



SOLARIS Mobile Ltd



SOLARIS Mobile Ltd,
in cooperation with SES ASTRA S.A. and Eutelsat S.A.,
response to Ofcom Consultation:

Authorisation of terrestrial mobile networks complementary to 2 GHz mobile satellite systems

25 March 2008

1. Introduction

SOLARIS Mobile Ltd (“SOLARIS Mobile”), established in Dublin, Ireland, is a 50/50 S-Band joint venture between SES Astra S.A., based in Luxembourg, and Eutelsat S.A., based in France. SOLARIS Mobile Ltd will provide mobile satellite services in the 2GHz MSS Band (or “S-Band”) enabling a range of broadcasting and interactive mobile applications, including Mobile TV. An S-Band satellite payload able to cover, inter alia, the UK, under construction with Thales Alenia Space (France) since October 2006, is scheduled for launch and operation in early 2009.

SOLARIS Mobile congratulates Ofcom in conducting this consultation on the authorisation of terrestrial mobile networks complementary to 2 GHz mobile satellite systems in a timely manner and we consider that Ofcom is setting an excellent example for European administrations in doing so. SOLARIS Mobile is pleased to provide comments in response to the consultation document, given below.

2. General Observations

We suggest that careful consideration may be needed on the structure of the licences and licence exemptions that would be applied to MSS and CGC operators, as well as to the equipment. We understand that Ofcom does not intend to authorise the MSS operators that would be selected by the process in the proposed Article 95 Decision, relying instead on exemption of equipment from individual licencing. For systems providing only MSS in the UK (ie, without CGC), a suitable mechanism should be adopted to reflect the selection decision in the national legislation, while ideally exempting equipment for the entire band, subject to meeting the appropriate equipment standards.

We envisage that this licence exemption would apply to the equipment whether they operate directly with the MSS satellite, or with the CGC base stations. With regard to authorisation of the CGC base stations however, the subject of the proposed CGC licence, it could be envisaged that each CGC licence will be for a specific operator, and that the CGC licence itself includes the specific frequency range identified by the selection decision as foreseen in the proposed Article 95 Decision.

3. Answers to Questions

Question 1: Do you agree that the CGC licence should be in the form of a spectrum access licence with standard terms and conditions?

We agree that the standard terms and conditions appear to be reasonable and appropriate in this context.

Question 2: Do you agree that such licences should be awarded on a UK-wide basis?

We are of the opinion that CGC would be deployed throughout the UK and that therefore a UK-wide licence would be appropriate.

Question 3: Do you agree that the CGC licence should authorise the complete set of frequencies assigned under the EC process?

Although an MSS network employing a CGC might not use all the authorised frequencies for CGC in any one area at all times, the MSS operator would need the flexibility to manage the frequency arrangements to meet system requirements and to ensure an efficient use of spectrum. Therefore, a CGC licence which covers the complete set of frequencies assigned to the MSS operator is strongly recommended.

Question 4: Do you agree that the initial grant of the CGC licence should be made to the MSS operator only?

In accordance also with the requirement included in the draft Article 95 Decision, we agree that the initial grant of the CGC licence should be made to the respective MSS operator. For the avoidance of doubt, we wish to highlight that, in accordance with the draft Decision, the operator must be established in the EU, but does not necessarily need a formal UK presence.

Question 5: Subject to certain safeguards, would it be appropriate to license the CGC in advance of the satellite service coming into operation and if so, what criteria should be applied to determine whether the satellite component of the MSS network is operational and what period of time do you consider would be appropriate?

In Question 5, Ofcom asks three sub questions, which we address in turn.

• should Ofcom license the CGC in advance of the EC selection and authorisation procedure?

In accordance with the draft Article 95 Decision, and assuming its rapid adoption by the European Parliament and the Council of the European Union, Ofcom should not license the CGC in advance of the completion of the selection decision as foreseen in said draft Article 95 Decision.

• should the CGC be licensed before the satellite component of the MSS system is operational?

