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## Arqiva response to Ofcom consultation on WRC-19

This submission addresses three areas of key long-term concern to Arqiva, affecting our Terrestrial Broadcast, Telecoms and Satellite and Media interests. These concerns relate to Standing Agenda Item 10 – Future Agenda Items – and we seek to address the issues of:

- The provisional WRC-23 Agenda item looking at the review of services using 470-960 MHz and subsequent Radio Regulation allocation of 470-694 MHz;
- Any potential proposal to identify 3.8-4.2 GHz for IMT at a future World Radio Communications Conference; and
- Whether there is scope to reopen the discussion identifying the 28 GHz band for IMT suitable to deliver future 5G services.

As such, we are responding solely to Question 32 of Ofcom’s consultation. We address each of our concerns in turn below.

### Provisional WRC-23 UHF Agenda Item

This section sits alongside the submission to this consultation by Digital UK, the trade association for the UK digital terrestrial television (DTT) platform of which we are a member. That document sets out in more depth the growing strategic importance of the DTT platform in the wider TV ecology in the UK. We fully endorse those arguments.

Ofcom helpfully sets out in Section 8 of its consultation the high-profile nature of the provisional Agenda Item on UHF spectrum, intended for debate at WRC-23. We are grateful for Ofcom’s clarification in that Section that any changes to Radio Regulations should be “appropriate justified and demonstrated to be necessary”. This is a welcome sign, for example, that any arguments to extend co-primary mobile allocations to the 470-694 MHz band will need to be accompanied by rigorous evidence from the broader mobile sector and/or relevant administrations. This is, of course, in an environment when Ofcom’s current view on this matter has crystallised over recent months:

*our work shows that public service broadcasters will have uncontested access to DTT for at least the next ten years as the value to other users of the underlying spectrum has diminished [our emphasis].*

Ofcom, Public service broadcasting in the digital age, March 2018

This is a view that we also subscribe to and is borne out by the focus on higher frequency bands where greater bandwidths are available, more suited to the requirements of high speed 4G and 5G mobile and other wireless services.

We are also grateful for Ofcom's clarity on the specific role of the Radio Regulations in paragraph 2.7. Clearly, any change to the international regulatory status of the 470-694 MHz band would be viewed as more than a mere enabling measure. A move toward a co-primary broadcasting and mobile allocation in this spectrum could have several unintended consequences. It could, in particular, lead to a serious market failure in the highly competitive UK Broadcasting sector with unknown negative impacts for viewers.

With that in mind, our view remains that the evidence will strongly point to a retention of the exclusive broadcasting allocation in the 470-694 MHz band at WRC-23.

However, to ensure that this evidence can be properly assessed, it is crucial that the UHF agenda item as agreed in 2015 is not materially changed. In particular, the UK must reject any attempts to reduce or otherwise amend the scope of the review of spectrum used and needs of existing services. The current wording which refers to the wider 470-960 MHz band was agreed as a carefully crafted compromise between all interested parties at the conclusion of WRC-15. It was deliberately chosen to ensure that both broadcasting and mobile should account for their use of lower frequency spectrum.

We are, however, concerned that some within the broader mobile sector may seek to restrict the review on the UHF Agenda Item to 470-694 MHz only. This would inevitably lead to a narrow and sterile conversation about the desirability - or otherwise - of further "salami slicing" of spectrum currently allocated exclusively for broadcasting.

To illustrate further the importance of this point: our experience from previous World Radiocommunications Conferences strongly suggests that the broader mobile sector will claim the need for additional low frequency spectrum to support demand for capacity and coverage. In November 2017, Digital UK commissioned a report through Aetha Consultancy which demonstrated that there could be opportunity to secure such capacity through existing mobile spectrum holdings in the 700, 800, 900 MHz and (to a lesser extent) 1.4 GHz bands. This notion has been further examined by LS Telcom, who concluded that it was of sufficient interest to warrant further consideration.

This concept and other more creative approaches to securing genuine spectrum efficiency needs to be a key part of any future discussion on how low frequency capacity and coverage and should be

secured for mobile services. It is difficult to see how that discussion could happen unless a formal UHF review under the auspice of the WRC assessed the use of the full 470-960 MHz band.

