

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

In the Matter of)	
)	
SWARM TECHNOLOGIES INC.)	File No. SAT-PDR-20200228-00021
)	
Petition for Declaratory Ruling to)	Call Sign S3064
Access the U.S. Market using)	
NVNG UHF MSS Spectrum)	

REPLY OF MYRIOTA PTY. LTD.

Myriota Pty. Ltd. (“Myriota”) hereby replies to the Consolidated Opposition and Response filed by Swarm Technologies, Inc. (“Swarm”) to petitions and comments on its petition for declaratory ruling to access the U.S. market using a non-voice, non-geostationary (“NVNG”) ultra-high frequency (“UHF”) mobile-satellite system.¹ Myriota was one of three processing-round participants that responded to the *Swarm Petition* raising concerns about Swarm’s request for a waiver of the Commission’s processing-round rules under Section 25.155(b).²

The information set forth in the *Swarm Petition* and *Swarm Opposition* does not meet the high bar for a waiver of the Commission’s processing-round rules, and the rationale provided in those filings would make the Commission’s processing-round procedures essentially irrelevant. Furthermore, the *Swarm Opposition* fails to address the shortcomings in the *Swarm Petition*. Accordingly, the Commission should defer consideration of the *Swarm Petition* until coordination discussions in the current processing round have concluded.

¹ Swarm Technologies, Inc., *Consolidated Opposition and Response of Swarm Technologies*, File No. SAT-PDR-20200228-00021 (filed June 1, 2020) (“*Swarm Opposition*”); Swarm Technologies, Inc., *Petition for Declaratory Ruling to Access the U.S. Market using NVNG UHF MSS Spectrum*, File No. SAT-PDR-20200228-00021 (filed Feb. 28, 2020) (“*Swarm Petition*”).

² Myriota Pty. Ltd., *Petition to Defer and Comments*, File No. SAT-PDR-20200228-00021 (filed May 18, 2020) (“*Myriota Petition*”).

I. DISCUSSION

A. The Commission Should Reject Swarm's Attempts to Circumvent its Rules and to Re-Open the Processing Round.

The *Swarm Petition* does not demonstrate good cause for waiver of the Commission's processing-round rules. A request for waiver can meet this high standard only by demonstrating that: (i) the requested relief will not undermine the policy objectives of the rule; and (ii) the application of the rule in a particular instance would be inconsistent with the public interest.³ The *Swarm Petition* did not meet either of these requirements and the *Swarm Opposition* does not remedy these shortcomings. Accordingly, the Commission should reject Swarm's attempt to re-open the processing round.

1. *Granting the requested waiver would undermine the objectives and underlying policy of the rule.*

Permitting Swarm to enter a closed and nearly completed processing round on an equal basis with current participants would undermine the Commission's stated processing-round objectives which promote the public interest. Processing-round procedures exist to "ensure orderliness, expedition and finality in the licensing process."⁴ These principles serve the Commission's critical public interest objectives including "fairness among applicants and permit[ting] the rapid dispatch of Commission business."⁵ On this basis, the Commission has previously rejected requests to reopen closed processing rounds which would have allowed late-filed applications after a cut-off notice was issued.⁶ Swarm cites no precedent which would

³ See *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

⁴ *Echostar Satellite Corp.*, 16 FCC Rcd 14300, ¶ 4 (2001) ("*Echostar Waiver Order*"), recon. denied, 17 FCC Rcd 8305 (2002).

⁵ *Id.* at ¶ 5.

⁶ See *Myriota Petition* at 3 (citing *Echostar Waiver Order*); see also FCC Public Notice, Cut-off Established for Additional NGSO FSS Applications or Petitions for Operations in the 10.7-12.7 GHz,

permit it to enter this closed processing round, and its attempts to distinguish *Echostar* from the current proceedings fall flat.⁷

Swarm has not explained why it did not file a timely application despite adequate notice of the NVNG UHF processing round.⁸ The Public Notice initiating the processing round states that petitions filed after October 15, 2019 “may not be entitled to shared use of this spectrum with equal status with respect to any grant of application or petitions filed prior to the cut-off date.”⁹ Without sufficient explanation from Swarm, the Commission lacks a basis on which to consider upsetting the orderliness and finality of the processing round for the other participants and undermining the policy objective of its rules by granting the requested waiver.¹⁰

Accordingly, Swarm has not met the high burden of showing that a waiver is appropriate.

