

Your response

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<p>Section 3 – Spectrum use by the PMSE sector in the UK</p> <p>Question 1: What are your views on how our processes work - for example our online booking system, turn-around times, and event coordination. Do you think the current approach works well? How could we improve it?</p>	<p>Confidential? - N</p> <p>N/A</p>
<p>Section 4 – PMSE historic trends</p> <p>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?</p>	<p>Confidential? - N</p> <p>N/A</p>
<p>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?</p>	<p>Confidential? - N</p> <p>N/A</p>
<p>Section 5 – Future trends and opportunities</p> <p>Wireless audio</p> <p>Drivers of demand</p> <p>Question 4: What factors have driven changes in the demand for audio PMSE applications, specifically for:</p>	<p>Confidential? - N</p> <p>Q4a) I can only expect the demand for spectrum to increase with continued use if wireless mics, instrument connections and especially stereo in-ears.</p> <p>Q4b) Not aware of a decline in the UHF requirement. In recent times I haven't used the VHF allocation.</p> <p>Q4c) I don't see a decline in talkback.</p>

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<p>a) the increased use of coordinated wireless microphones and IEMs, particularly the peak number of simultaneous assignments used at the largest events?</p> <p>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?</p> <p>c) the declines in talkback, fixed audio links and ADS licences?</p>	
<p>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:</p> <p>a) coordinated wireless microphones and IEMs, particularly the peak number of simultaneous assignments used at the largest events?</p> <p>b) national wireless microphone licences (UHF channel 38 and VHF)?</p> <p>c) talkback, fixed audio links and ADS licences?</p>	<p>Confidential? – N</p> <p>Q5a) I can only see this increase</p> <p>Q5b) I can only see this increase</p> <p>Q5c) I can only see this increase</p>
<p>Question 6: Do you agree that, given the trends, we are right to focus on</p>	<p>Confidential? – N</p> <p>Although not in my usage – wireless Video is also a re-</p>

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wireless microphones/IEMs?	quirement
<p data-bbox="204 450 592 521">Changes in the take-up of bands already available</p> <p data-bbox="204 562 660 707">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?</p>	<p data-bbox="699 456 906 488">Confidential? - N</p> <p data-bbox="699 533 1385 678">Production organisations and especially non-profits have significant investment in expensive equipment that operates in the traditional UHF bands. Coverage is poorer in the DME band</p>
<p data-bbox="204 804 671 949">Question 8: What actions could enable greater take-up of the DME, DECT and licence exempt bands in the future?</p>	<p data-bbox="699 819 906 851">Confidential? - N</p> <p data-bbox="699 896 1377 965">Over time suitable equipment may become more widely available.</p>
<p data-bbox="204 1021 520 1093">Changes in spectrum availability</p> <p data-bbox="204 1120 639 1301">Question 9: Which potential additional bands might be suitable for wireless audio applications, particularly microphones and IEMs at the largest events and venues?</p>	<p data-bbox="699 1028 906 1059">Confidential? - N</p> <p data-bbox="699 1104 1331 1173">If an allocation of a band between 832 and 863 were possible this would be readily taken up.</p>
<p data-bbox="204 1344 671 1570">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?</p>	<p data-bbox="699 1359 906 1391">Confidential? - N</p> <p data-bbox="699 1435 1382 1626">Latency isn't really an issue Resilience: The higher frequencies have more limited coverage and are more prone to drop-outs Capacity: I can only see a greater demand for capacity as previously commented.</p>
<p data-bbox="204 1680 651 1751">Changes in efficiency of spectrum use</p> <p data-bbox="204 1778 671 2002">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</p>	<p data-bbox="699 1684 906 1715">Confidential? - N</p> <p data-bbox="699 1760 1353 1874">Its not clear what this question is asking. I'm aware of some digital technologies that are more spectrum efficient.</p>

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and IEMs at the largest events and venues in the context of reduced UHF spectrum availability?	
<p>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?</p>	<p>Confidential? – N</p> <p>As above. I'm aware of Digital technologies that are more spectrum efficient. There are two related issues with this:</p> <ol style="list-style-type: none"> 1) The digital technology will allow higher channel count. Which as noted before there is increasing demand. 2) However, use of digital technology requires more current equipment that will be a challenge for no-profits to replace their existing equipment
<p>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?</p>	<p>Confidential? – N</p> <p>As noted above. Monetary assistance with upgrading equipment such as a buy-back scheme would help to facilitate this.</p>
<p>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?</p>	<p>Confidential? – N</p> <p>At the larger events there is significant 'channel management' already taking place to make best use of available spectrum. A quart is already being extracted from a pint pot.</p>
<p>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?</p>	<p>Confidential? – N</p> <p>Cost of equipment replacement is especially an issue for non-profits.</p>
<p>Wireless video</p> <p>Drivers of demand</p> <p>Question 16: What factors (such as</p>	<p>Confidential? – N</p> <p>This section is not applicable in my usage.</p>

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<p>more complex events and use of higher resolution equipment) have driven the demand for wireless video bandwidth, in particular for:</p> <ul style="list-style-type: none"> 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? 	
<p>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:</p> <ul style="list-style-type: none"> 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? 	Confidential? - Y / N
<p>Potential news bands</p> <p>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?</p>	Confidential? - Y / N

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<p>Question 19: Which potential additional bands might be suitable for video PMSE applications, particularly at the largest events and venues?</p>	<p>Confidential? – Y / N</p>
<p>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?</p>	<p>Confidential? – Y / N</p>
<p>Changes in efficiency of spectrum use</p> <p>Question 21: What technologies are currently available or are being developed which can improve wireless video spectrum efficiency in the future?</p>	<p>Confidential? – Y / N</p>
<p>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?</p>	<p>Confidential? – Y / N</p>
<p>Question 23: What types of video demand could realistically be supported by private (for example 5G) networks?</p>	<p>Confidential? – Y / N</p>
<p>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?</p>	<p>Confidential? – Y / N</p>
<p>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?</p>	<p>Confidential? – Y / N</p>

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<p data-bbox="204 297 523 338">Other comments</p> <p data-bbox="204 365 643 472">Question 26: Do you have any other comments or views on the issues raised in this document?</p>	<p data-bbox="699 286 906 315">Confidential? - N</p> <p data-bbox="699 365 1337 432">Non-profits do not have the budget to replace equipment made obsolete by potential regulatory changes</p>

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