

**British Entertainment Industry Radio Group (BEIRG)  
Response to DCMS Communications Review Seminars**

**September 2012**

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## **Introduction**

This is the British Entertainment Industry Radio Group (BEIRG) response to the first four seminars of the DCMS Communications Review. The response will mainly focus on issues relating to the third seminar, 'Maximising the Value of Spectrum to Support Growth and Innovation', and the fourth seminar, 'Driving investment and growth in the UK's TV content industries'. In particular, this response will reflect on the social, cultural and economic benefits that the Programme Making and Special Events (PMSE) industry has for UK citizens and consumers, and the importance of balancing these benefits with expansion of the mobile communications sector.

BEIRG is an independent, non-profit making organisation which represents users of radio spectrum in the PMSE sector, working for the benefit of all those who produce, distribute and ultimately consume content made using radio spectrum in the UK. We campaign for the maintenance of PMSE access to sufficient quantity of interference-free spectrum. Our members are involved in the production of all areas of television content, at national, regional and local level. A large proportion of these PMSE users are SMEs. They are essential in the production of content including TV, film, sport, theatre, live music, newsgathering, political and corporate events, along with many others. As well as being vital in producing live content, wireless technologies also play a vital role in helping to improve security and safety levels within the entertainment industry and other sectors. Their benefits include improving the management of electrical safety, the reduction of noise levels, the development of safety in communications and reducing trip hazards as well as providing an essential tool for the security orientated services. Wireless equipment and the spectrum it operates in are undeniably crucial to the British entertainment industry and the wider economy.

The PMSE sector is a diverse and diffuse community of content producers, manufacturers, rental organisations, small businesses and freelance engineers. Responsible for content production for live and recorded entertainment, PMSE services contribute significantly to the economic and social wellbeing of the UK. It plays a crucial role in the on-going success of the British creative industries, which contribute £36 billion annually to the UK economy and are currently responsible for the provision of 1.5 million jobs<sup>1</sup>. The PMSE sector is also critical to the production of content which is exported around the world and the economic and social importance of PMSE, and the creative industries which rely on it, is growing. On a daily basis this sector is responsible for the production of content that attracts a global audience and receives world-wide acclaim.

Spectrum demand for use by PMSE continues to increase, as outlined in the third seminar by Ofcom's representative, Charles Jenne. Yet while PMSE is growing in size and importance, access to the spectrum which is vital to its operations is being steadily eroded. Without sufficient access to spectrum, the PMSE sector's ability to produce content for consumers is severely compromised.

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<sup>1</sup>[UK Government Department for Culture, Olympics, Media and Sport](#)

## **PMSE benefits to consumers and citizens**

Consumer demand for content produced by the PMSE industry is currently extremely high and growing. The Government must carefully consider the benefits that existing users of spectrum deliver to citizens and consumers when developing a framework for further growth in the communications industry. It is vital that this growth is not imposed at the expense of valuable services which improve the cultural and economic life of UK citizens. If Britain wants to maintain its position as a global leader in entertainment and the creative industries, continuing to develop new and innovative productions such as those seen at the Opening and Closing Ceremonies of the London 2012 Olympic and Paralympic Games, then growth in the PMSE industry and support for the SMEs which make it up is essential. However, as spectrum is sold off or allocated to mobile communications, demand for PMSE spectrum is already starting to exceed supply. It is becoming increasingly difficult for PMSE professionals to produce the world-class content that is so integral to the success of the British entertainment industry. The Government must recognise what they are putting at risk when developing a strategy for future communications growth. It is simply not clear that consumers would prefer increased mobile communications services at the expense of the high quality entertainment which they currently enjoy. Reports commissioned by the mobile sector that 'prove' this demand should be viewed objectively.

For example, the West End of London, which uses PMSE equipment to produce much of its content, attracts visitors from all over Britain and tourists from across the world. The current annual turnover of the West End is £500 million, and it attracts around 15 million visitors a year. Including downstream revenue such as merchandise, transport and hotels, the current economic impact is £2 billion. This figure is continuing to grow. Yet without adequate spectrum access, maintaining revenue at this level would be impossible. Similarly, music festivals, regional theatre, major sporting events and live music concerts also contribute a significant amount to the British economy. In 2005 it was estimated that Glastonbury Festival's impact on the local economy was over £50 million.

