

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Use of Spectrum Bands Above 24 GHz For Mobile Radio Services	)	GN Docket No. 14-177
	)	
Amendment of the Commission’s Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands	)	ET Docket No. 95-183 (Terminated)
	)	
Implementation of Section 309(j) of the Communications Act – Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz Bands	)	PP Docket No. 93-253 (Terminated)
	)	
Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz Band	)	RM-11664

**JOINT COMMENTS OF SES AMERICOM, INC., INTELSAT CORPORATION,  
O3b NETWORKS USA LLC, AND INMARSAT, INC.**

SES Americom, Inc. (“SES”), Intelsat Corporation (“Intelsat”), O3b Networks USA LLC (“O3b”), and Inmarsat, Inc. (“Inmarsat,” and with SES, Intelsat, and O3b, the “Satellite Parties”), by their attorneys, hereby submit comments in response to the Notice of Inquiry in the above-captioned proceeding (the “NOI”).<sup>1</sup> These comments focus on two issues. First, as part of its review of existing and future uses of the spectrum above 24 GHz, the Commission should explore the possibility of more intensive use of the 27.5-28.35 GHz band (the “Lower LMDS band”) by the Fixed-Satellite Service (“FSS”). A number of FSS satellite operators already operate in the Lower LMDS band on a secondary basis in order to meet growing demand for innovative, high-throughput Ka-band satellite services. A simple first step

---

<sup>1</sup> *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, GN Docket No. 14-177, *et al.*, Notice of Inquiry, FCC 14-154 (rel. Oct. 17, 2014).

towards more intensive use of the Lower LMDS band would be to consider according protected, co-primary status for certain types of FSS earth stations, such as the FSS gateways that are already being deployed in the band. Second, SES, Intelsat, and O3b suggest that the Commission also consider allowing use of the 25.05-25.25 GHz band (the “24 GHz band”) to support FSS services. The 24 GHz band is another spectrum segment that could help relieve demand for additional capacity for FSS networks, making it worthwhile to examine the possibility that FSS operations in the band could be introduced in a manner that is consistent with Broadcasting-Satellite Service (“BSS”) use of the band.

SES, Intelsat, O3b, and Inmarsat are members of the Satellite Industry Association (“SIA”) and strongly support the comments being submitted by SIA in this proceeding.<sup>2</sup> The SIA Comments highlight the importance and spectrum efficiency of current and planned satellite uses of bands above 24 GHz.<sup>3</sup> In order to ensure that satellite providers can continue to play their essential role in the U.S. and global telecommunications infrastructure, SIA urges the Commission to make sure that satellites have meaningful access to the spectrum resources needed to meet customer demand today and in the future.<sup>4</sup>

The Satellite Parties are commenting separately here to encourage the Commission to provide the regulatory certainty and practical flexibility required to promote the growth and development of satellite services. Specifically, SES, Intelsat, O3b, and Inmarsat ask the Commission, as part of its examination in this proceeding of possible future uses of bands

---

<sup>2</sup> Comments of the Satellite Industry Association, GN Docket No. 14-177, *et al.*, dated Jan. 15, 2014 (“SIA Comments”).

<sup>3</sup> *Id.*, Sections II-III.

<sup>4</sup> *Id.*, Section IV.

above 24 GHz, to consider allowing FSS gateway earth stations<sup>5</sup> in the Lower LMDS band to operate on a co-primary basis. Such a change is consistent with the policy rationale underlying the Commission's band plan for services in the 20/30 GHz frequency range and would serve the public interest by enabling more extensive use of a spectrum band by a service with a demonstrated need for more spectrum.

As the SIA Comments observe, a number of satellite operators including Inmarsat Global Xpress, O3b, and ViaSat have found that FSS-primary spectrum in the 20/30 GHz band is insufficient to support projected demand and have deployed facilities using the Lower LMDS band, where there is currently a secondary allocation for FSS.<sup>6</sup> In providing for a secondary FSS allocation in these frequencies, the Commission anticipated that individually licensed earth stations could successfully co-exist with terrestrial networks,<sup>7</sup> and that expectation has been borne out by experience. Terrestrial licensees are aware of the locations and operational parameters of FSS terminals, and to the Satellite Parties' knowledge, there have been no interference issues resulting from the FSS operations in the Lower LMDS frequencies.

---

<sup>5</sup> See, e.g., *Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations*, Second Report and Order, FCC 03-296, 18 FCC Rcd 25427, 25441 (2003) ("V-Band Second Order") (adopting and codifying in 47 C.F.R. § 25.202(a)(1) the following definition of gateway earth stations: "Satellite earth station facilities in this band may not be ubiquitously deployed and may not be used to serve individual consumers.").

<sup>6</sup> SIA Comments, Section III.A.2.

<sup>7</sup> See, e.g., *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*, Third Report and Order, 12 FCC Rcd 22310, 22338 (1997) (the Commission envisions that "limited FSS uplink operations, such as gateway operations" will be feasible in spectrum used by LMDS).

However, for a gateway earth station that supports large portions of a satellite network, the uncertainty of being secondary to potential future terrestrial systems deters additional FSS investment in more robust use of this band. As a result, in order to facilitate more intensive use of the Lower LMDS band, the Satellite Parties recommend that the Commission as a first step consider whether certain types of FSS applications, such as the gateway earth stations that a number of satellite operators have already installed, should be allowed to operate in the 27.5-28.35 GHz band on an individually licensed and coordinated, co-primary basis with the Fixed Service in the same band. Experience to date confirms that these kinds of earth stations can use spectrum without significantly constraining Fixed Service deployment in the same band.<sup>8</sup> Giving FSS gateways co-primary status would help meet rapidly growing demand for additional Ka-band satellite spectrum and would almost immediately lead to more extensive, efficient usage of these frequencies by satellite operators.

In addition, SES, Intelsat, and O3b request that the Commission consider allowing expanded satellite use of the 24 GHz band. That band segment is part of the feeder link spectrum identified for BSS networks.<sup>9</sup> The Commission should examine whether use of the band to support FSS systems and meet demand for additional FSS spectrum would be feasible consistent with use of the band for BSS.

---

<sup>8</sup> See, e.g., V-Band Second Order, 18 FCC Rcd at 25440, ¶ 30 (“Permitting [co-primary] satellite ‘gateways’ to be deployed at large installations or large corporate campuses without generating the types of ubiquitous, consumer-level deployments, would not defeat the designation of [fixed] wireless services as the predominant use in this band.”).

<sup>9</sup> See SIA Comments, Section III.B.

Accordingly, the Satellite Parties request that the Commission consider a co-primary allocation for FSS gateway earth stations in the Lower LMDS band. SES, Intelsat, and O3b also ask the Commission to explore the feasibility of permitting FSS use of the 24 GHz band.

Respectfully submitted,

**SES Americom, Inc.**

/s/ Nancy J. Eskenazi  
VP Legal Services, Global Regulatory  
1129 20th Street N.W., Suite 1000  
Washington, D.C. 20036

**O3b Networks USA LLC**

/s/ Suzanne Malloy  
VP, Regulatory Affairs  
900 17<sup>th</sup> Street, N.W.  
Washington, D.C. 20006

**Intelsat Corporation**

/s/ Susan Crandall  
Associate General Counsel  
7900 Tysons One Place  
McLean, VA 22102

**Inmarsat, Inc.**

/s/ Christopher J. Murphy  
Vice President Gov't Affairs  
1101 Connecticut Ave. N.W., Suite 1200  
Washington, D.C. 20036

January 15, 2015