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April 28, 2016

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Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Room TW-A325  
Washington, DC 20554

**Re: O3b Limited Notice of *Ex Parte* Communication; GN Docket No. 14-177; IB Docket Nos. 15-256 & 97-95; RM-11664; and WT Docket No. 10-112**

Dear Ms. Dortch:

On April 26, 2016, O3b Limited (“O3b”) met with Daudeline Meme, legal advisor to Commissioner Clyburn and separately met with Commissioner Pai and Brendan Carr, his legal advisor. On April 27, 2016, O3b met with Commissioner Rosenworcel and Johanna Thomas, her legal advisor. O3b’s presentations were limited to issues in the above-captioned proceedings. O3b was represented by Stewart Sanders, its Chief Technology Officer; Suzanne Malloy, its Vice President of Regulatory Affairs; and the undersigned, its counsel.

O3b explained that its non-geostationary orbit satellite system is uniquely capable telecommunications infrastructure that provides an entirely new category of telecommunications service. Its low latency, high capacity coverage can be made available temporarily or permanently in places that terrestrial infrastructure does not reach (such as areas with limited or no fiber access) and in use cases (such as on board large maritime vessels) in which terrestrial systems are not an option. O3b capacity is allowing terrestrial operators to introduce 4G/LTE services in urban and rural areas alike, accelerating both enterprise and community access to broadband connectivity.

We explained that demand for O3b’s low latency (comparable to long-haul fiber) and high capacity links has exceeded the most optimistic projections, and that O3b has already ordered additional satellites to support growing demand. O3b is the largest

provider of satellite capacity in the Pacific region. This unprecedented access to broadband capacity is powering growth in the vital tourism sector while opening new possibilities in the health and education sectors. O3b has also spurred a revolution in maritime communications. On the day O3b initiated its maritime service to a Royal Caribbean cruise ship, that one ship instantly had more bandwidth than the rest of the cruise industry combined – the *global* cruise industry. When O3b launched service to the second Royal Caribbean ship, those two ships had more capacity than all other maritime vessels combined. Without O3b's unique system these breakthroughs in connectivity were simply out of reach for these markets. We emphasized that the rapid growth in demand for innovative services like those provided by O3b is critically important to a building a robust, competitive and diverse broadband ecosystem.

Our presentation also addressed the following points:

- O3b's system cannot operate without using the 28 GHz band. The 27.6-28.4 GHz band (the "28 GHz band"), most of which overlaps with the LMDS "A" block, represents 60% of the spectrum O3b uses for uplinks. These frequencies are essential to and necessary for operation of O3b's system domestically and internationally. O3b's network operations center and two of its nine gateways are located in the United States. All the gateway facilities use, and must continue to use, all of the 28 GHz frequencies on the O3b satellites. The network operations center manages all O3b operations globally, and uses the 28 GHz band to test and integrate customer terminals for deployment. O3b's U.S. gateways interconnect traffic from all of the Americas and the Pacific.
- O3b must have the ability to plan, build and operate new site-licensed earth stations with flexibility and certainty. O3b must be able to deploy earth stations to serve new customers, to support the additional capacity of new satellites to be launched, and to continue to provide the reliability and redundancy of the services O3b provides. Satellite operators cannot rely simply on the possibility that licensees holding exclusive rights to large geographic areas will be willing to accommodate O3b's growth. Most proposals in the NPRM for "marketplace" solutions are not market solutions at all. Exclusive rights to deploy mobile networks in the most valuable geographic areas would not be awarded by a separate auction, but rather would simply be assigned to LMDS incumbents. Designating further large tracts for exclusive licensing by auction would so bias the process in favor of

terrestrial use that FSS operators could not realistically access the spectrum.<sup>1</sup> We reiterated O3b's position that exclusive geographic license areas are inappropriate for mobile service in the 28 GHz band.

- Any mobile service rules adopted must protect FSS satellites receivers in the 28 GHz band from aggregate terrestrial emissions. Referring to a technical study O3b submitted on March 24, 2016 at the request of FCC staff, we explained that relatively small numbers of terrestrial 5G transmitters could create a level of noise that would overwhelm the receivers on O3b's satellites. The FCC must not allow mobile service in the 28 GHz band absent adoption of appropriate thresholds to protect FSS receivers from the aggregate emissions of 5G.

We acknowledged the Chairman's call for industry consensus on the issues surrounding shared satellite and terrestrial use of the 28 GHz band. We stated that while some discussions are underway, engagement has been uneven. In particular, developing rules that protect satellite receivers requires significant engagement by both terrestrial and satellite interests to discuss ways to control aggregate uplink interference. O3b submitted its uplink interference study on March 24, 2016,<sup>2</sup> and has solicited feedback on that study from multiple parties. Uplink interference is an enormously complex problem and, absent serious engagement right away, it is unlikely that any solution can be developed in the near term.

Respectfully submitted,



John Hane

cc (via electronic mail):

Brendan Carr  
Daudeline Meme  
Johanna Thomas

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<sup>1</sup> Cf. Comments of O3b Limited, GN Docket No. 14-177, *et al.* (filed Jan. 28, 2016) (proposing traditional site licensing with auctions used to resolve mutual exclusivity as a last resort).

<sup>2</sup> See [Notice of Ex Parte Communication](#) of O3b Limited, GN Docket 14-177, *et al.* (filed March 24, 2016).