



May 2, 2013

**FILED ELECTRONICALLY**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street N.W.  
Washington, D.C. 20544

**Re: Notice of *Ex Parte* – Petition for Rulemaking RM-11640**  
***Amendment of the Commission’s Rules to Establish a Next-Generation Air-Ground Communications Service on a Secondary Licensed Basis in the 14.0 to 14.5 GHz Band***  
**And**  
**Petition for Rulemaking RM-11341**  
***Amendment to the National Table of Frequency Allocations to Provide Allocation Status for Federal Earth Stations Communicating with Non-Federal Satellites***

Dear Ms. Dortch:

On April 30, 2013, representatives of the Satellite Industry Association (“SIA”)<sup>1</sup> met with Commission staff to discuss satellite sector views in two dockets that appear on the Commission’s tentative agenda for the May Open Meeting: RM-11640, Qualcomm’s

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<sup>1</sup> SIA is a U.S.-based trade association providing worldwide representation of the leading satellite operators, service providers, manufacturers, launch services providers, and ground equipment suppliers. Since its creation more than fifteen years ago, SIA has advocated for the unified voice of the U.S. satellite industry on policy, regulatory, and legislative issues affecting the satellite business. SIA Executive Members include: Artel, LLC; The Boeing Company; The DIRECTV Group; EchoStar Satellite Services LLC; Harris CapRock Communications; Hughes Network Systems, LLC; Intelsat, S.A.; Iridium Communications Inc.; Kratos Defense & Security Solutions; LightSquared; Lockheed Martin Corporation.; Northrop Grumman Corporation; Rockwell Collins Government Systems; SES S.A.; and SSL. SIA Associate Members include: AIS Engineering, Inc.; Astrium Services Government, Inc.; ATK Inc.; Cisco; Cobham SATCOM Land Systems; Comtech EF Data Corp.; DRS Technologies, Inc.; Encompass Government Solutions; Eutelsat, Inc.; Globecom Systems, Inc.; Glowlink Communications Technology, Inc.; Inmarsat, Inc.; ITT Exelis; Marshall Communications Corporation.; MTN Government Services; NewSat America, Inc.; O3b Networks; Orbital Sciences Corporation; Panasonic Avionics Corporation; Spacecom, Ltd.; Spacenet Inc.; TeleCommunication Systems, Inc.; Telesat Canada; The SI Organization, Inc.; TrustComm, Inc.; Ultisat, Inc.; ViaSat, Inc., and XTAR, LLC.

proposal to offer secondary Next Generation Air-to-Ground (“ATG”) service in the 14.0-14.5 GHz band (“Ku-band”) and RM-11341, a petition from the National Telecommunications and Information Administration to amend the National Table of Frequency Allocations to provide allocation status for federal earth stations communicating with non-federal satellites.

The following SIA representatives attended the meetings: Patricia Cooper and Sam Black, Satellite Industry Association; Gregg Elias, Wiley Rein<sup>2</sup>; Susan Crandall, Intelsat; Daniel Mah, SES; and Steven Doiron, Hughes.

SIA representatives met with the following Commission staff: David Grimaldi and Louis Peraertz, Office of Commissioner Clyburn; Matthew Berry and Courtney Reinhard, Office of Commissioner Pai; Priscilla Delgado Argeris, Office of Commissioner Rosenworcel; Michael Steffen, Renee Gregory, and Kate Dumouchel, Office of Chairman Genachowski; Linda Chang, Tom Derenge, and Brian Regan, Wireless Telecommunications Bureau; Roderick Porter, Robert Nelson, James Ball, and Kate Collins, International Bureau; and Geraldine Matise, Nicholas Oros, and Jamison Prime, Office of Engineering and Technology.

During these meetings, the SIA representatives reiterated satellite industry perspectives represented by the Association’s active filings in both dockets. SIA also noted that filings by the Association in both dockets represented the consensus views of SIA’s 44 member companies, a significant representation of the industry, including manufacturers of spacecraft, satellite operators in Fixed (“FSS”), Mobile (“MSS”) and Broadcast Satellite Services (“BSS”) bands, end-to-end satellite network integrators, and satellite ground equipment manufacturers.

In each of the meetings with Commission staff, SIA underscored its ongoing general position in support of spectrum efficiency and sharing as tools to encourage industry investment and innovation. With respect to RM-11640, however, SIA noted its continued opposition to the Qualcomm petition, reiterating SIA’s view that Qualcomm’s proposed ATG system will cause interference into the FSS satellite services that are primary in that band. SIA reviewed the ongoing importance of the Ku-band uplink bands to the satellite industry, noting that the industry has invested more than \$20 billion to build, launch and operate more than 80 satellites with Ku-band capacity.<sup>3</sup> These satellites generate more than \$1 billion dollars in satellite services revenue in North America alone. SIA representatives

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<sup>2</sup> Mr. Elias only attended the meetings with the Offices of Commissioners Pai and Clyburn.

<sup>3</sup> As noted by SIA in its February 8, 2013 *ex parte* submission, there are 81 satellites with Ku-band capacity that are either licensed by the United States or authorized to serve U.S. customers. There are numerous other Ku-band satellites licensed by other administrations and which serve non-U.S. customers.

outlined the myriad services utilizing Ku-band frequencies, ranging from satellite news gathering, enterprise networks comprised of over 600,000 Very Small Aperture Terminals (“VSATs”), broadband services for rural America, and innovative mobile satellite applications that include broadband connectivity to commercial aircraft, U.S. government Unmanned Aerial Vehicles (“UAVs”), ships and off-shore oil platforms, and vehicle-mounted terminals used by first responders and the U.S. military.