We agree that CGC may be licensed in advance of the deployment of the satellite system, subject to certain safeguards. However, we have strong reservations about allowing the activation of the CGC, and commercial operation of the services, prior to successful launch of the satellite to be used by the respective MSS operator:

- It is only upon successful launch of the satellite to be used by the respective MSS operator that there is sufficient assurance that the services will actually be provided in a manner that is consistent with the Commission Decision 2007/98/EC on the designation of the band to MSS (with the ability to deploy CGC) and the proposed Article 95 Decision;
- Neither the Article 95 Decision nor the Commission Decision 2007/98/EC foresee a maximum period of time during which commercial operation prior to successful launch of the satellite is permitted (although there is a proposed provision that services may continue for 18 months after a failure). Specific national exemptions on this may lead to a patchwork of different rules across the European Union, which is exactly what the draft Article 95 Decision is attempting to prevent;
- Finally, operators of non-MSS networks in other frequency bands (such as terrestrial mobile networks) may justifiably feel that the CGC licensees receive unfair advantages if they are allowed to operate without having deployed the associated satellite first;

For these reasons, Ofcom should not permit commercial operation under the CGC license prior to successful launch of the satellite covering the UK. This should not prevent, however, other use of the spectrum under separate licence on a secondary basis in accordance with Commission Decision 2007/98/EC;

• what criteria should Ofcom apply to determine whether the MSS is operational?

This question is not necessarily related to the potential authorisation of CGC. However, there will likely be a requirement for the European administrations, including Ofcom, to make an assessment that operators meet the relevant milestones after the selection and assignment process. This includes the final (9th) milestone: "Provision of mobile satellite service within the territories of the EU Member States". It is necessary that the European administrations assess milestone compliance in a consistent manner, using the same criteria. For the purpose of ensuring compliance with respect to this and other milestones, Ofcom should follow the criteria which are expected to be included in the Article 95 Decision. For the specific purpose of the 9th milestone, we would recommend to base the assessment primarily on the operational service date of the satellite(s) to be used by the MSS operator.

Ofcom mentions Gateway earth stations as one criterion, however we would note that requirements related to Gateway earth stations seem to be adequately covered by the earlier milestone 4.

Question 6: Do you agree that the CGC licence should not include a coverage obligation?

We agree with Ofcom that coverage obligations are unnecessary in the CGC licence, because the coverage of the system will be defined by the MSS network in conjunction with the CGC element so the two elements cannot be separated.

With regard to the duration of the licence, Ofcom suggests that the duration be linked to the expected lifetime of the satellite. We understand that the licence duration is expected to be prescribed in the Article 95 Decision, in which case the CGC licences should be in accordance with this requirement. In any case, the duration of the CGC license should be no less than the duration of the associated MSS license in other countries (where applicable), and should be well beyond the expected lifetime of the satellite in order to allow appropriate time to manufacture and deploy follow-on satellites.

Question 7: Do you agree that the CGC licence should be provided on a service and technology neutral basis?

We agree that the CGC licence should be provided on a service and technology neutral basis, to the extent that this is possible within the constraints of the Commission Decision 2007/98/EC and the (draft) Article 95 Decision.

Question 8: Do you agree that CGC licences should be tradable and, if so, that they should be both totally or partially tradable and both outright or concurrently tradable, that Ofcom's consent should be required for transfers and that the grounds on which Ofcom may withhold consent should be limited as proposed?

Under the draft Article 95 Decision, Ofcom would be required to grant authorisation to the successful applicants, and by implication, only to the successful applicants. Given the constraints on use of a CGC licence, in particular the need for the CGC to be fully integrated with, and dependent on, the MSS system (which Ofcom does not intend to not authorise separately), trading may not be practically feasible in this band and may therefore not be desirable.

Question 9: Do you agree that AIP should be applied to CGC licences at a rate that reflects the associated opportunity cost?

