



November 5, 2020

VIA IBFS

Karl Kensinger, Acting Chief
Satellite Division, International Bureau
Federal Communications Commission
45 L Street, NE
Washington, DC 20554

Re: Swarm Technologies, Inc., Call Sign S3041, File Nos. SAT-LOA-20181221-00094, SAT-MOD-20200501-00040, and SAT-AMD-20200504-00041; ORBCOMM License Corp., Call Sign S2103, File Nos. SAT-MOD-20070302-00041, SAT-MOD-20070531-00076, and SAT-AMD-20071116-00161

Dear Mr. Kensinger:

ORBCOMM License Corp. (“ORBCOMM”) finds it necessary to correct the numerous misstatements and mischaracterizations presented in the most recent letter submitted by counsel to Swarm Technologies, Inc. (“Swarm”) on November 2, 2020 (the “Swarm Letter”). The Swarm Letter asserts that:

Let us begin with where ORBCOMM and Swarm agree. ORBCOMM does not dispute that its FCC satellite license requires it to vacate all frequencies outside of its primary assignments once a second U.S.-licensed NVNG MSS system begins operations, and it does not dispute that Swarm, a U.S. NVNG MSS licensee, commenced operations this past September.¹

While we do not dispute that Swarm has commenced operations, we respectfully disagree with Swarm’s other vaguely overstated characterizations of our position. To be precise, ORBCOMM agrees that *within the United States*, the 2019 Commission space segment license issued to Swarm affords Swarm ‘primary’ status in specific uplink and downlink NVNG MSS frequency segments. ORBCOMM has taken the necessary action to cease operations in the United States that could cause harmful interference to the authorized Swarm operations.

Swarm also mistakenly asserts that ORBCOMM “claims that it is entitled to an exception to the ‘general Commission policy’ requiring U.S. space station licensees to operate in

¹ Swarm Letter, at p. 1 (citation omitted).

conformance with their FCC authorizations on a global basis.”² Swarm likewise states that “[h]ad the Commission intended to create an exception to its general policy for ORBCOMM, surely it would have said something in ORBCOMM’s satellite license.”³

In making these arguments, Swarm once again inexplicably ignores the fact that, *for the Non-Voice, Non-Geostationary Mobile Satellite Service, the Commission has explicitly declined to adopt a global band-sharing plan -- indeed, the Commission “said something” in ORBCOMM’s original satellite license as well as in both of the NVNG MSS rulemakings that have been conducted to date that establish the Commission’s current NVNG MSS Rules and policies.*⁴ Having cited and quoted these decisions in our previous response, we find it *more than a little puzzling* that Swarm would claim that “ORBCOMM does not even *try* to find an example of an ‘NVNG frequency assignment’ decision that allows U.S. licensees to operate outside the scope of their FCC license overseas.”⁵ This statement in the Swarm Letter is based on the

² Swarm Letter, at p. 1.

³ Swarm Letter, at p. 2. See also, Swarm Letter, at p. 3 (“The *simple truth* is that the Commission’s NVNG MSS decisions have *always* reached U.S. licensees’ non-U.S. operations.”)(emphasis added). ORBCOMM could not agree more with this statement of fact provided by Swarm. There is absolutely no question that Commission NVNG MSS rulemaking and space segment licensing decisions have always included provisions regarding NVNG MSS operations outside of the United States, rendered in accordance with the Commission’s statutory authority pursuant to the Communications Act. For example, enforcing the national security provisions of Section 706 of the Communications Act, and the prohibitions on exclusive arrangements exclusive arrangements with other countries concerning communications to and from the United States referenced in the Swarm Letter. *Infra*, at p. 5. ***The actual simple truth, however, is that the Commission has never adopted NVNG MSS Rules or policies, and has never issued an NVNG MSS space segment license, that extend NVNG MSS space segment frequency assignment licensing decisions outside of the territory of the United States.***

⁴ *In the Matter of Application of Orbital Communications Corporation*, 9 FCC Rcd. 6476 (1994), at ¶ 15 (“Further, we will not impose a global bandsharing plan on U.S. licensees at this time. As we discussed in our Report and Order in the MSS Above 1 GHz proceeding, we do not believe it is appropriate for the United States to impose global bandsharing restrictions, which will directly impact the ability of other countries to access these LEO systems, absent indications from these countries regarding their planned use of these frequency bands.”). See also, *In the Matter of Amendment of the Commission’s Rules to Establish Rules and Policies Pertaining to a Non-Voice, Non-Geostationary Mobile-Satellite Service*, 8 FCC Rcd 8450 (1993), at ¶ 28; *In the Matter of Amendment of Part 25 of the Commission’s Rules to Establish Rules and Policies Pertaining to the Second Processing Round of the Non-Voice, Non-Geostationary Mobile Satellite Service*, 13 FCC Rcd. 9111 (1997), at ¶ 128.

