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Dear Reuben,

Response to Ofcom’s consultation, *Co-existence of new services in the 700 MHz band with digital terrestrial television*

This letter sits alongside the consultation response from Digital UK of which we are a member. That submission deals directly with the issues raised in the above consultation and we fully support the points made within. In this letter, we seek to look ahead to some of the challenges which may be faced by any support scheme mitigating interference from 700 MHz mobile services into DTT reception. Specifically, we raise the importance of balancing any such scheme with ensuring Mux E services¹ remain available to as many viewers as possible for as long as possible.

We recognise that the ongoing consultation does not concern itself fully with the details of any future support scheme. However, we consider that it might be helpful to set out at this early stage some of our thinking on the challenges that establishing a scheme will likely face.

In our detailed submission to Ofcom’s consultation, *Maximising the benefits of clearing the 700 MHz band*, we set out the importance of retaining the new HD multiplexes beyond 2020. These representations followed on from Ofcom’s own objective of promoting take up of DVB-T2 compatible receivers as set out in its decision to award the 600 MHz band to Arqiva in July 2013².

In May 2016, we provided evidence in response to the *Maximising the benefits of clearing the 700 MHz band* consultation that prolonging the life of these services beyond the original licence end date of December 2018 would be of strategic importance to the DTT platform because it:

¹ These are the TV stations provided on the so-called “new HD multiplexes”, made available when the 600 MHz band was cleared as part of the rearrangement of UHF spectrum in the lead up to digital switchover and 800 MHz mobile award.

² In particular, paragraph 2.9: “these temporary multiplexes should adopt the more efficient DVB-T2 and MPEG4 technologies. This would support the long-term strategy by encouraging viewer take-up of receiver equipment capable of receiving the new services.”

- Reduces the risk of viewer churn caused by a sudden reduction of HD and SD channels on the platform; and
- Promotes viewer take-up of MPEG4 TV receivers, potentially expediting moves toward a T2 transition on the DTT platform. This would enable free-to-air viewers to further share in the benefits conferred by HD content.

Ofcom, at that time, was not fully persuaded of the strategic value of the new HD multiplexes and we continue to have a dialogue on this specific issue. However, it did note that there are some clear benefits of retaining them where spectrum can be made available. Accordingly, Ofcom's stated position is that the 700 MHz duplex gap (733-748 MHz) should be made available for this purpose, contingent on any interference concerns being addressed and new mobile services not needing these frequencies for deployment.

In practice, this means that the services provided by the new HD multiplexes could be available for DTT viewers significantly beyond the May 2020 clearance date for the 700 MHz band. They may be available at the same time as new 700 MHz mobile services for two years or more.

Ofcom will be aware that we are currently engaged in a constructive dialogue with its strategy division on the policy challenges facing the DTT platform over the medium to long-term. The role of the new HD multiplexes is a key part of those discussions.

Mitigating 700 MHz LTE interference into DTT could adversely affect the new HD multiplexes

We welcome Ofcom's attempts to assess the likelihood of 700 MHz LTE interference into DTT, although we fully support Digital UK's view that the analysis in its current form is incomplete. In its consultation, Ofcom raises the possibility of some potential future mitigations which could be deployed to reduce the risk of interference from LTE to DTT.

Our view at this stage is that there are five potential ways of achieving this, namely:

- Filters, similar to the approach taken in the at800 scheme to address interference issues caused by 800 MHz mobile services;
- Increased viewer take-up of Group K aerials, which will have the effect of filtering out any interference above 700 MHz;
- Allocating 700 MHz plan blocks in a similar manner to France where the first mobile block of the band is 5 MHz as opposed to 10 MHz (ie 703-708 MHz). This would have a similar effect to the additional constraints Germany placed on the first 5 MHz³;

³ We also believe there could be merit in the upper uplink block being 5 MHz to minimise interference into all future centre gap services

- Altering the in-home TV set up in a way which reduces interference from mobile base stations (an approach which we understand has been effectively used by at800 in home visits without the parallel need for filters);
- In cases of mobile device interference (especially to set top aerials), remove or switch-off the interfering mobile device.

At some point in the future, Ofcom and government will consider which, if any, of the above mitigations will be the most appropriate to address interference from 700 MHz LTE services into DTT. It would be precipitate of us to offer any detailed thoughts on this at this early stage. However, we have noted that the first two of these approaches would have the regrettable unintended consequence of removing access to new HD multiplex services from a yet-to-be-quantified number of viewers.

We strongly support the general principle that 700 MHz LTE interference into DTT should be minimised. However, we would also urge any policy decisions to strike a sensible balance, if possible, between that objective and ensuring that any adverse impact on new HD multiplex services are also minimised.

With that in mind, we look forward to engaging with Ofcom and government in future phases of their policy considerations to ensure that these twin objectives can be achieved.

Yours sincerely,

John Canavan