Furthermore, the 2012 London Olympic Games would not have been possible to produce without the additional spectrum made available for the event in the 2.5 – 2.69 GHz spectrum and the 800 MHz radio mic channels, both of which frequency bands are due to completely close to the PMSE sector at the end of 2012. Capital cities will always expect to be able to produce such large-scale events; but may find their capability to do so severely hindered in the future if spectrum access for PMSE continues to be reduced.

Richard Lindsay-Davies from the Digital TV Group suggested in the spectrum seminar that a balanced and professional approach had to be taken in the reallocation of UHF spectrum, as there was a danger of underestimating the disruption that could be caused by making changes. BEIRG believes that DCMS must increasingly take into account the cultural, social and financial benefits that the PMSE industry delivers when it considers the development of the communications market. With more and more spectrum being allocated to the communications sector, BEIRG is concerned that if further spectrum sales take place, the entertainment industry will face irreparable damage.

## **Growth in the Communications Market and its impact on PMSE**

Over the past five years the environment in which PMSE users in the UK have been operating has radically changed. The industry has already faced serious upheaval. The clearance of the 800 MHz band has placed a serious financial burden on the industry, on small businesses in particular. The confusion over the future allocation of the 600 MHz has damaged confidence and negated investment in equipment for this band. The threat of interference from unlicensed White Space Devices (WSD), and the potential clearance of the 700 MHz band, are providing further concern for PMSE professionals and undermining investor confidence. At the same time, consumer demand for PMSE produced content is rising. Using white space information available from Ofcom, BEIRG believes that there will soon be insufficient spectrum available to operate necessary quantities of PMSE equipment for large-scale musical productions to be staged at certain prime venues across the UK<sup>2</sup>, including at theatres in Edinburgh, Cardiff, Brighton, Southend, Woking, Reading, York and Sunderland.

The PMSE sector relies upon wireless equipment such as wireless microphones, in-ear monitor systems, talk back and instrument systems. In the past thirty years there have been vast improvements in production values and safety levels as a result of advances in wireless technology. The PMSE sector currently relies on use of the interleaved spectrum that resides between existing TV broadcast channels and, from 2012, the dedicated nationwide PMSE channel 38. It is important to note that, unlike other technologies, wireless microphones do not have the capability to move to platforms other than radio spectrum. Whereas television broadcasts may potentially be able to be broadcast online in the longer-term, PMSE equipment cannot function on any platform other than clean, interference-free UHF spectrum. Currently there is only a limited pool of PMSE equipment that operates outside the UHF spectrum, due to the cost of developing and producing such equipment. The First Digital Dividend, the future allocation of the 600 MHz band, the planned introduction of WSD in to UHF bands, and now the uncertainty over the future of the 700 MHz band has, and will continue to, negatively impact on the quantity and quality of spectrum available to PMSE in the UK, leaving the industry with ever-increasing pressure on its ability to operate successfully, and threatening to render the 80% of recent PMSE equipment sales, that utilise the 700 MHz band, unsustainable. The purchasing of 700 MHz equipment has only resulted from PMSE's earlier eviction from Channel 69, and to clear 700 MHz of PMSE users so soon after Channel 69's reallocation would be a financial blow that many SMEs will be unable to recover from, with too much money invested in unworkable equipment. PMSE needs certainty about where it will be operating in the future, in order to allow manufacturers to develop high standard equipment, and provide time for users to invest in this equipment.

It is vital that the Government does not consider growth in the communications market in isolation. As Ofcom's Charles Jenne recognised of PMSE and other existing users of 700 MHz during the spectrum seminar, they are 'high value and important users of spectrum'. Any future move to re-allocate additional spectrum away from PMSE would severely disrupt an industry which has already, as a result of decisions by Government and Ofcom, faced serious financial and operational upheaval. BEIRG strongly believes that any move to auction the 600 MHz band would be a serious error, and should not be made until it is clear that there will be

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<sup>2</sup> Working on the basis that a large-scale production requires over 50 MHz of interference-free spectrum to operate its wireless microphones, in-ear monitor systems and wireless communications.

sufficient access to existing or replacement spectrum allocations in order for the PMSE industry to meet the growing demand for its services.

This is made even more important by plans in Europe for the harmonisation of the 700 MHz band for telecommunications. If the 600 and 700 MHz bands were to be sold in addition to the 800 MHz band, the PMSE industry would be left with insufficient access to spectrum. Were this situation to develop, wireless content production in the UK would be effectively wiped out. The British entertainment industry would no longer be able to produce much of its content, and this would result in serious financial and cultural losses to UK plc. BEIRG believes that until the fate of the 700 MHz is decided, no auction of the 600 MHz should be undertaken, and the status quo should be maintained. It is also important that the government remains aware of the spectrum situation in Europe, where harmonisation of sufficient spectrum on a pan European basis for the continuation of PMSE delivery should be of equal stature to the provision of mobile broadband, and adequately address the spectrum deficit from which PMSE will suffer. No decisions should be made by the Government which could leave this valuable industry without access to such a key resource in its operation.