We acknowledge AIP as one of the spectrum management tools available to Ofcom, based on the principle of pricing the value of the particular use of radio spectrum in accordance with the opportunity cost associated with such usage. We agree that this principle makes sense in this specific context, but do not come to the same conclusions on the opportunity costs (see answer to Question 10). Indeed, we believe the opportunity cost is zero or close to zero, for the reasons we will explain in more detail below.

In this context, it is necessary to give more thorough consideration to the potential alternative uses of the spectrum. At a certain point, a high AIP based on the opportunity cost for another application might, in theory, persuade the operator to voluntarily reduce the quantity of spectrum authorised for CGC, which could then be used by an alternative application. Given the restrictions imposed by the European regulations and the mandatory requirement stemming from the EC process for MSS systems to cover at least a substantial part of the UK, any alternative application would have to protect current and future MSS and MSS/CGC systems operating in the UK and outside of the UK. Hence, any alternative application would have to operate with severe technical and operational constraints (for example very low power, restricted coverage), which would rule out standard terrestrial cellular networks as alternative users of the spectrum. Also, it must be noted that the CGC is an optional use of

this spectrum designated for MSS, and therefore the true alternative use for deploying CGC (which forms the basis for the estimation of the opportunity cost) is not to deploy CGC at all!

As a consequence, the opportunity cost is much lower than the value proposed by Ofcom, and we would submit that the true opportunity cost is zero or close to zero.

Basing the opportunity cost on a service which attracts a high value but cannot feasibly be deployed may ultimately result in spectrum being unused giving a net loss to the overall economic efficiency of the spectrum.

Question 10: Do you agree that the licence fees should be set at around £554,000 per 2 x 1MHz?

We do not agree that fees should be set based on comparison with the licence fees paid by GSM operators in the 1.8 GHz band (or indeed, any mobile networks). As indicated above, the opportunity cost for the 2 GHz MSS bands cannot be based on terrestrial cellular networks as the best alternative use, as such systems cannot be deployed under the current regulations. This approach should therefore not be used as a basis for setting spectrum usage fees for CGC.

Furthermore, a terrestrial only cellular system and a CGC should not be considered as equivalent for the purpose of setting fees. Ofcom must take into account that the bands in question have been designated for MSS systems, with or without CGC. Any such system that will be deployed in these bands must be primarily an MSS system. This is ensured by Commission Decision 2007/98/EC designating the band to MSS: "Any complementary ground based station shall constitute an integral part of the mobile satellite system and shall be controlled by the satellite resource and network management system. It shall use the same direction of transmission and the same portions of frequency bands as the associated satellite components and shall not increase the spectrum requirement of its associated mobile satellite system."

As a consequence, the CGC itself will not have the same capacity as a terrestrial only mobile system for the same amount of spectrum. At any time, a portion of the spectrum licensed to the CGC operator may not be used for CGC but will be used for the satellite part.

Furthermore, the costs of the overall system need to be considered, including the satellites and their associated ground infrastructure, and dual mode handsets that will be able to work with both the satellite and CGC. These are costs which, naturally, a terrestrial only operator does not have to bear. It must also be recognised that the MSS operator must, under the proposed Article 95 Decision, meet certain social obligations, in particular requirements for substantial territorial and population coverage in all EU Member States. The same requirements could not apply to a UK based terrestrial operator.

In summary, the licence fee proposed does not accurately reflect the true opportunity cost of these bands, which is zero or close to zero, and it should not be considered that CGC systems and terrestrial mobile systems are comparable for the purpose of setting fees.

Question 11: If you believe that setting fees at this level would result in CGC systems not being deployed, please provide your reasons and full supporting evidence including a detailed business case.

SOLARIS Mobile Ltd



It has already been decided at the European level that these bands will be available for MSS systems (with or without CGC) and Ofcom is party to that decision. Such use is fully in accordance with Ofcom's general duties. Ofcom must therefore be careful not to introduce regulations, and in particular licence fees, that prevent CGC systems from being deployed. As mentioned in the answers to Questions 9 and 10, we strongly believe that the opportunity cost, for a variety of very fundamental reasons, is zero or close to zero.