⁵ Swarm Letter, at p. 2. *Ibid.*

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fallacious premise that the “scope” of ORBCOMM’s FCC space segment license frequency assignments extends outside of the United States. The Commission unambiguously has declined to extend spectrum assignments for NVNG MSS system licensees outside of the United States, and the Commission has *never modified* that clearly stated policy choice.⁶ Contrary to Swarm’s increasingly strained assertions, ORBCOMM is operating in full accordance with its FCC space segment license.

In contrast to the NVNG MSS, for the Above 1 GHz Mobile Satellite Service (“Above 1 GHz MSS”), the Commission also initially determined not to apply a global band plan, and subsequently revised that policy for that service, but only after completing a rulemaking proceeding and a proposed modification of license proceeding. Swarm relies on that modified policy for the Above 1 GHz MSS extensively,⁷ but conspicuously ignores the procedures that were necessary to change that policy for that service. The Commission has not changed its clearly stated policy of not extending NVNG MSS system spectrum assignments beyond the United States. Issuance of a letter from the Commission as Swarm has requested would be procedurally deficient as a means for the Commission to render the necessary modifications of the NVNG MSS Rules and policies and the ORBCOMM and Swarm licenses issued thereunder.⁸

⁶ Swarm also incorrectly claims, at p. 4 of the Swarm Letter that ORBCOMM’s request in a 2007 Amendment Application for authority to the extent necessary for a temporary non-conforming (not allocated) use of the 435 MHz band to conduct downlink transmissions to TT&C earth stations in Russia and Germany somehow undercuts the fact that the Commission has consistently declined to extend NVNG MSS spectrum assignments outside of the United States. The ORBCOMM amendment application referenced by Swarm (File No. SAT-AMD-20071116-00161) requested authorization to the extent necessary for short-term utilization on a non-interference basis only of spectrum in the 435 MHz band for ORBCOMM spacecraft TT&C *downlink transmissions* during the deployment and pre-operational in-orbit testing (and potentially for subsequent emergency restoration) of the ORBCOMM ‘Quick Launch’ satellites (the first ORBCOMM Next Generation spacecraft deployed prior the ORBCOMM Generation 2 satellites). ORBCOMM requested the temporary non-interference authorization because the subject frequency band was not allocated for the proposed use. In granting this authorization to operate in non-conformity with the relevant allocations, the Commission in no way altered its clearly stated policy of not extending protected spectrum assignments for NVNG MSS licensees outside of the United States.

⁷ Swarm cited the *Globalstar Licensee LLC, GUSA Licensee LLC, Iridium Constellation LLC, Iridium Satellite LLC And Iridium Carrier Services*, 23 FCC Rcd 15207 (2008) (“*Globalstar-Iridium Order*”) in the Swarm Letter, at footnotes 3, 13, 14, 15, 18, 21, 22, 24, 25 and 26.

⁸ Swarm also claims that ORBCOMM’s discussions of the difference between NVNG MSS and Above 1 GHz MSS is a “red herring.” Swarm Letter, at p. 4. In fact, these significant

Despite the baseless claim to the contrary in the Swarm Letter⁹, the necessary change to the applicable existing NVNG MSS Rules and policies and licensing decisions issued thereunder to extend NVNG MSS frequency assignment licensing decisions outside of the United States clearly requires a formal notice and comment proceeding.¹⁰

Notwithstanding the Commission's clear statements in NVNG MSS rulemaking and licensing decisions that spectrum assignments issued to NVNG MSS licensees are not to be applied outside of the United States, Swarm suggests that: "If ORBCOMM believes it has better reasons than Globalstar for the Commission to deviate from that policy, it should have raised them when it applied for its satellite license."¹¹ Swarm's claim disingenuously ignores the Commission's clear on-point decisions regarding NVNG MSS. Moreover, contrary to the assertion in the Swarm Letter, ORBCOMM could not have asked for an exception to the "general policy" enunciated in the *Globalstar-Iridium Order*, both because that decision applied only to the Above 1 GHz, and because ORBCOMM's modification application and grant of that request *pre-dated* the *Globalstar-Iridium Order*.¹²

Swarm also seeks to bolster its claim to an extra-territorial application of Commission NVNG MSS system spectrum assignment decisions by arguing:

differences between the two services – including the lack of a Commission finding in the issuance of the 2019 Swarm space segment license that the ORBCOMM and Swarm systems are not capable of co-frequency co-coverage spectrum sharing – will need to be addressed if the Commission decides to reexamine its NVNG MSS policy of not applying spectrum assignments outside of the United States. Absent such a finding, the Commission would not have the public interest justification of avoiding harmful interference that was the principal justification for its authority under Communications Act to modify its Above 1 GHz MSS Rules and policies to extend the enforceability of Above 1 GHz MSS frequency assignment licensing decisions to include worldwide regulation of spacecraft *receiver* operations. *Globalstar Licensee LLC, GUSA Licensee LLC, Iridium Constellation LLC, Iridium Satellite LLC And Iridium Carrier Services*, 23 FCC Rcd 15207 (2008) ("*Globalstar-Iridium Order*"), at ¶¶ 32-33.

