

RESPONSE FROM INMARSAT TO OFCOM CONSULTATION “AWARD OF AVAILABLE SPECTRUM: 1452-1492 MHz”

9 June 2006

1 Introduction

Inmarsat is pleased to offer comments on the Ofcom Consultation on the Award of Available Spectrum: 1452-1492 MHz.

We gave some initial comments on Ofcom’s proposals in response to the Spectrum Framework Review: Implementation Plan. Although we note and appreciate that Ofcom has responded to some of our comments, we remain opposed to Ofcom’s proposals to allow use of the upper 12.5 MHz for terrestrial services and to auction the spectrum. We consider that Ofcom’s proposals are unfair and discriminatory against satellite services, for reasons we will elaborate on below.

We believe there are important frequency management issues related to obligations under international co-ordination procedures as well as legal issues related to RSA and non-discriminatory licensing conditions that need to be resolved before a spectrum award is made.

Our concerns and comments do not fit comfortably within the framework of the six specific questions which are summarised in Annex 4 of the consultation document, and hence these questions have not been directly addressed.

2 The band 1479.5-1492 MHz should be reserved for satellite use

As we indicated in our response to the Implementation Plan, we consider that the upper 12.5 MHz should be limited to satellite use (with associated terrestrial repeaters). The Radio Regulations allocate the band 1467-1492 MHz to both the broadcasting and broadcasting-satellite services. However, the lower half of this band has already been planned for terrestrial services in CEPT through the Maastricht Agreement, leaving just the upper half of this band, 1479.5-1492 MHz available for satellite services. Satellite radio services have been very successful in the United States and the band 1479.5-1492 MHz is the only band in Europe in which comparable services can be envisaged. However, Ofcom now proposes to allow even this relatively small band to be used for terrestrial services. This would potentially prevent the availability of digital sound broadcasting via satellite in the UK as well as in other countries, both inside and outside the EU.

As Inmarsat has explained in several contributions to Ofcom over the last few years, there is a need for international harmonisation of spectrum for satellite uses. Satellite beams cover more than one country and hence the actions of one country have a material effect on the ability of other countries to provide a satellite service. The Radio Regulations require satellite downlinks in this band to be coordinated with any terrestrial services in the same band, in any country visible from the satellite. Since there is an existing, operating satellite radio system which has notified certain broadcast assignments, there is probably little Ofcom

could do to limit the pfd produced by that satellite. However, if this band is licensed to a terrestrial operator, the UK would likely seek to protect the terrestrial services from any future satellite radio system operating in this band. The level of protection required by a terrestrial system may prevent satellite radio services from being offered, not only in the UK, but it also in other countries served by the same satellite beam. In the case of the Worldspace satellite for example, the beam which covers the UK also covers western Europe and north-west Africa, a region of around 50 countries. This demonstrates that licensing of a terrestrial system in the UK would have repercussions far beyond the borders of the UK. We therefore recommend that OFCOM reserves the upper 12.5 MHz exclusively for S-DAB services and implements CEPT Decision ECC/DEC/(03)02.

3 Rights and protection provided by the authorisation process

Satellite radio operators are currently able to offer service in the UK without the need for a licence since existing legislation does not require receivers located in the UK to be licensed¹. However, if Ofcom proceeds to authorise use of this band for terrestrial applications, it is unclear how the interference from a terrestrial application to satellite radio receivers will be managed. Without proper protection mechanisms there is the risk that in effect, at a stroke, a major market for satellite radio services, which was previously being legitimately served by a satellite system, will have been removed. This situation illustrates the need for robust harmonisation measures to ensure the market for satellite services cannot be suddenly and unpredictably undermined and any new terrestrial entrant is clear about the effect on its business case due to limitations imposed in view of protection for satellite services.

4 Non-discriminatory treatment of operators

We understand that Ofcom has a preference for market mechanisms to choose between satellite and terrestrial applications where they compete for access to the same frequency bands. However, we note that the proposed auction process for the 1452-1479.5 MHz is predicated on the band being used only for terrestrial services, consistent with the Maastricht Agreement and in spite of the fact that, from the perspective of the Radio Regulations, this band is also available for satellite services. Hence, under Ofcom's proposal, the part of the band which is harmonised for terrestrial services by CEPT would be made available only for terrestrial services in the UK. On the other hand, the part of the band which is harmonised for satellite use within CEPT is to be made available for either satellite *or* terrestrial use in the UK. This is clearly discriminatory against satellite services. We re-iterate our recommendation to make the band 1479.5-1492 exclusively accessible for satellite operators in the same way as the band 1452-1479.5 is in effect exclusively accessible for terrestrial operators.

In paragraph 5.59 of the consultation document, Ofcom suggests that terrestrial and satellite applications are equivalent in so far as both applications benefit from economies of scale from gaining rights in multiple jurisdictions. However, for a satellite operator, the coordination agreement to use the same segment of spectrum must be obtained from multiple countries before service can be initiated in any one of those countries. The same constraint does not apply to terrestrial services which, to the contrary, do not rely on international co-ordination of spectrum and can tailor their network in such a way that interference management in one

¹ Statutory Instrument 1989 No. 123, The Wireless Telegraphy Apparatus (Receivers) (Exemption) Regulations 1989

single country is sufficient to provide service in that jurisdiction. Satellite operators rely on harmonised availability of spectrum and interference issues need to be cleared in the full footprint in order to ensure interference-free communications in any given country. Hence it is erroneous to suggest that an equivalent regulatory situation can exist between satellite and terrestrial services.

