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 improve it?	Works well on the occasions I have needed to book a license.
### 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?	
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?	

Question	Your response
## 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? b) 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? c) the declines in talkback, fixed audio links and ADS licences	A/ I have very rarely ever needed to cover large events with wireless. I tend to work more on small crews and on documentary shoots. Just a note here that I am these days (mainly) a college lecturer at London Film School. Over the past three years nearly all of my work as recordist has been on documentary shoots abroad. B/ Slowdown in the industry, = less work for sound recordists. People leaving the industry.
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?	If and when the industry recovers we will need reliable wireless available. Previously channel 69 worked well. More recently Channel 38 has worked well for talent and incoming audio. Location sound recordists also need another set of frequencies either much higher or much lower than ch 38 for sending audio out to other crew members as well as Wireless camera hops and in IEM systems. 823 – 832 MHz has been adequate as has 863-865MHz (Ch.70)

Question	Your response
b) national wireless microphone licences (UHF 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?	y
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?	Generally the most important thing is to be frequency agile. Barriers for most owner operator sole traders is the cost. Two cannels of pro digital wireless can easily cost £7000 and more.
Question 8: What actions could enable greater take-up of the DME, DECT and licence exempt bands in the future?	I will be leaving boxes blank where I don't feel qualified to answer or the questions concern working in large venues, which is not something I usually do.
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?	
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?	

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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?	
Question 12: What technologies are currently available or are being developed which can improve audio spectrum efficiency in the future, particularly in the use of wireless microphones and IEMs at the largest events and venues?	Digital radio mics now allow more frequencies to operate within smaller bandwidths.
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?	
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?	
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	

Question	Your response
events and venues? What could industry do and what could Ofcom do to facilitate those efficiencies?	
## Wireless video ### 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: 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?	

Question	Your response
c) the bandwidth used at horse racing fixtures and other major sporting events?	
Potential new bands **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?	
Question 19: Which potential additional bands might be suitable for video PMSE applications, particularly at the largest events and venues?	
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?	
Changes in efficiency of spectrum use **Question 21:** What technologies are currently available or are being developed which can improve wireless video spectrum efficiency in the future?	
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?	Confidential? – Y / N
Question 23: What types of video demand could realistically be supported by private (for example 5G) networks?	Confidential? – Y / N

Question	Your response
Question 24: What changes to working practices and spectrum planning could improve video spectrum efficiency in the future?	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?	Confidential? – Y / N
Other comments **Question 26:** Do you have any other comments or views on the issues raised in this document?	The critical question is for most sound recordists who own wireless kit is regarding compensation for any equipment which will not work within a re-allocated frequency band. For example to replace a (typical) two channel Audio Ltd 2040 ch 38 with the new digital equivalent Sound Devices A20 two channel digital radio mic system would cost around £7,100 plus vat (without the mics) plus the cost of newly fitted connectors as required.

Please tell us how you came across about this consultation.

☐ Saw it on social media

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