



June 1, 2016

VIA ECFS

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, GN Docket No. 14-177

Dear Ms. Dortch:

The Satellite Industry Association (“SIA”)¹ submits this ex parte to update the Commission on the on-going satellite and wireless technical discussions with regard to UMFU deployment. SIA recognizes the need to work with the wireless industry to come to a technical solution for sharing the 28 GHz band so that both industries can flourish and maximize services to current and future customers.

Over the past 10 weeks, SIA has reached out to and arranged meetings with the representatives of the wireless industry.² At SIA’s request, the parties met five times to exchange technical information and to discuss parameters under which the FSS and

¹ SIA is a U.S.-based trade association providing representation of the leading satellite operators, service providers, manufacturers, launch services providers, and ground equipment suppliers. Since its creation twenty years ago, SIA has advocated on behalf of the U.S. satellite industry on policy, regulatory, and legislative issues affecting the satellite business. For more information, visit www.sia.org. SIA Executive Members include: The Boeing Company; The DIRECTV Group; EchoStar Corporation; Intelsat S.A.; Iridium Communications Inc.; Kratos Defense & Security Solutions; Ligado Networks; Lockheed Martin Corporation; Northrop Grumman Corporation; OneWeb; SES Americom, Inc.; Space Exploration Technologies Inc.; SSL; and ViaSat, Inc. SIA Associate Members include: ABS US Corp.; Artel, LLC; Comsat Inc.; Digital Globe Inc.; DRS Technologies, Inc.; Eutelsat America Corp.; Global Eagle Entertainment; Glowlink Communications Technology, Inc.; Hughes; iDirect Government Technologies; Inmarsat, Inc.; Kymeta Corporation; O3b limited; Panasonic Avionics Corporation; Planet Labs Inc.; TeleCommunication Systems, Inc.; Telesat Canada; TrustComm, Inc.; Ultisat, Inc.; and XTAR, LLC.

² Nokia, Verizon, and AT&T were the initial terrestrial participants. T-Mobile and Ericsson joined the technical discussions later in the process. AT&T has served as a helpful broker in arranging the requested meetings.

UMFU can coexist as was requested by Chairman Wheeler and the FCC staff. During those meetings, SIA provided technical parameters for FSS earth stations as well as FSS space stations to terrestrial service providers and some of those parameters have been used for simulations performed by Nokia on UMFU/satellite system interference. For example, an interim simulation result, run by Nokia, was shared in late April showing interference potential between satellite systems and UMFU systems.

In addition, many SIA members have held smaller meetings with terrestrial service providers and equipment manufacturers. A group of satellite service providers presented a detailed technical analysis to the Commission with the information that they had available from the terrestrial parties.³ AT&T, Nokia, Samsung, Verizon, and T-Mobile filed alternative simulation results, utilizing different assumptions including some information not previously provided to SIA members or placed in the record⁴. Consequently, the current process has yet to produce consensus results in determining aggregate interference solutions. Therefore, SIA requests that the FCC convene a tripartite technical meeting including terrestrial service providers and the satellite industry, before any decisions are made, to allow both terrestrial and satellite stakeholders to present data on factors influencing, and solutions for limiting, aggregate interference to satellite receivers.

Given that the U.S. and International Tables of Frequency Allocations expressly provide that FSS and Mobile services are co-primary, SIA urges the FCC to adopt a balanced approach that both protects FSS space station receivers from interference from aggregate UMFU operations while recognizing the need to provide protection for UMFU base stations and user equipment from deployment of future FSS earth stations. Developing the appropriate regulatory and technical framework to achieve these goals is complex; rushing into a solution does not serve the goals of the Commission to bring services to U.S. consumers or to use spectrum as efficiently as possible. While SIA has made efforts to coordinate and develop technical and operational parameters for co-existence of satellite and UMFU systems, some terrestrial service providers mistakenly consider FSS as secondary with respect to both protection of FSS space stations and deployment of satellite earth stations.⁵ This fundamental misunderstanding of the current spectrum allocation is making it difficult to reach a technical agreement on

³ See *Notice of Ex Parte* filed by Echostar, O3b, SES, Inmarsat, Intelsat, Viasat, and OneWeb, GN Docket 14-177 (filed May 12, 2016)

⁴ See *Notice of Ex Parte* filed by AT&T, Nokia, Samsung, Verizon, and T-Mobile, GN Docket 14-177 (filed May 13, 2016)

⁵ While the FCC made FSS secondary to legacy LMDS by rule, it never changed the primary status of the FSS allocation and it expressly stated that FSS would have “licensing priority vis-à-vis any third service” introduced to the band. *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed-Satellite Services*, 11 FCC Rcd 19005, ¶ 44 (1996). See *Notice of Ex Parte* filed by CTIA GN Docket 14-177, (filed May 20, 2016) arguing that FSS is secondary to all terrestrial services.)

sharing of the 28 GHz band. When the basic tenet of FSS' co-primary status is not recognized by terrestrial service providers⁶, it is not possible to achieve agreement on important technical requirements to ensure protection from harmful interference for both in-orbit and planned space stations. A common understanding that FSS and terrestrial service providers will be co-primary in the 28 GHz band would be helpful to lay the groundwork for more productive technical discussions, including for the proposed FCC meeting described above, on how to protect systems from interference in that band.

More analysis is clearly needed to come to agreement on technical solutions for spectrum sharing with UMFU, and SIA wishes to continue a productive dialogue with the wireless industry with appropriate deployment scenarios. However, the fundamental co-primary allocation issue addressed above needs to be made clear so the discussions are based on a common understanding between the parties. If sharing is to be the path of the future, there needs to be a trusted and open process in which interested parties can discuss the associated technical issues.

Respectfully submitted,

SATELLITE INDUSTRY ASSOCIATION

By: /s/ Tom Stroup

Tom Stroup
President
1200 18th Street, N.W., Suite 1001
Washington, D.C. 20036
(202) 503-1560

⁶ See *Notices of Ex Parties* filed by T-Mobile, GN Docket 14-177 (filed May 9 and May 27, 2016); *Notice of Ex Parte* filed by Verizon, GN Docket 14-177 (filed May 19, 2016); *Notices of Ex Parties* filed by CTIA, GN Docket 14-177 (filed May 20 and May 27, 2016); *Notice of Ex Parte* filed by Intel, GN Docket 14-177 (filed May 24, 2016).