



SatCom Law LLC  
1317 F St. NW, Suite 400  
Washington, D.C. 20004  
T 202.599.0975  
www.satcomlaw.com

July 7, 2016

**FILED ELECTRONICALLY**

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

**Re: Use of Spectrum Bands above 24 GHz for Mobile Radio Services, et al;  
GN Docket No. 14-177; IB Docket Nos. 15-256 & 97-95; RM-11664;  
and WT Docket No. 10-112**

Dear Ms. Dortch:

SES Americom, Inc. ("SES") and O3b Limited ("O3b") strongly support the recent *ex parte* filing by ViaSat, Inc. regarding the legal status of fixed satellite service ("FSS") operations in the 27.5-28.35 GHz ("28 GHz band")<sup>1</sup> and urge the Commission to ensure that its decision in the above-referenced rulemaking respects the well-established rights and significant reliance interests of the FSS industry.

The ViaSat Letter conclusively demonstrates that terrestrial wireless interests have blatantly and repeatedly mischaracterized the Commission decisions on which FSS operators have reasonably depended in developing and deploying satellite networks using 28 GHz spectrum. In particular, it is clear that in adopting the plan for use of 28 GHz frequencies, the Commission intended to maximize the "flexibility for system implementation, inter-system sharing, and future system growth."<sup>2</sup> To achieve this objective for satellite operations, the Commission expressly provided that, although satellite service was secondary to fixed LMDS operations, FSS retained its licensing priority with respect to any other service in the band, including terrestrial mobile operations.<sup>3</sup> Both space and earth station authorizations granted by the Commission under this

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<sup>1</sup> ViaSat, Inc. *Ex Parte* Submission; Legal Status of Fixed Satellite Service in the 28 GHz Band; GN Docket No. 14-177; IB Docket Nos. 15-256 & 97-95; RM-11664; and WT Docket No. 10-112, July 1, 2016 (the "ViaSat Letter").

<sup>2</sup> ViaSat Letter at 7, quoting *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*, First Report and Order, 11 FCC Rcd 19005, 19023 ¶ 41 (1996) ("28 GHz First Report and Order").

<sup>3</sup> ViaSat Letter at 7-8, citing *28 GHz First Report and Order*, 11 FCC Rcd at 19024 ¶ 44.

regulatory framework confirm the priority status of FSS operations vis-à-vis any prospective new terrestrial mobile systems.<sup>4</sup>

In light of this explicit policy promoting the development and evolution of the FSS in the 28 GHz band, suggestions that new Upper Microwave Flexible Use (“UMFU”) licensees should be granted veto power over continued use of existing FSS facilities or the deployment of additional FSS network elements must be rejected.<sup>5</sup> Instead, the Commission must protect the multi-billion dollar investments that have been made and are continuing to be made in 28 GHz space stations and earth stations. Such protections are crucial given the long lead-time associated with satellite projects, as the systems being built and launched today have been in the planning and construction stages for years and were begun well prior to the Commission’s initiation of this rulemaking proceeding.<sup>6</sup>

For space stations, this requires adopting policies to address the threat of both co-channel and adjacent channel interference into satellite receivers.<sup>7</sup> SES and O3b have observed that an aggregate interference limit on skyward emissions from mobile terrestrial networks would provide more flexibility to prospective UMFU licensees than would a set of detailed prescriptions on operational parameters.<sup>8</sup> However, one approach or the other must be employed to prevent harmful interference to space station receiver, and there is Commission precedent to support either mechanism.<sup>9</sup> The Commission cannot simply assume based on the fundamentally flawed simulations presented by terrestrial wireless interests that interference to satellites will not pose a problem.<sup>10</sup>

Similarly, the Commission must protect earth stations that have been deployed or are in the licensing or modification process as well as preserving reasonable access to new sites for future earth station installations. CTIA recently argued that the Commission should back-date the grandfathering of existing earth stations to the release of the Spectrum Frontiers NPRM;<sup>11</sup> this is unnecessary and unwarranted. The satellite industry has demonstrated that ensuring satellite

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<sup>4</sup> ViaSat Letter at 10-12 & nn.50-51.

<sup>5</sup> See *id.* at 2 & 13-14.

<sup>6</sup> See *id.* at 15 (discussing the lengthy deployment process for space stations and associated ground facilities).

<sup>7</sup> See *id.* at 22.

<sup>8</sup> See *Ex Parte* Presentation by EchoStar Satellite Operating Corporation, Hughes Network Systems, LLC and Alta Wireless, Inc., OneWeb, Ltd., O3b Limited, ViaSat, Inmarsat Mobile Networks, Inc., and SES Americom, Inc. to Secretary, FCC, GN Docket No. 14-177, *et al.*, June 9, 2016 (“Satellite Operators’ Presentation”) Attachment at 5.

<sup>9</sup> ViaSat Letter at 22 & n.98.

<sup>10</sup> See *id.* at 18-22 & Exhibit 1.

<sup>11</sup> CTIA *Ex Parte* Submission; GN Docket No. 14-177; IB Docket Nos. 15-256 & 97-95; RM-11664; and WT Docket No. 10-112, July 5, 2016. Notably, the CTIA visual representation of satellite earth stations pre- and post- October 22, 2015 shows less than 100 FSS earth stations combined, most located in remote or rural areas of the country. See *id.* at 6-7. This level of deployment is far less than the one earth station per county limit being contemplated by the Commission and will not by any measure meaningfully constrain terrestrial deployment.

service continuity and accommodating necessary expansion in response to growing demand is fully compatible with the development of terrestrial mobile systems in the 28 GHz band.<sup>12</sup> Furthermore, this frequency segment represents only a tiny fraction of the spectrum being considered for 5G systems.<sup>13</sup> Given the likely availability of significant additional spectrum, any modest constraints on terrestrial use of the 28 GHz band to enable UMFU sharing with satellite networks will not pose an obstacle to full development of 5G capabilities.

The public interest requires the Commission to fully consider the innovative services 28 GHz satellite networks are providing and will provide to meet the needs of U.S. residential, commercial and government customers for broadband connectivity on the ground, in the air, and at sea. Accordingly, the Commission must ensure that the UMFU regulatory framework preserves reliable and reasonable access to the 28 GHz band for FSS networks.

Please contact the undersigned if you have any questions.

Respectfully submitted,

*/s/ Karis A. Hastings*

Karis A. Hastings  
Counsel for SES Americom, Inc. and O3b Limited  
[karis@satcomlaw.com](mailto:karis@satcomlaw.com)

cc's:

Legal Advisors

Diane Cornell  
Edward Smith  
Daudeline Meme  
Johanna Thomas  
Brendan Carr  
Erin McGrath

OET

Julius Knapp  
Ira Keltz  
Michael Ha  
Bahman Badipour  
Martin Doczkat  
Barbara Pavon  
Nicholas Oros  
Serey Thai

OGC

Jonathan Sallet

WTB

Jon Wilkins  
Brian Regan  
Chris Helzer  
Blaise Scinto  
Stephen Buenzow  
Charles Oliver  
John Schauble  
Simon Banyai  
Tim Hilfiger  
Nancy Zaczek  
Larry Frazier  
Matt Pearl  
Catherine Schroeder

IB

Mindel De La Torre  
Robert Nelson  
Jose Albuquerque  
Chip Fleming  
Kal Krautkramer

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<sup>12</sup> See, e.g., Satellite Operators Presentation at 6-7.

<sup>13</sup> ViaSat Letter at 24.