



October 29, 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”) respectfully submits this letter in response to the letter submitted by counsel to Swarm Technologies, Inc. (“Swarm”) on October 16, 2020 (the “Swarm Letter”), seeking to have the Commission “instruct” ORBCOMM regarding the extra-territorial applicability of the Commission’s licensing decisions regarding frequency assignments for the ORBCOMM and Swarm Non-Voice, Non-Geostationary Mobile Satellite Service (“NVNG MSS”) systems.<sup>1</sup> As discussed more fully below, the answer at this time to Swarm’s request is clear: the Commission’s current NVNG MSS licensing Rules and policies, as well as all applicable underlying NVNG MSS rulemaking and adjudicatory decisions, explicitly and unambiguously decline to apply or enforce NVNG MSS frequency assignment licensing decisions outside of the United States.<sup>2</sup>

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<sup>1</sup> Letter from Scott Blake Harris to Karl Kensinger, File Nos. SAT-MOD-20070302-00041, *et seq.*, October 16, 2020. *See also*, Letter from Scott Blake Harris to Walter Sonnenfeldt, File Nos. SAT-MOD-20070302-00041, *et seq.*, October 5, 2020.

<sup>2</sup> *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.



Notwithstanding the Swarm Letter's assertion of a "general Commission policy" of global applicability of all FCC satellite system frequency assignment licensing decisions,<sup>3</sup> the Commission has consistently and explicitly declined to apply its NVNG frequency assignment and band sharing decisions outside of the United States.<sup>4</sup> If Swarm wants to try to change the

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<sup>3</sup> Indeed, the Ka-Band order cited at Note 7 of the Swarm Letter recognized that Commission-directed global application of satellite band plans for NGSO satellite systems was not universal, since it referred to the non-global band plan the Commission applied to the Above 1 GHz MSS at that time. *In the Matter of 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*, 12 FCC Rcd. 22310 (Oct 15, 1997), at ¶ 68.

<sup>4</sup> ORBCOMM's participation in European Conference of Postal and Telecommunications Administrations ("CEPT") proceedings addressing consideration of the Swarm system for authorization in CEPT countries, referred to as an impetus for the "urgent" request in the Swarm Letter, is fully consistent with all applicable Commission NVNG MSS Rules policies and decisions. Nevertheless, Swarm has repeatedly mischaracterized the nature of ORBCOMM's participation in the relevant CEPT proceedings as well as its submissions in those fora. The Swarm Letter asserts that "in response to a public consultation from CEPT, ORBCOMM recently stated that the 'FCC has no jurisdiction or authority to render decisions regarding uplink frequencies' outside of the United States." Consistent with the Commission decisions with regard to NVNG MSS services and licenses, what ORBCOMM actually stated was:

Section 3.2 of Draft ECC Report 322 incorrectly claims that the recent Swarm System uplink frequency assignment licensing decisions of the FCC are somehow applicable and binding in the CEPT countries. The FCC has no jurisdiction or authority to render decisions regarding satellite uplink frequency assignments that are binding on CEPT countries, or any Administration other than the United States. ERC Decision 99(06) sets out the CEPT policies and procedures for identifying S-PCS < 1 GHz frequency assignments, and for determining the feasibility of spectrum sharing between existing systems and new system entrants. Frequency assignments approved for Harmonised Introduction of S-PCS < 1 GHz systems, are set forth in Annex 2 of ERC Decision 99(06). Concluding that that inter-system sharing is or is not feasible based on the frequency assignment decisions of the FCC is clearly not appropriate under the applicable CEPT S-PCS < 1 GHz policies.

