



Response to Ministry of Defence consultation: UK Defence Spectrum Management. A Consultation on: An Implementation Plan for Reform

1. Background

JFMG Ltd is currently 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 WT Act 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 facilitation of PMSE access to a significant amount of MoD spectrum. JFMG own bespoke tools that uniquely enable us to coordinate spectrum, ensuring both protection for primary users, including MoD, and effective access for programme-makers. JFMG also provide on-site consultancy services.

Whilst JFMG currently have a contract with Ofcom, recent policy decisions mean that this arrangement will be changing in the future. JFMG are confident that we will be successful in securing the new PMSE Band Manager role but we are also looking to increase our commercial activity and are therefore investigating other opportunities where our current skills and expertise could be readily transferred and utilised.

Therefore our reasons for responding to this consultation document are twofold:

- a) As the current/potential future PMSE band manager. Some of the spectrum proposed for release to the market is currently utilised by our PMSE customers. We are therefore responding with the impact these changes may have to our current users in mind. This includes how PMSE might gain access to MoD spectrum in the future and the cost implications new commercial arrangements may have.
- b) As a potential commercial opportunity. We believe that JFMG has many of the tools and expertise to facilitate greater spectrum sharing with MoD, for both the PMSE community and other suitable industries.

2. Detailed Response

This response may not specifically answer questions posed by MoD's consultation, however it provides JFMG's thoughts with regards the impact for our PMSE customers and the potential sharing opportunities that we could help MoD exploit.

2.1 MoD Spectrum Audit, Demand Study and Sharing (Q's 1 – 9)

The detailed explanation of spectrum audit phases, the impending demand study and the identification of sharing issues within the consultation document highlights the difficulty and complexity involved in releasing MoD spectrum to the market. There is no doubt that a considerable amount of work will be required simply to determine whether RSA should be applied for in a particular band.

JFMG support MoD's approach to this work as a whole. Adopting a phased approach and prioritising the bands highlighted within the UK Audit of Spectrum Holdings makes good sense. In addition considering whether all remaining MoD bands should also be audited ensures that costs and benefits are weighed up before undertaking further work.



We strongly believe that it is preferable to take the necessary time to fully understand the spectrum and its complexities before rushing towards market mechanisms. This will ensure that all repercussions and issues have been identified and resolved prior to release.

The following headings address a few concerns that we have regarding the process.

2.1.1 Timing issues

Whilst we completely agree with approaching this extensive work in phases there are some issues that this approach raises. Firstly, it would appear that at the point when MoD are proposing to start engaging an interim Third Party SMO there will only be one band certain of having RSA (401.6 – 430 MHz). This raises the question of whether there would be sufficient interest in just this one band to justify such an engagement. In addition, would there be sufficient financial incentive for interested SMO's to take part in the selection process? It would seem that a decision regarding whether an SMO is necessary should be left until a more significant proportion of the spectrum audits, demand studies and sharing issues have been completed. Whilst the document states that the final decision in this regard will not be until early 2009, if full commercial engagement occurs shortly after, there may not be sufficient time for interested parties to undertake full business analyses of the opportunity.

Secondly, some of the bands in the initial phases are shared by PMSE users, whilst other bands shared by PMSE are not. If those initial bands are identified as suitable for RSA and subsequent trading, whilst others have not yet been looked at, it could result in the existence of dual access mechanisms for PMSE users. Those without RSA may continue to be licensed under the current PMSE arrangements, whilst those with RSA may be required to gain access via a different mechanism. This could lead to confusion for PMSE users as well as a possible disparity in cost impacting on subsequent demand. It is therefore important for MoD, Ofcom and the relevant PMSE band manager to work in conjunction to agree a mutually agreeable way forward for sharing arrangements.

2.1.2 Sharing Hurdles

A further observation is the considerable amount of negotiation required with other sharers of spectrum bands included in the audit. Many of which when looked at in detail indicate that there could be some difficulty in agreeing arrangements for release of spectrum. This indicates a delay in many instances, but also a likelihood that some of these bands may never reach the market. In addition, once release has been agreed and RSA gained, could further protracted interdepartmental discussions regarding trades impinge on short-term leasing opportunities? Would it be prudent to concentrate on purely MoD used bands in order to simplify the initial process?

2.1.3 PMSE Sharing Queries

JFMG recognise the current difficulty of providing any certainty regarding how PMSE users will gain access to the spectrum that they currently share on a secondary basis with MoD. Not least because there is a parallel piece of work being undertaken by Ofcom to determine the mechanism by which all PMSE users will gain access to spectrum in the future. We hope that once this additional consultation has been completed that both MoD and PMSE users will have a better understanding of how sharing may continue in the future.

Currently JFMG holds an inventory of spectrum which includes a number of bands owned by MoD. Each band has related geographical and power restrictions which we input into our coordination tools. This enables us to coordinate and issue PMSE licences in MoD spectrum whilst ensuring MoD operations are not interfered with. PMSE and MoD have proven to be perfect sharing partners over the years because of the largely temporal and geographical nature of programme-making use.



Indeed we believe that there are far more sharing opportunities that could be investigated. Additional spectrum is often required to cover the operations of large programme-making and special events such as the British F1 Grand Prix and the Open golf Championship, and much of it is currently owned by MoD. In these instances we are required to approach MoD via an Ofcom liaison to gain access. This can often be at very short notice and no doubt causes some inconvenience for the parties involved. We therefore believe that increased sharing via RSA or simply an extension of the current arrangements would benefit everyone.