5 Auctions should not be used

Inmarsat has previously expressed its opposition to the use of auctions for satellite services. This opposition extends to a situation such as this where a licence is offered in a service neutral way but a potential use is for satellite services. Auctions are an unworkable method to select the licensee among competing satellite operators, and are also an inappropriate method to select the licensee among satellite and terrestrial operators competing for the same spectrum. Auctions can, in principle, be effective where competing bidders value the spectrum subject to the same constraints and conditions. Such a situation does not exist in this case.

In many frequency bands in which satellite and terrestrial applications might compete for a licence, the odds are stacked heavily in favour of the terrestrial operator. This is due to the intrinsic international nature of satellite services.

- First of all, satellite services need the same frequencies to be available in several countries prior to operations. This constraint does not apply to most terrestrial operations.
- Furthermore, the options available to satellite systems for improving efficiency are very limited as they do not operate in terrestrial cells and even the most advanced satellite technology only permits satellite spot beams of some 500km in diameter (with many systems operating with spot beams covering one third of the globe or continental-size 'regional' beams). Design parameters of the satellite systems are determined in advance of launch and remain broadly fixed for the life of the equipment. A high spectrum fee would therefore be largely discriminatory against satellite providers since they have limited possibilities to improve their spectrum efficiency.
- Satellite operators have high up-front sunken costs. They make investments based on the prospect of harmonised spectrum availability and reasonable certainty of access to spectrum. This cannot be achieved through a series of auctions of the band and unclear measures to protect against interference which can have international repercussions. Terrestrial operators can start investing in network build-out after licence award and risk of interference is normally manageable at a national level.

In this particular case, important interference management issues have not been clarified. Neither satellite nor terrestrial operators are given sufficient guarantees to take the risk that the usage rights will be sufficiently clearly defined. Potential terrestrial operations in the band 1479.5-1492 MHz would be constrained by the need to protect satellite reception in neighbouring countries. On the basis of the study in the Analysys/Mason report, this may limit use in most of the UK to low power devices. On the other hand, the RSC mechanism proposed to ensure protection of satellite receivers is also still undefined.

Satellite and terrestrial applications are therefore subject to different but unclear constraints and a free-market approach is inappropriate.

The implications of the associated rights to trade licences obtained through an auction also illustrate the inappropriateness of an auction process in this band. To illustrate this it is useful to consider two potential satellite bidders, 1) the current satellite radio operator, and 2) a potential new satellite radio operator.

1) Although satellite receivers in the UK may be used without a licence, the current satellite radio operator may decide to bid for a licence to ensure that radio receivers in the UK do not suffer interference from terrestrial services. If parts of the band are unused by that operator, it could, in theory, trade the licence for part of the spectrum to an alternative terrestrial or satellite operator. However, the band 1479.5-1492 MHz is most likely the only band available for satellite radio broadcast in Europe, and thus the licensee would have a considerable incentive not to trade any part of its licence to other satellite radio operators who would directly compete with it. Hence, the value from that operator's perspective is based on the extent to which it wishes to protect its receivers from interference and the extent to which it wishes to prevent competition.

2) An alternative satellite operator may also consider to bid. However as assignments in parts of the spectrum have been notified by the current operator and the current operator has coordination priority in the rest of the band, there can be no assurance that the alternative operator would be entitled to provide service in any part of the band. Hence there is no assurance that any part of the licence would be usable by the alternative operator and hence any bid would be enormously risky.

The key point here is that due to the international assignment process, the value of the same piece of spectrum to the current and alternative satellite operators varies considerably and an open market approach cannot be considered an effective method to select the licensee.

6 Proposed licence for the band 1479.5-1492 MHz

As indicated above, there is no necessity for a Wireless Telegraphy licence for satellite receivers. Nevertheless, Ofcom proposes to introduce a licence product which it expects to be obtained by a satellite operator which aims to provide service in the UK. In the Implementation Plan, Ofcom suggested that the mechanism of RSA could be applied in this band, but the draft licence now proposed by Ofcom for the band 1479.5-1492 MHz appears to be an individual licence. Inmarsat has the understanding that receive-only services are not licensable by UK law. Hence, if an auction takes place as proposed by Ofcom and the winner is an operator intending to provide a satellite only service (without terrestrial repeaters), there appears to be a problem that could result in a very uncertain legal basis for such operators. This would obviously dramatically exacerbate the discrimination against satellite operators that was discussed in section 4. Ofcom has previously proposed Recognised Spectrum Access (RSA) for these types of services and Inmarsat has commented in several consultation responses on that issue. Ofcom indicates in Annex 5 of the consultation document that it plans a detailed consultation before any plans are made on RSA. Bearing in mind the possibility that some system proponents for this band would offer receive-only services and also the need to clarify the mechanism for protection against interference for satellite receivers, we consider that Ofcom should withhold from licensing of the upper 12.5 MHz until it has conducted the

planned consultation on RSA. To proceed with the licensing of this band as proposed would clearly prejudice the anticipated consultation on RSA for satellite services.

7 Summary

For the reasons explained above, we consider that the band 1479.5-1492 MHz should be reserved for satellite services. We also consider that auctions should not be used to select the licensee in the band 1479.5-1492 MHz – irrespective of whether the band is limited to satellite use only or may be used also for terrestrial applications. Finally, we consider that Ofcom should withhold from licensing the band 1479.5-1492 MHz until after it has consulted on RSA.

We request that Ofcom take account of our comments before proceeding with the spectrum awards in the band 1452-1492 MHz.
