Consultation response form

Please complete this form in full and return to liz.hall@ofcom.org.uk.

Consultation title	
Full name	
Contact phone number	
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Confidentiality

We ask for your contact details along with your response so that we can engage with you on this consultation. For further information about how Ofcom handles your personal information and your corresponding rights, see Ofcom's General Privacy Statement.

Your details: We will keep your contact number and email address confidential. Is there anything else you want to keep confidential? Delete as appropriate.	Nothing
Your response: Please indicate how much of your response you want to keep confidential. Delete as appropriate.	None
For confidential responses, can Ofcom publish a reference to the contents of your response?	Yes

Your response

Question	**Your response**
Section 3 –Spectrum use by the PMSE sector in the UK **Question 1**: What are your views on how our processes work - for example our online booking system, turnaround times, and event coordination. Do you think the current approach works well? How could we	As you will see I sporadically use the site. It is only on filming work that requires more than a handful of contributor microphones that I need to book coordinated frequencies outside of Ch.38. With the down turn in the industry over the last two years I don't see this improving. However when doing so, now I am familiar, I find it

improve it?

relatively easy to do but is definitely showing its age. I rarely have needed to speak to anyone to coordinate but always been a quick turnaround. A mobile app would be lovely that could use location data and allow instant bookings for hours rather than entire days like a parking app but appreciate this would be quite an under taking. This flexibility would hopefully encourage productions and licensees to make the effort to book (the reality is there will be many productions that don't book because they are filming in multiple locations per day and don't want to book for each of these locations due to the cost or time required to book or simply don't know where they will be. For example, The Apprentice style shows filming across the capital and don't know with any accuracy where they will be but are running contestant microphones, IEM's, Camera Wireless Feeds (some of these will be within Ch.38 but some won't be). When I've done these style of shows I endeavour to make use of the license free 863-865 but this is getting more crowded.

The series I am on at this moment has a license as we are running dozens of channels in a fixed location. But the existing workflow for bookings doesn't work well when on a PSC/ENG shoot with 4-5 contestants the IEM feeds for directors and Camera Wireless Hop needs to be away from Ch.38 that is filming in multiple locations (which you don't know before hand as the call sheet comes out the night before). The Hops need to be 470-550Mhz while the IEM's 830-865Mhz leaving the talent mics to be 606.5-613.5Mhz. Productions don't want to pay for the Hop or IEM frequencies in multiple locations each day. A booking system like RINGGO for radiomic bookings with prices to match would more likely be used.

As a result, you are missing out on income and the scale of use for the PMSE market is hidden.

Confidential? – N

Section 4 – PMSE historic trends

Question 2: Do you have any comments on how we have analysed and characterised wireless microphone and IEM demand, or suggestions for alternative ways of characterising this demand?

In addition to what I've said above about demand being hidden due to the inflexibility of the existing booking system. Production Companies are not using dedicated Sound Recordists on many shows. Most of BBC daytime output for things like Travelling Auctioneer are self shot. The Directors/Producers are given a camera with some radiomics hired from a facilities house but they may or may not be correctly setup. These individuals I meet on various bigger shoots have no idea about coordinating frequencies and that there is even a legal requirement for an operating license. On

the current shoot I had to shout at a PD for using their own kit as it was interfering with our rig. They had no idea it could have been an issue.

There are a host of users out there that are using spectrum unlicensed because they don't know they have to have a license. While their ignorance isn't an excuse I do believe action could be taken to make Hire Companies confirm licenses are held by those hiring equipment.

Confidential? – N

Question 3: Do you have any comments on how we have analysed and characterised wireless video demand, or suggestions for alternative ways of characterising wireless video demand?

No comment

Confidential? – Y / N

Section 5 – Future trends and opportunities

Wireless audio

Drivers of demand

Question 4: What factors have driven changes in the demand for audio PMSE applications, specifically for:

a) the increased use of coordinated wireless microphones and IEMs, particularly the peak number of simultaneous assignments used at the largest events?

a) the slight decline in the number of national wireless microphone licences (UHF channel 38 and VHF)? Has the extent of use of these licences changed, and if so why?

b) the declines in talkback, fixed audio links and ADS licences?

A) Everyone and their mother now want their own feed because they can. This was not the case as it was more difficult to do. With the world of Dante assigning personal mixes is much easier so rather than accepting a group mix, everyone wants their own.

B) Television production demand has dropped off the cliff since 2024. With many Sound Recordists out of regular work, I imagine many have cut back on the cost of the license as a result. They are then using them without a license when they get work. Also see my answer to Q2 regarding unlicensed operators using hired equipment.

C) IP based talkback means more channels over fewer frequencies.

Confidential? – N

Question 5: What factors could drive further changes in the demand for audio PMSE applications in the future, and what will this mean for future demand, specifically for:

a) coordinated wireless microphones and IEMs, particularly the peak number of simultaneous assignments used at the largest events?

b) national wireless microphone licences (UHF

A) I don't believe Television production rates will increase and this is the new "normal" so demand patterns won't change.

B) Demand is there but probably unlicensed so masked.