### **European Harmonisation and Wireless Broadband**

In light of the PMSE industry's experiences of the u-turn on channel 69, BEIRG believes that any future decisions made on harmonisation should be conducted with the relevant European bodies. PMSE faced increased disruption in their eviction from channel 69 due to the decision by Ofcom to act ahead of European developments. Any future framework should thus be more cautious. BEIRG believes that the UK should be pushing for a harmonisation of broadcast and PMSE in the 600 MHz and 700 MHz bands across Europe, rather than allocating ever more spectrum to the communications sector. This would be an acceptable means of ensuring that PMSE users retain sufficient access to spectrum and that consumer and citizen demand for live entertainment content is met, bringing positive benefits for manufacturers and PMSE professionals, and ultimately the citizens who consume the content they produce. Harmonised bands allow manufacturers the opportunity to develop equipment which can be sold across a much greater market, increasing the funds available for research and product development. In addition, for touring productions, harmonised bands would allow productions to take their shows to an ever greater audience, both nationally and internationally, without costs increasing exponentially. This ensures that theatre and music are not reserved for the select few who live in those areas where spectrum is available.

BEIRG has serious concerns about the possibility of 700 MHz being re-allocated on a co-primary basis for the deployment of wireless broadband (WBB). BEIRG does not accept that the 700 MHz band needs to be cleared for this purpose. No formal decisions were reached at World Radiocommunication Conference 2012 with regard to the future of this band, and BEIRG does not believe that widespread spectrum clearances need be undertaken. It is more important that mobile companies make better use of their existing spectrum resources for mobile broadband before being assigned any new bands. Given the large quantity of spectrum already available to mobile services, and the limited access which PMSE already has, no clearance of 700 MHz until should be made until mobile services can be proven to be making the best use of their existing spectrum holdings. Indeed, it should be possible for mobile companies to ensure adequate mobile broadband coverage with the level of spectrum access that they currently enjoy.

Not only is BEIRG concerned that new WBB services will reduce the amount of spectrum available for PMSE use, BEIRG is also concerned about the interference that these services will cause to adjacent TV bands. This would further reduce available spectrum, and have an effect on the capabilities of industries such as PMSE. A Study by the German Federal Network Agency in October 2008<sup>3</sup> identified that 96 MHz of spectrum was the minimum requirement for PMSE audio equipment to operate production on a daily basis. This study was carried out in an urban area, and took into consideration the operation of PMSE systems in close proximity to each other, including press and conference centres, operas, theatres, musicals, concerts, production studios and education facilities. The study excluded sites such as hotels, public/community centres, churches and other enterprises, which also utilise PMSE equipment. However, both practical application and the report shows that 96 MHz is required for each of these locations to operate PMSE services without interference or difficulty. It is fair to say that the UK situation is no different. Furthermore, this study did not include special events, such as national and international political gatherings and conferences, VIP visits, elections, large open air events, national and international sports events, religiously motivated meetings, parades and more. These would require a great deal more spectrum to be available in order to operate successfully.

BEIRG challenges whether additional spectrum allocation for mobile broadband should be needed at this time. We are concerned that the mobile companies have so far not best utilised their current spectrum allocation and that much more efficient use could be made of this limited resource. As the Minister himself pointed out during the third Communications Review seminar, efficient use of the spectrum is vital, as there is a real economic value to it.

Qualcomm, for example, should be required to forego its license to 1.452 – 1.492 MHz in the L-Band, having failed to make use of it since obtaining licences for the band. The L-Band is a potential source of harmonised spectrum for PMSE use. It should not, however, be seen as an alternative to UHF spectrum for the PMSE industry, and should be allocated alongside UHF frequencies.

### **Creating the right environment for the content industry to thrive**

BEIRG is seriously concerned that the drive towards faster communications and faster delivery of content by mobile services will be immaterial if the quality of the content itself is irrevocably damaged. Having a communications sector offering a multitude of different content delivery platforms would be irrelevant if the quality of content it broadcasts is severely reduced. This will be the case if further sales of UHF spectrum occur, and the PMSE industry's access to spectrum is diminished further. Whilst broadcast may be able to operate on alternative platforms, the PMSE industry relies on UHF spectrum to produce content. Were the 600, 700 and 800 MHz bands to be sold, the PMSE industry would have almost no spectrum to operate its wireless equipment on. This would effectively force content production levels to revert to those of 30 years ago.