*See, also*, Letter from Scott Blake Harris to Walter Sonnenfeldt, File Nos. SAT-MOD-20070302-00041, *et seq.*, October 5, 2020; *Consolidated Response and Opposition of Swarm Technologies, Inc.*, File Nos. SAT- MOD-20070531-00076 and SAT-AMD-20071116-00161 (filed September 1, 2020), at pp. 15-16; *Reply of ORBCOMM License Corp.*, File Nos. SAT- MOD-20070531-00076 and SAT-AMD-20071116-00161 (filed September 14, 2020), at pp. 21-22. Swarm's CEPT submissions have consistently misrepresented FCC Rules and policies by incorrectly

NVNG MSS Rules and the applicable ORBCOMM and Swarm FCC space segment license conditions, Swarm should petition to initiate the necessary proceeding where these matters can be properly considered in accordance with the Commission's Rules, the Communications Act, and the Administrative Procedures Act. The Swarm Letter does not do so – instead it inappropriately asks the Commission to instruct ORBCOMM to follow *a non-existent global bandsharing plan* – and thus is procedurally defective in this regard.

In asserting its unfounded claim that the Commission's NVNG MSS frequency assignment and spectrum sharing licensing decisions have worldwide applicability, Swarm *conspicuously* ignores the consistent service-specific NVNG MSS decisions issued by the Commission. Instead, Swarm attempts to improperly rely on other inapposite Commission decisions – primarily those issued in regards to Above 1 GHz MSS Rules and policies.<sup>5</sup> Although Swarm is correct that the Commission decided in 2008 to modify its Above 1 GHz MSS Rules and policies to extend the territorial applicability of Above 1 GHz MSS frequency assignments to include worldwide operations, the Commission only did so after conducting a rulemaking to implement this Rule change, and then a separate proceeding to modify Globalstar's license. Swarm, like Iridium did, is free to file a petition for rulemaking to propose desired changes to the Commission's NVNG MSS Rules and policies. But the “urgent” demand in the Swarm Letter seeking Commission action to simply bootstrap the Above 1 GHz MSS policies to NVNG MSS space segment licenses issued to Swarm and ORBCOMM is procedurally defective and should not be countenanced by the Commission.

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asserting as fact (which it is clearly not) that FCC NVNG MSS frequency assignment licensing decisions unquestionably have worldwide applicability. Swarm's CEPT submissions and statements during CEPT meetings have even gone so far as to disingenuously imply, contrary to the extensive underlying record in the 2018 Swarm FCC space segment application proceeding, that the separated frequency assignments for the Swarm and ORBCOMM systems resulting from the 2019 Swarm FCC space segment license were the result of an “agreement” purportedly reached between Swarm and ORBCOMM. *See, e.g., Swarm document on WI SE40\_40*, CEPT Document SE(20)INFO003, <https://www.cept.org/ecc/groups/ecc/wg-se/client/meeting-documents/?flid=27606>, September 25, 2020; *Draft ECC Report 322 (as sent for Public Consultation)*, CEPT Document SE40(20)061, Annex1, at §3.2, <https://www.cept.org/ecc/groups/ecc/wg-se/se-40/client/meeting-documents/?flid=28062>, August 27, 2020.

<sup>5</sup> *Globalstar Licensee LLC, GUSA Licensee LLC, Iridium Constellation LLC, Iridium Satellite LLC And Iridium Carrier Services*, 23 FCC Rcd 15207 (2008) (“*Globalstar-Iridium Order*”); *Globalstar License LLC and Iridium Constellation LLC*, Order Proposing Modifications, 23 FCC Rcd. 7984 (2008); *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).

Moreover, any Commission proceeding considering modification of the Commission's consistently rendered decisions not to apply or enforce NVNG MSS frequency assignment licensing decisions outside of the United States would have to take into account the significant differences between the NVNG MSS and the Above 1 GHz MSS. Among other things, the record in the Above 1 GHz MSS proceedings established that co-frequency co-coverage sharing between the Globalstar (CDMA) and Iridium (TDMA) systems was not possible.<sup>6</sup> In contrast, the Commission did not consider or render any finding on the feasibility of co-frequency co-coverage sharing between the Swarm and ORBCOMM systems in its decision to issue the 2019 Swarm space segment license. And, unlike the clear finding that sharing was not possible between the Iridium and Globalstar Above 1 GHz MSS systems, the Commission determined in the NVNG MSS Second Processing Round rulemaking that TDMA NVNG MSS systems (like the ORBCOMM and Swarm systems) using mutually agreed active interference avoidance technology implementations can share mobile earth station uplink spectrum on co-frequency co-coverage basis among as many as three (3) NVNG MSS constellations.<sup>7</sup> Indeed, in the context of the Swarm space segment licensing proceedings, both ORBCOMM and Swarm have stated that that such sharing should be possible.<sup>8</sup>

