



5800 Touhy Avenue, Niles IL 60714-4608

VIA ELECTRONIC MAIL

Radio Spectrum Policy Group
European Commission
Information Society and Media Directorate-General
BU33 7/09
B-1049 Brussels

15 December 2006

Public consultation on the Draft RSPG Opinion on "EU Spectrum Policy Implications of the Digital Dividend"

Dear Sirs and Madams,

We are pleased to provide the following submission in the above-mentioned consultation:

Shure Incorporated ("Shure"), headquartered in Illinois (USA), is a leading manufacturer of audio electronics including wireless microphones and headsets with a history spanning over 80 years. Shure is well known for producing wireless microphones and wireless systems for stadiums, events, churches, concert halls etc. as a prerequisite for content productions ("PMSE" - Programme Making and Special Events). Shure's products are used by professionals in numerous business and entertainment industries worldwide. Shure has significant operations in Europe; in particular in the U.K. and in Germany.

There are 5 'core messages' that Shure would like to draw to your attention:

1. The PMSE community is a disparate one but it is united in one fact – that current use of PMSE equipment is essential to modern content production.
2. Despite its disparate nature PMSE is integral to an industry of several billions of Euros per annum in the EU alone.
3. At present, there is no commercially available technical alternative to the currently used analogue PMSE technology.
4. The regulators and national governments in the EU should only bring forward proposals that permit continued use of PMSE equipment.
5. Shure would be pleased to discuss any proposals that the Radio Spectrum Policy Group or the European Commission may put forward before they become "set in stone".

In more detail:

- 1. The PMSE community is a disparate one but it is united in one fact – that current use of PMSE equipment is essential to modern content production.**

Shure observes that the PMSE industry in Europe, which is a prerequisite for any content production, is very extremely fragmented. PMSE is used by various organizations and companies, such as broadcasters, theatres, sport events, the motion picture sound industry, film and show production services, artists, etc.

- 2. Despite its disparate nature PMSE is integral to an industry worth of several billions of Euros per annum in the EU alone.**

Existing PMSE operations today provide enormous economic and cultural benefits to the European economy. UK sales figures from just two wireless microphone manufacturers indicate

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that there are at least 125,000 wireless microphones operated in the U.K. and more than 16,000 In-Ear Monitors operated in the U.K. alone. These figures just cover the devices that are used for professional systems. They do not include tens of thousands of wireless systems that are out there in Pubs, Clubs, Houses of Worship, Schools and Colleges. Recent U.K. Government figures state that the creative sector that relies on PMSE contributes £50 billion overall to the UK economy alone.

A large production or public event such as the Olympics, a major political convention, or a potential World Cup in Europe will require hundreds of wireless audio channels. Any lack of spectrum availability would have a major detrimental economic impact and would drastically compromise high-quality, real-time wireless audio transmissions. In fact, everybody in the Europe benefits from PMSE, for instance by listening to the radio, watching television, attending a theatre or opera performance, going to a live concert, attending a party convention or political conference, visiting a house of worship, or attending a sporting event.

3. At present, there is no commercially available technical alternative to the currently used analogue PMSE technology.

Wireless microphones and earphones are essential tools – not luxury items – that are critical to modern content production. Radio microphones, as manufactured by Shure, have several unique characteristics such as “real time” operation: This 100% duty cycle is necessary and required by the artists and studios for live entertainment. High quality audio (CD quality), greater than 100 db dynamic range and a channel bandwidth of ~ 200 kHz is required to provide the high-quality services that artists and studios are accustomed to. Due to the high bandwidth and transmission quality that are needed for the wireless microphones, frequency sharing not possible or not advisable. The radiated power of a PMSE device typically is 10 to 50 mW with a typical range of 100 meters, which inhibits other uses of this spectrum in an area.

Current alternative technologies are unable to perform at this level. In particular, Bluetooth and Wi-Fi have latency and range issues that remain largely unresolved. Digital wireless microphones are not an option at present due to latency issues. Even if these issues were to be resolved, multi-channel systems would still require significant amounts of spectrum to operate successfully. PMSE equipment uses the so-called ‘white spaces’ of the TV bands, that are not occupied by analogue TV broadcasting. If PMSE is pushed out or evicted from existing bands, not only manufacturing companies such as Shure will suffer, but also the European content production industry and ultimately the European consumers of high quality content generated with the help of PMSE.

4. The regulators and national governments in the EU should only bring forward proposals that permit continued use of PMSE equipment.

The ‘invisible’, currently analogue, technology for wireless microphones is a cornerstone to activities that generate £15 billion per annum to UK PLC alone. Giving away this spectrum to other technologies via auctions would harm this crucial sector of the EU economy. The above-mentioned fragmentation of the industry presents a huge problem with regard to the PMSE community bidding in any auction process. It is not practical or financially feasible for the PSME sector to bid for spectrum. Unlike PMSE, potential bidders for spectrum from the Digital Dividend are highly centralized, well organized organizations, such as mobile phone operators, with access to large amounts of capital. By contrast, the PMSE community will be unable to compete in any bidding process due to the highly fragmented nature of the group of industries that form the community. As a consequence, Shure and others would be ‘evicted’ in place of services that do not even exist yet, and are not being offered any ‘alternative accommodation’.

If the European Commission would promote auctions, the EU will be burdened with various new ‘delivery portals’ but with an inability to actually make new content for which PMSE is an



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important factor. On a larger scale, European theater and show productions will be under threat as falling production values will undoubtedly result in falling audience figures. Consequently, international touring acts of artists will no longer bother to include the EU in their touring schedules and TV production will be driven 'offshore' ruining one of the most creative and respected sectors of the European industry.

The EU's Radio Spectrum Committee (RSC) also recognizes the significance of PMSE. In its RSC working document "Draft Mandate to CEPT on technical considerations regarding harmonisation options for the digital dividend" of 24th November 2006, the RSC particularly states that "... the European Commission wishes to ensure an optimal use of the spectrum dividend by achieving a sufficient level of coordination and consistency of approaches regarding the spectrum dividend, in particular to be able to satisfy a future demand for pan-European services." Shure believes that this harmonization requires further work, and it would be counter-productive if European regulators prematurely sell off the spectrum that is gained from the Digital Dividend by way of auctions.

5. Shure would be pleased to discuss any proposals that the Radio Spectrum Policy Group or the European Commission may put forward before they become "set in stone."

Shure respectfully submits that policy decisions that are being made in the forthcoming months should reflect real-world PMSE usage. Without access to sufficient quantity of "clean" RF spectrum for PMSE use, the EU will become a very unattractive place for content creation to take place. Shure supports the Radio Spectrum Policy Group's efforts to make more efficient use of spectrum. However, a method must be identified to ensure the continuing success of PMSE operations – just evicting providers could be viewed as a restriction of trade radio and ultimately would harm the industry and the Community as a whole.

Shure looks forward to working with the Radio Spectrum Policy Group and the European Commission and other institutions to find a suitable solution that safeguards the interests of incumbent spectrum users as well as potential future spectrum occupants.

Respectfully submitted,

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Jeff Krull
Vice President, Product Development
Shure, Incorporated
5800 West Touhy Avenue
Niles, IL USA 60714
(847) 600-1246