⁹ Swarm Letter, at p. 3.

¹⁰ 5 U.S.C. §§ 553 and 554. *See, also, Globalstar-Iridium Order; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands*, 18 FCC Rcd 1962 (2003), at ¶¶ 261-274.

¹¹ Swarm Letter, at p. 4 (emphasis in original).

¹² The ORBCOMM modification application was filed on May 31, 2007, and that application was granted on March 21, 2008. The *Globalstar-Iridium Order* was not released until October 15, 2008.

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In the *Second Processing Round Order*, the Commission prohibited NVNG MSS licensees from pursuing exclusive service agreements in other jurisdictions, a rule that *by definition* bound what U.S. licensees can do overseas.¹³

The rule referenced by Swarm, however, was not a general limitation on conduct in those foreign jurisdictions, but rather only applied to exclusive agreements concerning communications to and from the United States, where the Commission clearly has authority. And even with respect to that limitation, the Commission recognized the authority of foreign Administrations to control NVNG MSS services within their territory:

We recognize that spectrum coordination and availability as well as market size and commercial opportunities in a particular country may limit the number of systems that can serve that country. We will not penalize the sole service provider in a particular market if spectrum and market limitations prohibit another system from entering and serving the particular market. We do not expect a United States licensed system to forego opportunities to serve markets based on the possibility that it may be the only service provider in the market.¹⁴

The Commission's recognition of the sovereignty of these foreign Administrations also undercuts Swarm's assertion that "requiring U.S. licensees to operate in conformance with their FCC licenses globally, the Commission in no way undermines other jurisdictions' ability to control the implementation of satellite service within their territories."¹⁵ The current activities within CEPT with regard to NVNG MSS clearly indicate that those Administrations, relying among other things on the International Radio Regulations, intend to continue to exercise their jurisdictional authority to regulate NVNG MSS transmission operations within their territories as they have for more than twenty years.

Finally, Swarm criticizes ORBCOMM for proposing that the parties should try to reach a sharing agreement, asserting that such a suggestion "is odd for an incumbent that has repeatedly claimed that it cannot effectively share with the Swarm system as authorized."¹⁶ But there is nothing at all inconsistent in ORBCOMM's position. As ORBCOMM has explained, the Second Processing Round sharing agreement demonstrates that multiple TDMA systems can share the

¹³ Swarm Letter, at p. 3 (emphasis in original).

¹⁴ *Policies Pertaining to the Second Processing Round of the Non-Voice, Non-Geostationary Mobile Satellite Service*, 13 FCC Rcd. 9111 (1997), at ¶ 128.

¹⁵ Swarm Letter, at p. 4.

¹⁶ Swarm Letter, at p. 5.

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uplink band.¹⁷ On the other hand, ORBCOMM has also demonstrated that Swarm's currently proposed implementation of a terrestrial-based Carrier-Sense Multiple Access control protocol with Collision Avoidance (CSMA/CA) will not prevent harmful interference to ORBCOMM, because the Swarm user terminals will only detect other NVNG MSS transmissions within a very close range of the Swarm terminal (tens of kilometers), but the ORBCOMM satellite will be receiving transmissions in a footprint spanning 5,100 kilometers, thus providing no protection against interfering transmissions.¹⁸ ORBCOMM continues to believe that it is all parties' interest to try to reach a sharing agreement (which the parties can clearly agree to globally). Moreover, as ORBCOMM explained in our previous letter, such a solution is consistent with the Commission's and CEPT's preferences.

Respectfully submitted,



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¹⁷ See, *Amendment of Part 25 of the Commission's Rules to Establish Rules and Policies Pertaining to the Second Processing Round of the Non-Voice, Non-Geostationary Mobile Satellite Service*, 13 FCC Rcd 9111, 9157, at ¶ 122 (rel. October 15, 1997).

¹⁸ This problem is demonstrated in greater detail in the record of Swarm's currently pending space segment license modification application. See, Reply of ORBCOMM Corp., File Nos. SAT-AMD-20200504-00041 & File No. SAT-MOD-20200501-00040, filed September 14, 2020, at pp. 8-12 and Attachment 1.

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