



24 March 2008

Via Electronic Mail to Bob.phillips@ofcom.org.uk

Office of Communications (Ofcom)

Bob Philips

Floor 3 - Space Services Unit

Riverside House

2A Southwark Bridge Road

London SE1 9HA

Dear Sir,

The Satellite Industry Association (“SIA”) is pleased to provide the following comments to Ofcom’s consultation on “Authorisation of terrestrial mobile networks complementary to 2 GHz mobile satellite systems,” (“Consultation”) published on January 15, 2008.

SIA is a U.S.-based trade association providing worldwide representation of the leading satellite operators, service providers, manufacturers, launch services providers, remote sensing operators, and ground equipment suppliers. SIA is the unified voice of the U.S. satellite industry on policy, regulatory, and legislative issues affecting the satellite business.¹ The Members of SIA have both direct and indirect interest in the outcome of this consultation.

As recognized in the consultation, satellites, including MSS satellites, are a vital component of the communications marketplace. Satellites play an essential role in disaster recovery and remote connectivity for first responders and other emergency service providers. This makes MSS an excellent means of ensuring redundant, reliable, ubiquitous communications capability during times when terrestrial wireless and wireline networks fail.

MSS systems, however, cannot provide the same coverage as terrestrial providers in some markets. In urban areas, for example, MSS satellite signals may be blocked by buildings and other man-made structures.² This limitation has meant that MSS providers

¹ SIA Executive Members include: Arrowhead Global Solutions, Inc.; Artel Inc.; The Boeing Company; DataPath, Inc.; The DIRECTV Group; Hughes Network Systems LLC; ICO Global Communications; Integral Systems, Inc.; Intelsat, Ltd.; Iridium Satellite LLC; Lockheed Martin Corp.; Loral Space & Communications Inc.; Mobile Satellite Ventures LP; Northrop Grumman Corporation; SES Americom, Inc.; and TerreStar Networks Inc. Associate Members include: ATK Inc.; Comtech EF Data Corp.; Constellation Networks Corp.; EchoStar Corporation; EMC Inc.; Eutelsat Inc.; Inmarsat Inc.; Marshall Communications Corp.; New Skies Satellites, Inc.; Spacecom Ltd.; Spacenet Inc.; Stratos Global Corp; SWE-DISH Satellite Systems; Telesat Corp. and WildBlue Communications, Inc. Additional information can be found at www.sia.org.

² *Consultation*, Section 4.12.

have been unable to develop the same mass customer base that is necessary to reduce per-customer rates, equipment costs, and handset size to levels that are competitive with terrestrial mobile providers. Thus, although MSS providers continue to adopt innovative technologies to make their equipment more user friendly and cost effective, the current MSS services and products nevertheless remain harder to use and more expensive than the products offered by terrestrial mobile operators. For these reasons, the current service offerings of MSS providers typically focus on a different market segment than terrestrial mobile services.

As acknowledged in the consultation, the U.S. Federal Communications Commission (“FCC”) has adopted rules authorizing MSS licensees to integrate an ancillary terrestrial component into their satellite systems.³ In doing so, the FCC noted that the record demonstrated that sharing between separate MSS and terrestrial mobile services was neither advisable, nor practical. The FCC also recognized the potential of deploying an ancillary terrestrial component, finding that the expanded authority would promote the efficient use of MSS spectrum, allow MSS providers to offer ubiquitous service by overcoming coverage gaps in densely populated areas, and achieve economies of scale that would dramatically reduce the cost of MSS equipment and service, promote public safety and national security, and increase wireless competition generally.⁴ In the consultation, Ofcom makes a similar finding that the CGC portion of the network is an integral part of MSS and that the frequencies used by both the MSS and CGC need to be managed by the same system operator.⁵

The focus of SIA’s comments below is on the last two questions of the consultation addressing spectrum fees for CGC in the United Kingdom. Specifically, (1) question 9: do you agree that Administrative Incentive Pricing (AIP) should be applied to CGC licenses at a rate that reflects the associated opportunity cost; and (2) question 10: do you agree that the license fees should be set at around £554,000 per 2 X 1 MHz?