SIA also pointed out the importance of careful interference calculations in evaluating the Qualcomm ATG proposal. SIA noted questions raised in its earlier filings about the validity of Qualcomm’s assumptions about the sensitivity of existing satellites currently operating in the Ku-band over North America, assumptions that are not supported by the satellite industry’s own performance measurement data and filings submitted to the Commission. Furthermore, SIA voiced concerns that Qualcomm expects that its proposed system would increase the noise floor by one percent on its own. SIA noted that, while ITU regulations allow a cumulative noise floor increase of one percent for all secondary systems, Qualcomm’s calculations presume to take up that entire noise floor and do not take into account the existing noise created by other secondary services currently in operation, including NASA’s TDRS system. SIA underscored the concern from previous filings that Qualcomm’s own interference calculations understate the interference that its proposed system would cause to existing satellites designated for primary status in these Ku-band frequencies.

SIA representatives further discussed satellite marketplace developments that are driving the satellite sector to innovate toward mobility and miniaturization. This has encouraged the satellite sector to develop smaller and lower-powered satellite terminals that are more sensitive to interference and also require space stations with greater ability to receive these weaker uplink transmissions. SIA observed that, by increasing the aggregate noise floor, Qualcomm’s system would, over time, limit the ability of the satellite industry to continue such innovation in response to market demands. While Qualcomm has indicated that it could reduce the power levels emitted by its base stations in order to address these interference concerns, SIA representatives observed that doing so would likely be at the cost of reduced service quality provided by Qualcomm’s system, therefore affecting its viability. Furthermore, SIA explained that identifying and mitigating disruptive interference caused by Qualcomm’s proposed system would be extremely difficult, as such interference may only be perceived as a result of an aggregate increase in interference. Moreover, geolocation of the source of interference would be further complicated by the fact that at least one, and possibly both of the terminals involved (the Ku-band satellite terminals and the terminals on aircraft with which Qualcomm’s system would communicate) would be mobile. SIA noted that because interference events caused by mobile terminals are often intermittent and thus particularly difficult to resolve, the

establishment of the proposed ATG system would result in degrading the quality of or reducing the availability of Ku-band satellite services.

Additionally, SIA voiced its established concern that Qualcomm's ATG system will suffer significant interference from FSS satellites and be unable to function as planned, and urged the Commission staff to consider carefully the implications of this prospect for a service in spectrum that may be allocated by auction. SIA's technical calculations filed in the docket indicate that the interference caused by incumbent satellite services will be more significant than Qualcomm has calculated, as south-facing satellite terminals will cause significant interference into Qualcomm's north-facing ATG base stations. Additionally, SIA noted that Qualcomm's deployment of base stations would encounter considerable interference from Ku-band VSAT satellite terminals. Because the Ku-band VSAT satellite terminals are blanket licensed by the Commission in order to encourage their wide deployment throughout the U.S. – including in rural and remote regions – they may be located or re-located without prior notification. With thousands of Ku-band VSAT terminals installed each month within the U.S., it is highly likely that at least some of these new terminals will be deployed close to the proposed ATG base stations. SIA representatives also reiterated questions about the interference mitigation options offered by Qualcomm for satellite interference into their proposed ATG system, questioning the viability of Qualcomm's proposal to re-locate their base stations when they encounter interference from satellite services. SIA voiced concern that such a scenario would be far more likely to encourage any ATG licensee to simply seek additional regulatory protections beyond secondary status, further eroding the performance and flexibility of existing and future satellite services.

In reiterating their opposition to the Qualcomm petition, the SIA representatives urged the Commission staff to prioritize the protection of primary satellite services in Ku-band in order to both safeguard existing services and ensure that the satellite sector is permitted to continue to innovate.

SIA representatives also discussed at each of these meetings the proposal to amend the National Table of Frequency Allocations to provide allocation status for federal earth stations communicating with non-federal satellites. SIA noted its past position of general support of providing protections for U.S. federal government-owned satellite earth stations, with certain caveats regarding implementing such a change. SIA outlined the significant services provided to the U.S. federal government by the commercial satellite industry, noting that the U.S. Defense Department's Defense Information Systems Agency ("DISA") purchased more than \$650 million worth of FSS capacity and services alone in Fiscal Year 2010.

SIA urged the FCC to ensure that, in providing additional protections to federal earth stations, federal earth stations become subject to the same regulatory obligations

currently imposed on commercial earth stations with respect to the Commission's licensing, interference, and enforcement requirements. Furthermore, SIA representatives expressed the view that in granting the requested protections for federal earth stations, the Commission should not impose any additional regulatory or approval procedures on commercial and experimental earth station operations in these shared bands, whether implemented by NTIA, the Commission, or any other government entity.

A copy of this notice is being emailed to the Federal Communications Commission staff identified below.

Please contact Patricia Cooper if you have any questions.

Respectfully submitted,

/s/

SATELLITE INDUSTRY ASSOCIATION



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U.S.A.

Attachment  
cc (via email):

Michael Steffen, Office of Chairman Genachowski  
Renee Gregory, Office of Chairman Genachowski  
Kate Dumouchel, Office of Chairman Genachowski  
David Grimaldi, Office of Commissioner Clyburn  
Louis Peraertz, Office of Commissioner Clyburn  
Matthew Berry, Office of Commissioner Pai  
Courtney Reinhard, Office of Commissioner Pai  
Priscilla Delgado Argeris, Office of Commissioner Rosenworcel  
Ruth Milkman, Wireless Telecommunications Bureau  
Linda Chang, Wireless Telecommunications Bureau  
Tom Derenge, Wireless Telecommunications Bureau  
Brian Regan, Wireless Telecommunications Bureau  
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Roderick Porter, International Bureau

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