



Response to Ofcom Consultation: Digital Dividend: 600 MHz band and geographic interleaved spectrum

Consultation on potential uses

1. Company Profile

JFMG Ltd is the dedicated band manager for programme-making, entertainment, special events and related activities. It is a privately owned company created specifically to ensure continued and equitable spectrum access to all areas of the programme-making industry.

JFMG successfully coordinates the use of spectrum, issues licences and collects licence fees on behalf of Ofcom, and have done so since 1997. The spectrum we manage ranges from 47MHz to 48GHz and requires expert knowledge of the bands, their uses and restrictions. This includes the spectrum within Ofcom's Digital Dividend Review and the interleaved spectrum.

In the UK, the professional use of radio for programme making and entertainment purposes is referred to as Programme Making and Special Events (PMSE). PMSE applications include:-

- Broadcast television studio production
- Broadcast television and radio coverage of news, sport or other public events including state occasions
- Theatre and touring shows (e.g. Doctor Dolittle, Cirque du Soleil)
- Music and other entertainment productions (e.g. Live8, Mandela, Glastonbury, T in the Park)
- Motor sport communications and remote monitoring (e.g. F1GP, Moto GP)
- Conferences, and corporate presentations and events
- Movie film productions

JFMG Ltd facilitates the successful running of these events. JFMG also provides on-site consultancy services and is committed to leading the industry through the transitional period ahead.

2. Consultation Questions

For this consultation, JFMG has responded only to questions that it believes are relevant to the management of PMSE in the geographic interleaved spectrum.

Question 2): *Do you have any comments on our approach to technical licence conditions for the 600 MHz band and geographic interleaved spectrum?*

JFMG believes that, to limit the risk of interference, it is essential for there to be a minimum separation between the frequencies used by mobile transmitters. Further, JFMG would like the technical

licensing conditions for the cleared spectrum to require that frequency offsets for DTT (if necessary) be applied away from the band edges.

Question 3): *Do you have any evidence using frequency offsets with DVB-T2 EC signals might have an adverse impact on uses of adjacent interleaved spectrum?*

JFMG believes that using frequency offsets with DVB-T2 EC signals will have a negligible impact on PMSE users.

JFMG works with PMSE manufacturers to encourage them to develop detailed frequency plans for their equipment that avoids using the spectrum at the edge of each TV channel. This means that there is better overall geographic availability of whitespace spectrum for those applications where equipment is required to be used on a tour. In such cases, the impact of offsets with DVB-T2 EC signals is likely to be minimal.

For other PMSE applications, such as installed systems that may occasionally use frequencies at the edges of TV channels, there may be a marginal loss in the usability of some PMSE channels close to the overlap with the DVB-T2 EC signal. However, this is likely to be balanced by improved usability of other PMSE channels which will benefit from increased isolation due to the DVB-T2 system being offset away from the PMSE use.

As a result, the overall impact for PMSE users within interleaved spectrum is likely to be neutral.

Question 5): *Do you have any comments on protecting PMSE in channel 38?*

As part of the planning for PMSE use in channel 38, JFMG has set up guard bands at either end of the spectrum to improve compatibility with other services in the adjacent spectrum. Therefore, based on the evidence in the consultation document, so long as any deployment of DVB-T2 EC mode in channel 39 has zero offset or is offset by 167 kHz up in frequency JFMG believes that the existing guard band at the top of channel 38 will not need to be increased.

Similarly, if DTT services are deployed in cleared spectrum and any deployment of DVB-T2 EC mode in channel 37 has either zero offset or is offset by 167 kHz down in frequency then the existing guard band at the bottom of channel 38 will also not need to be increased.

As a result, the available spectrum for PMSE use within channel 38 will remain the same.

Question 7): *Do you have any comments on our assessment of the most likely uses of the 600 MHz band and geographic interleaved spectrum? Are there any potential uses we have not mentioned that should be considered?*

PMSE already has applications in the 600 MHz band and the geographic interleaved spectrum and successfully shares with TV broadcasting. Through careful coordination, PMSE users are assured of the high quality of service essential for production and entertainment whilst the main broadcasting



service is protected against the risk of harmful interference. These sharing arrangements achieve an effective and efficient use of the available spectrum.

Following clearance of PMSE from the 800MHz band it is today unclear if there is sufficient spectrum to meet the demand for PMSE applications. Continued access to both the 600MHz band and geographic interleaved spectrum on a shared basis with DTT would mitigate the risk for PMSE users.

To facilitate continued access for PMSE users, JFMG is in favour of a combined award for the 600MHz and geographic interleaved spectrum where DTT is the preferred application and PMSE is enabled in the white spaces.

JFMG believes that this would be the most effective and efficient use of spectrum.

Question 10): *Do you have any comments on our intention to maintain a market-led approach to awarding the 600 MHz band and geographic interleaved spectrum?*

JFMG believes that a fully market-led approach to awarding the 600 MHz band and geographic interleaved spectrum would disadvantage the prospects for PMSE to emerge as a shared user. Applications other than DTT would not be compatible with PMSE and the overall result would be a significant reduction in the amount of geographic interleaved spectrum available for PMSE use.

Question 11): *What information can you provide on package and award design considerations?*

The best way for the package and award design to benefit PMSE users is for them to be designed in a way that supports DTT as a primary user of the spectrum.

Question 12): *When would you like to start operating new services using the 600 MHz and/or the geographic interleaved spectrum?*

As PMSE already uses the spectrum, JFMG believes that the most important thing is to provide PMSE users with continuity of the current arrangements up to and after the award.