C) Not able to comment

Confidential? – Y / N

channel 38 and VHF)? c) talkback, fixed audio links and ADS licences?	
Question 6: Do you agree that, given the trends, we are right to focus on wireless microphones/IEMs?	Yes Confidential? – Y / N
Changes in the take-up of bands already available **Question 7:** What factors have driven the take-up of different bands for wireless audio? What are the barriers to greater use of the DME band?	Range and cost of replacing equipment. As we found when Ch69 was removed, the company that you paid to take back the Ch69 gear quickly resold it on eBay and other auctions back to the public so it continued to be used. This would happen if Ch38 was removed. Some users would move to DME but many would be unable to afford to purchase gear so would likely continue using Ch38. Confidential? – Y / N
Question 8: What actions could enable greater take-up of the DME, DECT and licence exempt bands in the future?	Range and battery improvements. Digital codecs allowing multiple audio into a digital stream will help. What we need is Dante to be wireless but range will always be an issue. Confidential? – Y / N
Changes in spectrum availability **Question 9:** Which potential additional bands might be suitable for wireless audio applications, particularly microphones and IEMs at the largest events and venues?	Others are better to comment on this but going higher (DME) isn't what PMSE users need. Confidential? – Y / N
Question 10: To what extent do the characteristics of different audio applications drive their requirements for spectrum – for example particular requirements for latency, resilience or capacity?	Wifi and Bluetooth latency is dreadful so UHF is what is needed. Confidential? – Y / N
Changes in efficiency of spectrum use **Question 11:** What changes in spectrum use (technology, working practices, different bands, etc) have enabled audio wireless growth to be accommodated to date, particularly the increased use of wireless microphones and IEMs at the largest events and venues in the context of reduced UHF spectrum availability?	Wideband receivers have helped hugely for PMSE allowing users to be flexible without the need to purchase dedicated gear for a particular frequency range. Confidential? – Y / N
Question 12: What technologies are currently available or are being developed which can improve audio	No comment

spectrum efficiency in the future, particularly in the use of wireless microphones and IEMs at the largest events and venues?

Confidential? – Y / N

Question 13: Are there any barriers to adopting more efficient technologies for audio applications, particularly for wireless microphones and IEMs at the largest events and venues? What could industry do and what could Ofcom do to facilitate greater use of those technologies?

Cost. Ofcom would need to offer 100% replacement value (or as close to 100%) to encourage users to buy other gear.

Confidential? – Y / N

Question 14: What changes to working practices and spectrum planning could improve audio spectrum efficiency in the future, particularly in the use of wireless microphones and IEMs at the largest events and venues?

Each venue needs to publish contact details of their coordinator.

Confidential? – Y / N

Question 15: Are there any barriers to adopting working practices that could enable more efficient use of spectrum by audio applications, particularly for wireless microphones and IEMs at the largest events and venues? What could industry do and what could Ofcom do to facilitate those efficiencies?

Time. Productions on tight schedules rarely give the time required to find these details out before arriving on location.

Confidential? – Y / N

Wireless video

No comment

Confidential? – Y / N

Drivers of demand

Question 16: What factors (such as more complex events and use of higher resolution equipment) have driven the demand for wireless video bandwidth, in particular for:

a) the increased bandwidth required for the largest sporting events such as Formula 1 at Silverstone and The Open Championship?

b) the bandwidth required for nationally important state events such as The Coronation?

c) the slow growth or decline in bandwidth used at horse racing fixtures?

Question 17: What factors could drive further changes in the demand for wireless video bandwidth in the future, and what will this mean for future demand, in particular for:

No comment

Confidential? – Y / N

a) the bandwidth required for the largest sporting events like Formula 1 at Silverstone and The Open Championship?

b) the bandwidth required for nationally important

state events such as The Coronation?

c) the bandwidth used at horse racing fixtures and other major sporting events?

Potential news bands	No comment
Question 18: What factors have influenced the degree of take-up of existing bands used by wireless video applications, particularly the growth in take-up of the 7 GHz band?	Confidential? – Y / N
Question 19: Which potential additional bands might be suitable for video PMSE applications, particularly at the largest events and venues?	No comment Confidential? – Y / N
Question 20: To what extent do the characteristics of different video applications drive their requirements for spectrum – for example particular requirements for resilience or capacity?	No comment Confidential? – Y / N
Changes in efficiency of spectrum use	No comment
Question 21: What technologies are currently available or are being developed which can improve wireless video spectrum efficiency in the future?	Confidential? – Y / N
Question 22: Are there any barriers to adopting more efficient technologies for wireless video? What could industry do and what could Ofcom do to facilitate greater use of those technologies?	No comment Confidential? – Y / N
Question 23: What types of video demand could realistically be supported by private (for example 5G) networks?	No comment Confidential? – Y / N
Question 24: What changes to working practices and spectrum planning could improve video spectrum efficiency in the future, particularly in the use of wireless microphones and IEMs at the largest events and venues?	No comment Confidential? – Y / N
Question 25: Are there any barriers to adopting working practices that could enable more efficient use of spectrum by wireless video? What could industry do and what could Ofcom do to facilitate those efficiencies?	No comment Confidential? – Y / N
Other comments	No comment
Question 26: Do you have any other comments or views on the issues raised in this document?	Confidential? – Y / N

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- ☐ Email from Ofcom
- ☐ Saw it on social media
- ☐ Found it on Ofcom's website
- ☐ Found it on another website
- ☐ Heard about it on TV or radio
- ☐ Read about it in a newspaper or magazine
- ☐ Heard about it at an event
- ☐ Somebody told me or shared it with me
- ☐ Other (please specify)

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