

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
SWARM TECHNOLOGIES INC.)	
)	
Application to Modify the Authorization for the Swarm NGSO Satellite System)	File Nos. SAT-MOD-20200501-00040 SAT-AMD-20200504-00041
)	
Amendment to Application to Modify the Authorization for the Swarm NGSO Satellite System)	Call Sign S3041
)	

COMMENTS OF MYRIOTA PTY. LTD.

Myriota Pty. Ltd. (“Myriota”) hereby comments on the above-captioned application and amendment thereto¹ filed by Swarm Technologies, Inc. (“Swarm”) to modify its license to operate a non-voice, non-geostationary (“NVNG”) satellite system in the mobile-satellite service (“MSS”) in the 137-138 MHz (space-to-Earth) and 148-150.5 MHz (Earth-to-space) bands (the “NVNG VHF Bands”).² Myriota has a strong interest in the *Swarm VHF Modification*, as Myriota is the only other applicant in a processing round initiated for the NVNG VHF Bands.³

¹ See Swarm Technologies, Inc., File No. SAT-MOD-20200501-00040 (filed May 1, 2020) (the “*Modification*”); and Swarm Technologies, Inc., File No. SAT-AMD-20200504-00041 (filed May 4, 2020) (the “*Amendment*”) (together the “*Swarm VHF Modification*”).

² See Swarm Technologies, Inc., *Application for Authority to Deploy and Operate a Non-Voice, Non-Geostationary Lower Earth Orbit Satellite System in the Mobile-Satellite Services*, Memorandum Opinion, Order and Authorization, File No. SAT-LOA-20181221-00094 (rel. Oct. 17, 2019) (“*Swarm VHF Order*”); see also Swarm Technologies, Inc., File No. SAT-LOA-20181221-00094 (filed Dec. 21, 2018) (“*Swarm VHF Application*”).

³ See Public Notice, Myriota Pty. Ltd., Petition Accepted for Filing, Cut-off Established for Additional NVNG MSS Applications or Petitions for Operations in the 137-138 MHz and 148-150.05 MHz Bands, IBFS File No. SAT-PDR20191118-00135, DA 20-238 (rel. Mar. 5, 2020) (“*VHF Processing Round Public Notice*”) (including Swarm’s authorized VHF application in the processing round “for the purposes of any modifications to the Swarm authorization resulting from consideration of the lead and competing applications in this processing round.”).

While the *Swarm VHF Modification* requests access to operate across the full NVNG VHF bands,⁴ Swarm indicates only that it will coordinate with ORBCOMM regarding the request for new frequencies without acknowledging the need to coordinate with Myriota as the only other applicant in the processing ground. Swarm and Myriota would operate in the NVNG VHF Bands on an equal basis under the Commission’s rules and Swarm’s license, as modified, should acknowledge its coordination obligation with Myriota.

Nonetheless, Myriota supports Swarm’s assertion that frequencies assigned to ORBCOMM were intended to be shared with other NVNG MSS systems and, therefore, ORBCOMM would be required to coordinate with both Myriota and Swarm. The Commission should require Swarm, Myriota, and ORBCOMM to develop a new sharing arrangement in the context of that coordination to maximize the use of the extremely limited NVNG VHF Bands.

A. MYRIOTA HAS EQUAL STATUS TO SWARM AS A LEAD APPLICATION

As an initial matter, both Swarm and Myriota are lead applications in the current processing round and will operate with equal authority in the NVNG VHF Bands. In initiating the processing round, the Commission stated “both Myriota’s and Swarm Technologies’ applications are considered lead applications in this processing round.”⁵ This is consistent with the Commission’s reasoning in the *Swarm VHF Order* that “granting Swarm’s application before any possible future applications for the same frequencies does not confer on Swarm a higher status with respect to later authorized systems.”⁶ Thus, both Swarm and Myriota are co-equal applicants in the processing round.

⁴ See *Amendment* at 4-5.

⁵ See *VHF Processing Round Public Notice*.

⁶ See *Swarm VHF Order* at ¶ 17.

The Commission may also require applicants to coordinate their frequency usage with *all affected parties*. Specifically,

“[a]pplicants for authority to establish non-voice, non-geostationary mobile-satellite service systems are encouraged to coordinate their proposed frequency usage with existing permittees and licensees ... whose facilities could be affected by the new proposal in terms of frequency interference or restricted system capacity. All affected applicants, permittees, and licensees shall, at the direction of the Commission, cooperate fully and make every reasonable effort to resolve technical problems and conflicts that may inhibit effective and efficient use of the radio spectrum[.]”⁷

Consistent with this rule, Swarm previously asserted that it would coordinate with or otherwise accommodate future operators.⁸ Swarm stated that, “should the frequencies identified by new entrants overlap with Swarm’s, Swarm will work to coordinate in good faith with such entrants, consistent with the requirements of Section 25.142(b)(3).”⁹ Swarm must coordinate with other NVNG VHF operators in the processing round to ensure the applicants may share the band or otherwise split the spectrum.¹⁰ The changes requested in the *Swarm VHF Modification* may increase the potential for interference to other operators sharing the NVNG VHF Bands, making

⁷ 47 C.F.R. § 25.142(b)(3). The Commission has exercised this authority under similar circumstances. *See, e.g.,* Hiber Inc., *Petition for Declaratory Ruling to Access U.S. Market Using the Hiberband Low-Earth Orbit System*, Order and Declaratory ruling, File No. SAT-PDR-20180910-00069 (rel. May 6, 2020) at ¶ 11 (noting that Hiber “must coordinate with other entities in the processing round licensed or granted U.S. market access for this spectrum.”); *see also* Myriota Pty. Ltd., *Petition for Declaratory ruling Granting Access to the U.S. Market for Non-Voice, Non-Geostationary Satellite System*, Order and Declaratory Ruling, File No. SAT-PDR-20190328-00020 (rel. May 29, 2020) at ¶ 13.

