ to critical BR systems.</p> <p>Harmful Interference (ITU): <i>Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with Radio Regulations.</i></p> <p>In general, the FCS believes that increasing the DAB services is a valuable thing to do providing other essential services are not disrupted. It would seem very unfortunate if SS-DAB systems were deployed only to be withdrawn soon afterwards.</p>
<p>Question 2: Do you have any comments on our proposed changes to the DAB Technical Policy Guidance relating to the process of transmitter approvals?</p> <p>In particular, do you have any comments on our proposed sensitivity analysis, or on whether we should require or permit applicants to provide both horizontal and vertical antenna pattern information?</p>	<p><i>Is this response confidential? – Y/N (delete as appropriate)</i></p> <p>YES</p> <p>The FCS understands that DAB systems, including Small-Scale DAB deployments that are located close to BR systems, could cause Harmful Interference to those BR Systems, preventing critical and /or safety-related operational communications.</p> <p>BR operational radiocommunications system assignments exist at High VHF and Band III SB1. We believe that any of these assignments may be affected.</p> <p>An indicative analysis for same-site deployments has been provided to Ofcom separately.</p>

This Harmful Interference could occur whether the masks associated with either Case 1 or Case 2 (of EN 302 077 section 4.2.5) are used.

We believe that the ETSI group authoring Standard EN 302 077 took this issue into account and provided a Case 3 and a Case 4 (also in section 4.2.5 of the standard) which have spectrum masks with a further 20dB of attenuation. According to the FCS calculations, that level of attenuation appears to remove the problem.

We therefore believe that the transmitter approval should require the use of Case 3 or 4 (as appropriate) when considering assignments for DAB transmitters in geographical locations and/or DAB spectrum blocks that are close to BR critical systems.

The FCS notes that there are no preventative filtering measures possible at the victim receiver because the unwanted power from the DAB system is on the same frequency as the victim receiver.

The FCS further notes that DAB Spurious Emission limits in EN 302 077 (section 4.2.4) also give rise for concern. As with all spurious emissions, they are not continuous across the spectrum in question. However, if a significant product does fall on the receive channel of a BR system, it can be expected that the BR system will suffer Harmful Interference. Thus, in those cases, measures will need to be undertaken to remove the problem.

In other parts of the DAB spectrum planning or arrangements there may be no such risk and so have no need for such additional restrictions. However, the FCS is unaware of work being done that confirms this for Spurious and Out of Band Emissions.

In summary, the FCS believes that the process of section 3.19 of the Technical Policy Guidance for DAB Multiplex Licensees could be enhanced to make it clear that the licensees are obligated to avoid Harmful Interference and are subject to enforcement measures under section 54, 55

	<p>& 56 of the WT-Act in cases of such interference being caused.</p> <p>This guidance should make it clear that this obligation exists irrespective of compliance to any EN 302 077 emission masks.</p>
<p>Question 3: Do you have any comments on our proposals for investigating and potentially permitting use of the non-critical mask?</p>	<p><i>Is this response confidential? – Y/N (delete as appropriate)</i></p> <p>YES</p> <p>The FCS understands that the non-critical mask means Case 2 in section 4.2.5 of Standard EN 302 077. It is substantially less stringent than that that of other Cases at frequencies closer than ± 3MHz to the DAB centre frequency. Beyond ± 3MHz, the mask level is the same as Case 1 and as both Cases 1&2 do not provide sufficient protection, the DAB systems can cause Harmful Interference and therefore could be subject to enforcement measures under the WT Act.</p> <p>As noted in the response to question 2, the FCS believes that DAB and SS-DAB assignments should use cases 3 or 4 when proposing operations in DAB blocks close to BR systems. We anticipate that all deployments in DAB block 7d will certainly have to be subjected to detailed investigation with a clear preference for Case 3 or 4 (as appropriate) applied in the licensing process.</p> <p>However, following detailed technical investigation, it may be found that DAB Blocks at higher frequencies may be free of such concerns and so deployment of systems with the Case 2 mask (non-critical) may be adequate.</p>
<p>Question 4: Do you have any observations on Ofcom’s processes and information we are providing and proposing to provide in relation to acceptance tests and compliance checks? Is there anything missing that would help make the process smoother or easier from your perspective?</p>	<p><i>Is this response confidential? – Y/N (delete as appropriate)</i></p> <p>YES</p> <p>The FCS believes that the publication of information relating to impending SS-DAB deployments may be beneficial.</p>

	<p>This information need only be a confirmation that the deployment is not in a DAB Block that is close to BR systems such as 7d. Or, if it is in 7d or any other DAB Spectrum block where the problem can arise, that the spectrum mask applied in the licence corresponds to Case 3 or 4 and so is not likely to cause harmful interference.</p> <p>Without some such measure, the FCS is concerned that over time, any SS-DAB deployment may encounter resistance, even though it may not be of a type that will cause interference.</p> <p>The FCS assumes that the prospective licensee will be reminded of their obligations under the Act and the possibility of enforcement action in the event they contravene the regulations.</p> <p>This is important because the FCS believes that increasing the DAB services may be a valuable thing to do providing other essential services are not disrupted. It would seem very unfortunate if SS-DAB systems were deployed only to be withdrawn soon afterwards.</p>
<p>Question 5: Do you have any comments on the EMF, HbbTV, or document format modifications proposed in this section?</p>	<p><i>Is this response confidential? – Y/N (delete as appropriate)</i></p> <p>NO</p>

Please complete this form in full and return to broadcast.technical@ofcom.org.uk