Another significant difference between the Above 1 GHz MSS and the NVNG MSS band plans is the fact that the Iridium system operates on a bi-directional basis in the Above 1 GHz MSS uplink spectrum. Thus, the Commission was on firmer grounds in asserting its authority outside the United States in the Above 1 GHz MSS context, because the cited ITU Radio

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<sup>6</sup> *Globalstar-Iridium Order*, at ¶ 33: (“The Above 1 GHz MSS applicants recognized over 15 years ago that the CDMA and TDMA protocols presented significant risks of harmful interference to each other. This means that a CDMA and a TDMA system cannot provide co-frequency, co-coverage service, particularly at maximum system loading, without causing each other mutually harmful interference. For this reason, the Commission adopted a band plan in 1994 that assigned CDMA and TDMA systems to discrete portions of the Above 1 GHz MSS spectrum.”). The Commission cited the public interest need to preclude the harmful interference that would result from co-frequency co-coverage spectrum sharing between the Globalstar and Iridium systems as 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 operations. *Globalstar-Iridium Order*, at ¶¶ 32-33.

<sup>7</sup> *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).

<sup>8</sup> *See, e.g., Reply of ORBCOMM License Corp.*, filed September 14, 2020 at pp. 16-17; *Consolidated Response and Opposition of Swarm Technologies, Inc.*, filed September 1, 2020, at pp. 7-9 and 11.

Regulation to give it that authority – 18.1 – imposes obligations on the Commission as the licensing Administration for *transmissions*.<sup>9</sup> The Commission’s authority to regulate receivers, in contrast, is less expansive.<sup>10</sup> And any Commission reliance on the ITU obligations to prevent interference is misplaced,<sup>11</sup> because receivers do not cause interference. In claiming authority to impose a global band plan in the *Globalstar-Iridium Order*, the Commission posited a hypothetical where neighboring countries could adopt differing band plans, leading to chaos.<sup>12</sup> However, that hypothetical situation can be addressed by the licensing Administrations for the transmitting earth stations coordinating directly with each other – or dealing with transmissions on a regional basis, which is the approach with CEPT. Either of those approaches better accommodates the sovereignty of the affected Administrations and comports with ITU Radio Regulations than would the Commission unilaterally imposing a global band plan for the NVNG MSS. ***In fact, during the most recent CEPT FM44 meeting (FM44#60 October 6-8, 2020), participating CEPT Administrations discussed questions regarding need for segmentation of***

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<sup>9</sup> *Globalstar-Iridium Order*, at n. 85. Radio Regulation 18.1 provides (emphasis added):

*No transmitting station* may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject (however, see Nos. **18.2, 18.8** and **18.11**).

<sup>10</sup> The Commission issued a Notice of Inquiry in 2003 to potentially adopt receiver performance standards. *Interference Immunity Performance Specifications for Radio Receivers*, Notice of Inquiry, 18 FCC Rcd 6039 (2003). In that Notice of Inquiry, the Commission asked whether it had authority to regulate receivers. *Ibid*, at ¶ 22. In response, several commenters indicated that the Commission lacks such authority. See, e.g., Comments of AT&T Wireless Services filed July 21, 2003, at p. 15 (citations omitted):

None of the provisions cited in the *NOI* expressly authorizes the Commission to regulate receivers; instead the provisions focus on the regulation of transmission or emission of radiofrequency energy. This is not a mere oversight, as the Act’s legislative history confirms Congress’ intent, dating back to the Radio Act of 1927 and carried forward into the Communications Act, that such authority is not implicit in the statute.

