



Programme Making & Special Events – Paul Gill, Managing Director, JFMG Ltd
Westminster e-forum on the DDR – 28 February 2007

Programme

Today's presentation takes the form of four sections. Firstly looking at who JFMG are and what we do. Hopefully, this will explain why we feel we're in a good position to act as an intermediary and outline the case for PMSE access to the Digital Dividend spectrum.

Secondly we'll look at what the PMSE sector is. Thirdly we'll outline the case for PMSE, and why we believe that there should be some continued spectrum provision for this important industry. And finally we'll outline PMSE's requirements, or wish list from the DDR if you prefer.

About JFMG Ltd

So who are JFMG? Well putting it simply we're a Spectrum Management Organisation and a "White-space" manager who have been looking after the interleaved spectrum for almost 10 years. We are currently contracted by Ofcom to coordinate PMSE spectrum, issue licences and collect WT Act fees on their behalf. We have a specialist team of coordinators and engineers who have been supporting programme makers and the entertainment sector since 1997. Whilst we are contracted by Ofcom to undertake this role, we feel it is important to highlight that we are in fact a privately owned, ISO accredited company. We obviously have a vested interest in what happens to the Digital Dividend spectrum as it plays a large part of our day to day work, however today we are presenting the PMSE industry's view on the dividend, not just our own.

About PMSE Sector

What do we mean when we talk about the spectrum used for PMSE? Well, it means spectrum used by the equipment that facilitates the production of programme making and special events. The spectrum ranges from 48 MHz to 48 GHz and is utilised by various equipment, such as wireless cameras, studio to transmitter links and wireless microphones. The UHF spectrum is heavily used for wireless microphones, in-ear monitors and talkback systems. The equipment is seen as vital to ensure today's high production standards at all kinds of events. They provide wire-free production with "wired" quality. This means that high quality spectrum is required to ensure that no interference is received to the equipment. The occurrence of audible interference from a microphone would ruin a performance for the audience. In addition, if the performer is unable to hear the music and vocals through their In-ear monitors it may severely impair their ability to produce a good performance.

There are many activities that come under the PMSE umbrella. These range from broadcast television studio productions, outside broadcasts such as news and sporting events to theatre and touring shows, live music, movie productions, conference and corporate events, public address systems and even places of worship and schools. Subsequently any change in the provision of spectrum for wireless microphones will undoubtedly have an effect on a significant number of these users, both commercial companies and individuals.

The case for PMSE

So why is the PMSE industry so concerned about the proposals in the Digital Dividend Review? Well it's simple really, they currently use the entire interleaved spectrum, this includes the 15 channels that will be cleared of broadcasting use, as well as what will remain for broadcasting after switchover. PMSE also use Channel 36, which is being included in the cleared spectrum. Yes there is only one radar using this spectrum at the moment, but over the past two years over 2,000 PMSE assignments have been made within it, including many in West End theatres. JFMG ensure that the radar is protected from PMSE use, but it means that Channel 36 is available almost all over the UK (except from where the radar is located). Channel 38 is also utilised; again we ensure that radio astronomy is protected from interference from wireless microphones. Finally



we use Channel 69 which is only used by PMSE in the UK. It is, however used elsewhere in Europe for broadcasting and military applications.

So the PMSE industry's anxiety is that after 2012 there could be very little spectrum for wireless microphones to use. If we accept that Ofcom will continue with its proposals and proceed with an auction of both cleared and interleaved spectrum in 2008, users will face a number of moves during the following 4 years. At 2008 Channel 36 users will need to vacate. Then if, for instance, you are a wireless microphone user of the cleared spectrum in the Midlands, you will have to vacate the spectrum in 2010 and move into digital interleaved. If the PMSE industry has secured digital interleaved spectrum at auction in 2008, then this may be your final move. However, if the industry is not successful, at 2012 the user will need to vacate again, possibly into Channels 69 or 38 which could be the only channels available. If this is the case the channels will become over-crowded and the quality of performances and programme production we have now will become a thing of the past.

The PMSE industry believes that they will find it very difficult to succeed at auction. This is because they are made up of a diverse, disparate range of users, many of which are in competition with each other. In 2006 there were 600 licensed users of the analogue interleaved spectrum. This in reality accounts for some 32,000 separate frequency assignments. The top 20 users account for 50% and these include sound hire and outside broadcast facility companies. The top 100 licensees account for 80% of all use of the interleaved channels. Even if these competing organisations could come together, there would still be some 500 users who would be unsure of how to access spectrum.

So what kind of demand does PMSE really put on the UHF spectrum at the moment? Well in the West End theatre or for a Rock/Pop Arena tour you could be looking at up to 74 microphones and monitors being used. Every one will have a separate frequency and this would require 6.8 MHz TV channels. In television production studios there would be some 184 mics and monitors in use with a further 82 frequencies required for talkback systems. That amounts to 9 TV channels for the mics and monitors and a further 4 TV channels for talkback. Whilst these examples focus on fairly heavy use it does represent the day to day demands from programme making.

What are the key factors behind the case for PMSE? Firstly there is currently no alternative technology available. With that in mind there is also no alternative spectrum for PMSE users to migrate to. This spectrum is where almost all wireless microphones are manufactured and additional spectrum as we all know is hard to find. Secondly there is a case to say that PMSE are the incumbents of this spectrum along with the Broadcasters. They have been utilising the "white space" for some 30 years. Shouldn't there be some consideration to ensuring that they continue to have access to appropriate spectrum as a result? This spectrum is essential to support the creative industries. As well as enhance the viewing experience the use of personal monitors reduce on-stage sound levels to meet Health & Safety legislation. Finally this spectrum is vital to maintain the UK as a leading content creator and host for programmes; events; theatre and motion pictures. Without certainty of provision the PMSE industry believe that they will no longer be able to compete in this international market.

PMSE Requirements

So having put forward the case for PMSE, what exactly does the industry want Ofcom to agree to? Well, JFMG have some very detailed proposals for inclusion in our response to the DDR. We've shared much of it already with Ofcom and the industry, but we feel that it is too complex to air here. Instead the following focuses on basic premises.

Looking at access to digital interleaved spectrum. PMSE would require priority access to most of the interleaved spectrum to 2012 and beyond. They would like to see it remain coordinated to ensure that both TV reception and their sound quality are maintained. They would also seek that the spectrum remains affordable for the fragmented user base.



For cleared spectrum they would like to see priority maintained for all of it in London until 2012, and part of it outside London until 2012. Again they would like to see coordination continue.

And finally, they would like to see that the migration out of Channel 36 is subject to a fair timescale. Continue to access Channel 38 coordinated with radio astronomy as today. And last but by no means least PMSE would like to continue to access Channel 69.

JFMG have ideas on how to achieve a satisfactory outcome for both the PMSE industry and Ofcom and we will be sharing those thoughts in detail in our response to the Digital Dividend Review consultation document.