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<sup>3</sup> <http://www.apwpt.org/downloads/reportonthefrequencyrequirementsforpwsms.pdf>

The Government has recognised the inability of the PMSE industry to compete with multinational mobile operating companies at auction for released spectrum. PMSE is a disparate and diffuse industry comprised of a plethora of small organisations, SMEs and freelancers, which has no mechanism to coordinate bidding for the collective needs of the industry. It does not have the organisational capacity to compete with large communications companies at spectrum auctions. Ofcom has recognised this, and as such has established a frequency management policy using a band management contractor with obligations to the PMSE industry. There has been no radical change in the composition of the PMSE industry which would make it more able to now compete at auction for spectrum.

Following the notice to clear the 600 MHz and 800 MHz bands, the PMSE industry has been investing in equipment designed to operate in the 700 MHz band. 80% of recent professional equipment sales utilise the 700 MHz band. The industry typically gets between fifteen and twenty years of use out of professional equipment. These costs are not easy to bear for the many SMEs which make up the PMSE industry, and several have been unable to continue operating. As a result of the continuing disruption to our industry over the past decade, and the vast costs incurred as a result, BEIRG believes that, in the event of changes to the 700 MHz band, full compensation for the equipment rendered obsolete, along with remuneration for the recurrent disturbance to the sector, must be provided.

**To allow PMSE professionals to produce the best possible content, BEIRG believes that the PMSE industry must continue to be allowed interleaved access to the 700 MHz band, without the threat of interference from any WSD or WBB activity. In addition, we also require some contiguous channels put aside in the 600 MHz band for dedicated PMSE use, to ensure a sufficient level of spectrum access is maintained.**

PMSE requires a suitable amount of spectrum to continue its operation unhindered, a suitable transition mechanism in the case of any reallocation in spectrum use (including sufficient advance warning), and a suitable level of compensation to help soften the impact on the industry. The Government must fully understand and address the balance between fostering innovation in the communications sector and ensuring that the existing high levels of content production are upheld, and that the PMSE sector is in a position to continue to thrive and innovate.

## **Conclusion**

There is a significant risk of causing severe damage to the British entertainment industry if increasing quantities of spectrum is sold to the communications sector. BEIRG believes that growth in the communications sector is only desirable for consumers if the benefits of such growth clearly outweigh the costs it will inflict on the services they currently value. The Government is aware of the importance of spectrum to the British entertainment industry, and must not risk further reducing spectrum available to this industry. Demand for PMSE derived content is rapidly increasing whilst PMSE access to spectrum is declining. It is not clear how further sale of spectrum to the communications sector, at the expense of a successful existing industry, can be justified as being in interests of consumers or citizens. The growth in the

communications sector is itself being strongly driven by audio-visual content – content produced by PMSE.<sup>4</sup>

Demand for spectrum from PMSE professionals in the UK is considerable, and growing. During an average year, upwards of 90,000 requests for PMSE spectrum access are made to the licencing band manager in the UK.<sup>5</sup> Any changes to spectrum allocation which will affect the ability of these industries to operate risks diminishing their contribution to society and causing significant disruption in the sector, reducing its capability to provide a range of benefits to consumers. The reallocation of spectrum away from the PMSE sector is not something which could be easily reversed. Once reallocated, the damage will be done, and the British entertainment industry would be unlikely to recover. While BEIRG recognises that mobile broadband use will increase and may bring benefits to consumers in the future, as outlined by Charles Jenne, this should not be at cost to other industries reliant on spectrum such as PMSE. We urge the Government and Ofcom to manage future spectrum use with fairness and great care, and to recognise and seriously consider the impacts that any further disruption or reallocation of UHF frequencies will have, rather than acting rashly to allocate spectrum which mobile operators may not utilise or require for many years. Without suitable replacement frequencies, PMSE is unlikely to recover from the Government and Ofcom's current spectrum policy plans.

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<sup>4</sup> [http://www.itu.int/dms\\_pub/itu-r/oth/OA/06/ROA0600004C0001MSWE.docx](http://www.itu.int/dms_pub/itu-r/oth/OA/06/ROA0600004C0001MSWE.docx)

<sup>5</sup> <http://stakeholders.ofcom.org.uk/consultations/simplify/summary>