⁸ *See Swarm VHF Application*, Narrative at 35 (noting that “the Little LEO bands were always intended to support additional space communication networks and ... Swarm’s proposed network leav[es] ample spectrum for a future entrant to join ORBCOMM and Swarm”) (footnotes omitted).

⁹ *See Swarm Technologies, Inc., Consolidated Opposition and Response*, File No. Sat-LOA-20181221-00094, at 21-22 (filed Apr. 15, 2019) (“*Swarm Opposition*”). In granting Swarm’s VHF application, the Commission also noted that “Swarm asserts that its system is capable of sharing with future networks in a variety of ways.” *See Swarm VHF Order* at ¶ 17.

¹⁰ *See* 47 C.F.R. § 25.157 (if the applicants cannot operate in shared spectrum the processing round procedure employs frequency band segmentation to assign spectrum among operators).

coordination essential.¹¹ Thus, Swarm must coordinate with other operators in the processing round seeking to access the same frequencies.

For its part, Myriota has demonstrated that its system has the ability to share spectrum and has expressed its willingness to coordinate its operation in the NVNG VHF Bands with ORBCOMM and Swarm.¹² Both Swarm and Myriota should pursue good faith coordination to ensure that the NVNG VHF Bands are put to their most efficient use.

B. FREQUENCIES LICENSED TO ORBCOMM SHOULD BE SHARED WITH PROCESSING ROUND APPLICANTS

Myriota agrees with Swarm that frequencies assigned to ORBCOMM on a primary basis were intended to be shared with other NVNG MSS systems. Swarm states that “[f]requencies assigned to ORBCOMM on a primary basis were always intended to be shared with other NVNG MSS systems, and the Commission’s existing rules explicitly require ORBCOMM to coordinate with new systems pursuant to Section 25.142(b)(3).”¹³ As discussed above, this provision empowers the Commission to require all affected parties, *including existing licensees*, to coordinate with applicants. Myriota is willing to coordinate its proposed frequency usage with ORBCOMM, consistent with the Commission’s rules, to ensure the most efficient use of the limited NVNG VHF Bands.

The Commission’s NVNG MSS precedent supports a finding that ORBCOMM’s authorized frequencies are subject to sharing with other authorized NVNG systems in the NVNG VHF Bands. In authorizing Swarm’s system, the Commission rejected ORBCOMM’s

¹¹ *See Amendment*, Narrative at 4-5.

¹² *See Myriota Pty. Ltd., Petition for Declaratory Ruling to Access the U.S. Market in Non-Voice, Non-Geostationary (“NVNG”) Satellite System in the 137-138 MHz and 148-150.05 MHz Bands*, File No. SAT-LOI-20191118-00135 (filed Nov. 18, 2019) (“*Myriota VHF Petition*”), Narrative at 19.

¹³ *Amendment*, Narrative at 29.

contention that the band plan created over 20 years ago in the NVNG MSS *Second Processing Round Order* applied to future applicants.¹⁴ Moreover, the Commission's authorization of ORBCOMM permitted later access to those frequencies which were intended to be shared with other NVNG MSS operators.¹⁵ Thus, ORBCOMM has not been granted exclusive access to the NVNG VHF Bands, but instead must share the spectrum consistent with the Commission's rules and precedent.

As discussed in both Myriota's and Swarm's applications, current technologies and system designs can operate harmoniously, sharing all frequencies on an equitable basis in the VHF bands in which ORBCOMM currently operates. Myriota's minimally disruptive operating characteristics will enable an equitable coordination arrangement between the three operators which ensures that the utility of spectrum is maximized. Swarm and Myriota can share spectrum with ORBCOMM without creating harmful interference and disrupting ORBCOMM's services.

Accordingly, new sharing arrangements should be implemented in the NVNG VHF Bands through good faith coordination between the operators to ensure an equitable and efficient operating environment, consistent with the Commission's policy goal to ensure the most efficient use of spectrum resources.¹⁶

¹⁴ See *Swarm VHF Order* at ¶ 14 (citing *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*, Report and Order, 13 FCC Rcd 9111, 9117 (1997) ("Second Processing Round Order").

¹⁵ See *Myriota VHF Petition*, Narrative at 17-18 (citing ORBCOMM License Corp., *Application For Authority to Modify its Non-Voice, Non-Geostationary Satellite System License (S2103) to Launch a Next-Generation System*, File No. SAT-MOD-20070531-00076, at 24-25 (filed May 31, 2007) ("ORBCOMM Modification") and ORBCOMM License Corp., *For Authority to Modify its Non-Voice, Non-Geostationary Satellite System*, Order and Authorization, DA Docket No. 08-633, ¶¶ 22-23 (rel. Mar. 2, 2008) ("2008 ORBCOMM Order").

¹⁶ See *Amendment of the Commission's Space Station Licensing Rules and Policies*, 18 FCC Rcd 10760, ¶ 7 (2003).

C. CONCLUSION

For the foregoing reasons, Swarm should be required to coordinate with Myriota, and ORBCOMM should be required to coordinate with both Myriota and Swarm, in order to implement a new sharing plan in the NVNG VHF Bands.

Respectfully submitted,

MYRIOTA PTY. LTD.

A handwritten signature in blue ink, appearing to read "Eric Graham", is written over a light blue circular stamp.

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CERTIFICATE OF SERVICE

I, Jennifer White, do hereby certify that on August 17, 2020, I served a true and correct copy of these Comments of Myriota Pty. Ltd. by email to the following:

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