As described in more detail below, SIA believes that it is essential that Ofcom take into account the impact that AIP spectrum fees would have on the ability of satellite operators to finance the construction, launch and operation of a satellite network with an integrated CGC. It is important to recognize that an MSS/CGC system is fundamentally different from either a stand alone satellite system or terrestrial mobile system. A combined MSS/CGC system will require the upfront cost of constructing, launching and operating a satellite system many years before a terrestrial CGC network is constructed, and before any revenues flow to the operator.

³ See *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, Report and Order*, 18 FCC Rcd 1962 (2003) (“ATC Order”).

⁴ ATC Order at ¶¶ 1, 21, 23, 24, 29, and 32.

⁵ Consultation, Section 4.15.

In its comments below, SIA presents a statement of principles and specific solutions that it believes will be helpful to Ofcom in developing a workable framework for resolving the spectrum fees questions in the best interests of consumers of MSS/CGC services in the United Kingdom.

Respectfully submitted,

SATELLITE INDUSTRY ASSOCIATION

A handwritten signature in black ink, appearing to read "Patricia Cooper". The signature is written in a cursive, flowing style.

Patricia Cooper
President, SIA

SIA View on Spectrum Fees in Ofcom Consultation

Spectrum Fees Imposed on CGC Licensees Would Decrease Spectrum Efficiency and Deter Investment in CGC

Decrease Spectrum Efficiency. Ofcom agrees with the principle that an MSS/CGC licensee must provide an integrated MSS/CGC offering in order to ensure spectrum efficiency, service quality and seamless roaming between the satellite and terrestrial components for the provision of advanced communications systems.⁶ Segmenting the complimentary ground component from the related mobile satellite system for purposes of assessing a fee is inconsistent with the technical integration of the system. It would, moreover, deter licensees from deploying CGC, and therefore foreclose the benefits of more intense use of MSS spectrum that CGC offers.

Spectrum Efficiency is Best Encouraged by Means Other Than Incentive Fees in this Context

Continued advances in satellite technology have allowed the satellite industry to provide greater overall capacity, achieve a higher level of frequency reuse and share spectrum with other satellite and terrestrial networks.

High and Lengthy Infrastructure Costs. Satellite systems have extremely high and lengthy up-front infrastructure costs. Purchasing, launching, operating and insuring a single geostationary satellite is highly capital intensive. Non-geostationary satellite systems cost even more. Geostationary and non-geostationary satellite operators face extremely long development, financing and operational timeframes – up to a decade - with significantly greater risks of launch and in-orbit failure than terrestrial mobile networks. This creates a significant lag between the time that capital is required to develop a satellite network and when commercial revenues can be expected to recover the investment. By contrast, terrestrial mobile operators can incrementally deploy their upgradeable networks using revenue from initial build out for infrastructure extensions. Therefore, satellite operators have powerful market-based economic incentives to maximize spectrum efficiency and fully exploit their assigned spectrum quickly so as to recover their upfront investment.

Strict Milestones. Strict satellite licensing milestones effectively ensure that satellite spectrum is not warehoused. Fierce international competition for geostationary orbital slots and non-geostationary orbital and frequency assignments further ensure spectrum efficiency.

Spectrum Fees Set a Troubling International Precedent

Building viable international satellite systems and using the spectrum resource efficiently requires operators to secure landing rights in many countries rather than obtaining just

⁶ *Consultation*, Section 4.12, 4.13, 4.15.

one license in one country. Satellite beams can cover as much as one-third of the earth's surface simultaneously.

UK as Spectrum Management Leader. The UK is a leader in spectrum management and licensing, including for satellite systems. If the UK were to impose the proposed fees, other countries – both within and outside the EU – would be expected to follow, and some would do so in ways that favor their local domestic satellite operators.

Uncertainty and Magnitude of Fees. The uncertainty and magnitude of spectrum fees in every country would severely curtail the ability of satellite operators to raise the needed capital to construct, launch and operate their systems. For instance, if the proposed Ofcom AIP spectrum fee were adopted by half of the European nations covered by the pan-European 2GHz MSS authorization it would cost MSS operators approximately £183,000,000 annually in fees alone to provide CGC. Fees this high would likely render any business plan infeasible for 2GHz MSS/CGC.

Conclusions

Based on the principles described above, SIA believes that the proposed CGC spectrum fees would be economically crippling, inconsistent with international satellite licensing policies, and would neither promote spectrum efficiency nor encourage new service offerings in MSS spectrum. Spectrum fees for the CGC of mobile satellite services should only be tied to reimbursement of regulatory and/or administrative costs.