Finally the release of spectrum to the market that PMSE currently shares raises a number of questions regarding future costs. Fees are currently set to cover administrative costs and not the true market value of the spectrum. Whilst JFMG and users recognise that they will increasingly have to pay the market value there are some concerns regarding the price implications that accessing spectrum released to the market may have.

We appreciate MoD's assurance that PMSE access will be addressed as soon as practicable and look forward to hearing their thoughts in the future.

Q9. Can you identify any different approaches for the MOD to manage the spectrum it uses and engage with markets to deliver better value for money for defence and the tax payer?

JFMG believe that there is scope to extend the current sharing arrangements between PMSE users and MoD spectrum. There is likely to be a number of bands that MoD will not be able to release to the market, this could be for a number of reasons, such as insufficient quantity of spectrum or because its use is something that MoD would be uncomfortable releasing. JFMG already facilitate sharing of important MoD bands and we believe extending this to other spectrum could help in a small way to off-set MoD's unavoidable AIP costs. We are often required to seek permission to access additional MoD spectrum so it is likely that we could identify the most frequently requested bands and investigate the scope of this option. JFMG would be happy to discuss such arrangements with MoD.

2.2 Managing MoD's spectrum in the market

Section 6 of the consultation document clearly illustrates that MoD are seriously considering the engagement of a Third Party Spectrum Management Organisation. However it shows that its thinking is in its infancy. The options and activities that the SMO could take on are numerous and wide-ranging and would have a large impact on the type of organisation required to undertake the role. It is also unclear for how long the SMO would be in place and what form of competition, if any, would be used to select the Third Party.

MoD should consider these issues carefully in relation to how many spectrum bands will be ready for release to the market by the time the interim Third Party engagement is achieved. If there were only the 406.1 – 430 MHz band to manage then you could assume that a small SMO with basic activities would be the most appropriate, especially if the intention is to trade it on a full and permanent basis. But as the range of frequency bands and their relative geographic and power restrictions expand, more diverse ranges of use become possible. In addition, it increases the likelihood of partial and temporal trades which adds an extra area of complexity. In this instance a more sophisticated model would be required, which incorporates most, if not all of the activities listed in the document. In this example it may be necessary for the SMO to develop and expand its activities as more bands become available for release.

In addition the nature and extent of the SMO's activities, the contractual business model and anticipated commercial activity will all play a vital part in the viability of the SMO. Currently there is no indication how the contractual terms would be arranged. The document states that the fees will benefit the organisation permitting spectrum use, however it is unclear whether this refers to MoD directly (i.e. the SMO passes fees onto MoD and has a separate payment arrangement), or indeed the SMO (who's whole revenue would be generated by MoD spectrum trades). If the SMO's revenue is purely dependent on MoD spectrum trades then it is important that as many



bands as possible are made available for sharing so that a viable business case can be produced by potential SMO's.

2.3 Technical and managerial capability to support MoD

JFMG have been successfully managing geographical sharing in a number of MoD bands since 1997. Through our unique online systems, we are now facilitating coordinated use of other users' spectrum efficiently and effectively for a wide range of professional users. Therefore JFMG believe that we could provide essential advice on the various activities that the Third Party may be required to undertake. In addition we believe that we are a strong candidate to provide many of these services for MoD. We already have a proven track record in spectrum management and have the tools and expertise in place to take on additional work. We also believe that we could help facilitate extended sharing of bands that MoD are not comfortable releasing to the market, in a similar way to the current arrangements. We already have access to many users who regularly require additional spectrum, often in MoD bands, so our involvement would therefore "cut-out-the-middle-man".

JFMG's skills and knowledge are particularly suited to the activities listed below:

2.3.1 Band management

We have bespoke spectrum management tools that enable us to coordinate multiple users, taking into account geographical restrictions, power limits and other users in an area. This allows us to make some 90,000 individual assignments a year, ranging from those in specific areas for specific dates to those covering the whole of the UK on an annual basis.

In addition to our in-house expertise our e-commerce site enables users to book and pay for short-term assignments online using our automated coordination tools. These once again take into account other users and restrictions within an area to ensure that the assignment booked is as reliable as those processed by our experienced office staff.

2.3.2 Administering a charging regime for sharing

Under the current contractual arrangements JFMG issue licences on Ofcom's behalf and pass all fees back to Ofcom on a monthly basis (>£1million per annum). We therefore already have all of the necessary customer management and billing tools in place. The assignment process has also been integrated into the system. This allows us to easily collect information regarding spectrum usage, demand and revenue generation.

2.3.3 Negotiating specifics of sharing arrangements

JFMG has in the past engaged with MoD and other government departments to negotiate specific sharing arrangements designed to protect key systems and sites. JFMG is equipped with the engineering tools to tackle a wide range of sharing and compatibility studies. But JFMG appreciates that the technical parameters of many of MoD's battlespace systems are classified and that it is not always possible or desirable for MoD to make available the technical information necessary for this work. However, in those cases where MoD's use of radio systems are not as sensitive then JFMG could support MoD in deriving specific sharing arrangements that would fully protect MoD systems.



2.4 Scope of spectrum

Very little of the spectrum that JFMG manage is assigned for PMSE Primary use, in fact the vast majority is owned by someone else. Therefore we are well versed in managing complex sharing arrangements. The best example is our management of UHF interleaved spectrum, where we coordinate PMSE use of broadcasting channels in areas where they are not used for television transmissions.

We believe that our experience in these areas make us unique in the UK. Whilst many organisations say they are spectrum managers, we believe that we are the only company that provides a solution that works spectrum efficiently. With this in mind we would very much like to work with MoD and their consultants to help them fine tune their ideas on a Third Party SMO.