*See also*, Consumer Electronics Association Comments, filed July 21, 2013, at pp. 11-13. The Commission subsequently terminated the Notice of Inquiry proceeding without adopting a Notice of Proposed Rulemaking. *Interference Immunity Performance Specifications for Radio Receivers*, 22 FCC Rcd 8941 (2007).

<sup>11</sup> *Globalstar-Iridium Order*, at n. 86.

<sup>12</sup> *Globalstar-Iridium Order*, at ¶ 35.

***ORBCOMM and Swarm system mobile earth station uplink frequency assignments in CEPT countries, noting that co-frequency co-coverage operations of the ORBCOMM and Swarm systems should be possible, that segmenting uplinks would be contrary to existing national authorizations in a number of CEPT countries, could disrupt existing deployments, could preclude entry by additional MSS systems, and would be a highly inefficient use of the limited available VHF-Band MSS uplink spectrum in the CEPT countries.***

ORBCOMM recognizes the difficulties and challenges inherent to introducing a new NVNG MSS system. However, the request in the Swarm Letter is a procedurally defective effort by Swarm to address a situation that is by no means new – *but apparently only recently discovered by Swarm* – by illegitimately attempting to bootstrap inapposite Commission decisions in other satellite services that the Commission has *never* adopted for NVNG MSS licensees. The Commission’s relevant underlying NVNG MSS decisions were in place for years prior to Swarm’s filing of its application for NVNG MSS space segment authorization in 2018. Swarm’s 2019 space segment license was issued subject to these Rules and policies, as were all ORBCOMM space segment authorizations issued to date by the Commission under Call Sign S2103. Swarm could have sought to modify the Commission’s Rules and policies to expand the applicability of NVNG MSS frequency assignments beyond the United States when it filed its space segment application, or it could have sought reconsideration of its 2019 space segment license, but it failed to do so. Accordingly, as is the case where these matters have been addressed in the context of Commission Rules for other satellite services, any change to the applicable existing NVNG MSS Rules and policies and licensing decisions issued thereunder requires a formal notice and comment proceeding.<sup>13</sup>

Finally, we observe that, as a matter of longstanding policy, the Commission has routinely relied on system operators to address and resolve spectrum sharing matters by mutual agreement, with Commission intervention only considered as a measure of last resort.<sup>14</sup> The CEPT Administrations have likewise made clear that they would prefer that the parties

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<sup>13</sup> 5 U.S.C. §§ 553 and 554. *See also, Globalstar Licensee LLC, GUSA Licensee LLC, Iridium Constellation LLC, Iridium Satellite LLC And Iridium Carrier Services*, 23 FCC Rcd 7984 (2008); *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.

<sup>14</sup> *See, e.g., Globalstar-Iridium Order*, at n. 89 (“The Commission has consistently stated that if the parties cannot resolve their coordination differences among themselves, the Commission will dictate a solution.”).

themselves agree on a sharing plan.<sup>15</sup> ORBCOMM has consistently signaled its readiness to engage in good-faith with Swarm to resolve spectrum sharing matters,<sup>16</sup> and welcomed the first such discussions, albeit very preliminary in nature, that Swarm finally commenced just last month. We continue to believe that both parties are better positioned to develop a workable sharing plan, rather than continuing to trigger lengthy and resource-intensive proceedings at the Commission and before regulatory authorities elsewhere throughout the world.

Respectfully submitted,



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<sup>15</sup> See, e.g., *WG FM Liaison Statement to WG SE With Guidance for Studies on MSS Below 1 GHz*, CEPT Document FM(20)164Annex17, <https://www.cept.org/ecc/groups/ecc/wg-fm/client/meeting-documents/?flid=28035>, October 28, 2020.

<sup>16</sup> See, e.g., *ORBCOMM Petition to Dismiss, Deny or Hold in Abeyance*, filed April 1, 2019, at p. 6; *ORBCOMM Petition to Dismiss or Deny*, filed August 17, 2020, at pp. 6-7.