Given the nature of the careful compromise between competing stakeholders at WRC-15 which underpinned the current wording of the UHF Agenda Item, we would view any attempt to amend it now as a regrettable act of bad faith. If those scenarios were to play out, Ofcom should consider whether the Agenda Item should be withdrawn altogether. We ourselves, in recognition of the path which has led to the current wording, are not intending to propose any substantive changes to the Agenda Item. We understand that most, if not all, relevant international broadcasting representatives will be taking the same (or a broadly similar) approach.

Ofcom will also be aware that the 2017 European Union UHF Decision reserves the spectrum 470-694 MHz for DTT until at least 2030. It is unclear to us how this would be consistent with any regulatory move as early as 2023 which would signal a change in use of that spectrum.

Finally, at an institutional level, we understand that there has been some informal suggestions that ITU Study Group 6 (broadcasting) could be merged into other ITU Study Groups. Among the reasons why this could lead to undesirable outcomes for consumers is that it would prevent an independent broadcasting view from being heard as part of the UHF review process in the lead up to WRC-23. We would urge Ofcom, at the 2019 Radio Assembly, to support the retention of ITU Study Group 6 at least until the completion of the WRC-23 study cycle.

Subsequent to this, Ofcom should secure agreement at the Conference Preparatory Meeting after WRC-19 that ITU Study Group 6 should be one of the responsible groups for discussing the UHF Agenda Item in advance of WRC-23.

#### Potential 3.8-4.2 GHz agenda item

There are no current proposals to introduce discussions on the 3.8-4.2 GHz band to the agenda for WRC-23. However, we are aware that the possibility of putting this band forward has been discussed elsewhere in Region 1 and may well emerge as a proposal under Agenda Item 10.

Arqiva has worked constructively with Ofcom and others over the past two years to ensure that the entire 3.4-3.8 GHz band can be cleared for future 5G services by the early 2020s. We have been clear that a fundamental pre-requisite for moving satellite services from this band is secure access to the 3.8-4.2 GHz band for the foreseeable future underpinned by international regulatory predictability. Ofcom's response to these calls for such certainty has been, in our view, lukewarm.

Mindful of its previous support (during the WRC-15 preparatory process) for the 3.8-4.2 GHz band as a candidate band for 5G, we are calling for agreement to the principle that Ofcom would give an unequivocal rejection of any proposal to discuss these frequencies as an Agenda Item at WRC-23 or beyond.

## Revisiting the status of the 28 GHz band

Ofcom has been unequivocal in its support for the 26 GHz band as a future IMT band suitable for delivering future 5G services. We set out at length in our response to its September 2017 consultation *5G spectrum access at 26 GHz and update on bands above 30 GHz* how the benefits for consumers would be increased by looking at a combination of 26 GHz and 28 GHz. Ofcom, in contrast, has approached this question as a zero-sum game where promoting 26 GHz for 5G means that it cannot consider similar possibilities for 28 GHz.

Arqiva already holds a national licence to use the 28 GHz band for mobile, fixed wireless and satellite services. Further regulatory action on the 28 GHz band is not strictly necessary for Arqiva to deploy services in the 28 GHz band. However, there are clear potential benefits in supporting industry by sending signals that the 28 GHz band could be suitable for future 5G services.

Considering the continuing significant industry moves elsewhere toward 28 GHz broadband services in some of the world's biggest markets (notably the United States, Japan and South Korea) as well as the approach in 3GPP of looking at a wider 26/28 GHz band, we would repeat our view that the 28 GHz band should be formally studied to demonstrate the possibilities of co-existence between services.

We are confident from our own technical work that effective co-existence between fixed wireless and satellite services, for example, can be achieved. Indeed, this was the view of Ofcom in 2008 when it awarded the 28 GHz licences.

The formal technical assessments underpinning such action cannot, however, take place at the ITU if administrations prevent a WRC agenda item on the 28 GHz band as has happened in the existing WRC cycle. We would urge Ofcom to reconsider its regulatory approach, particularly as it relates to the WRC process, to allow the studies to take place to better understand the possibilities for 5G services in the 28 GHz band. It should, therefore, be added as an Agenda Item for WRC-23.

ARQIVA, September 2018