If the Commission were to waive the cut-off deadline and include Swarm in the current NVNG UHF processing round, it would undermine the rule and disrupt the reasonable expectations of the three processing-round participants that submitted timely filings. Inserting a new entrant into the processing round at this late stage, especially given the Commission’s

12.75-13.25 GHz, 13.8-14.5 GHz, 17.7-18.6 GHz, 18.8-20.2 GHz, and 27.5-30 GHz Bands, DA 20-325, Report No. SPB-279 (rel. Mar. 24, 2020) (opening a new processing round for applications which were filed “outside of the filing deadlines established for prior processing rounds”); *see also* LEOSat Corp., *Authority to Construct a Low-Earth Orbit Domestic Satellite System*, Memorandum Opinion and Order, 8 FCC Rcd 668 (1993) (denying request for waiver of fee processing requirements and confirming the validity of cut-off deadlines for processing rounds to avoid last minute filings which delay Commission action and impede availability of new services to the U.S. public).

⁷ *See Echostar Waiver Order*. Where the processing round has meaningfully progressed, as it had in both *Echostar* and the current UHF processing round, the untimely application will unbalance fairness among participants and delay the progress of the processing round. *Id.* at ¶ 5.

⁸ *See generally Swarm Petition; Swarm Opposition*. Swarm has disregarded the Commission’s rules and should not be rewarded for doing so.

⁹ *See* FCC Public Notice, Myriota Pty. Ltd. Petition Accepted for Filing, File No. SAT-PDR-20190328-00020; Cut-off Established for Additional NVNG MSS Applications or Petitions for Operations in the 399.9-400.05 MHz and 400.15-401 MHz Bands, DA 19-779, Report No. SPB-277 (rel. Aug. 15, 2019) (“*Public Notice*”).

¹⁰ *See WAIT Radio*, 418 F.2d 1153.

“coordinate or split” spectrum access requirements,¹¹ would place timely filed applicants at a severe competitive disadvantage. A late-filed entrant could delay the coordination process to extract more favorable terms from the processing-round participants and claim an equal share of the extremely limited UHF uplink spectrum¹² if the parties fail to coordinate. This would result in *a loss of 25 percent of available uplink spectrum* for processing-round participants. This plainly would be prejudicial to the participants who complied with the Commission’s rules and would have the effect of disrupting the processing round, limiting the ability of operators to roll out their services to the U.S. public, and threatening additional investment.

The spectrum in the uplink band is already constrained with three operators. The Doppler shift for this uplink band can be approximately ± 10 kHz,¹³ which is significant relative to the limited bandwidth to be shared. This may require some systems to implement guard bands that limit the usable spectrum and, therefore, increase the percentage loss of usable spectrum to processing-round participants. It may also limit the number of operators that can reasonably expect to use the band.

Finally, Swarm mistakenly interprets the Commission’s requirement that processing-round participants must coordinate with government entities after receiving a grant as a rule that permits late entrants to disregard the filing window and enter the processing round after the cut-off deadline.¹⁴ It is inaccurate to suggest that, because processing-round participants must

¹¹ See 47 C.F.R. § 25.157(e); 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 (granted May. 29, 2020) at ¶ 27.

¹² Only 150 kHz are allocated to UHF Mobile Satellite Service (399.9-400.05 MHz), of which 30 kHz (400.02-400.05 MHz) is significantly encumbered by high-power TT&C operations.

¹³ Based on an NGSO satellite at 500 km altitude (travelling at 7.6 km/s), and a carrier frequency of 400 MHz.

¹⁴ See *Swarm Opposition* at 2.

coordinate with government entities, they must also coordinate with all late-filed parties in a processing round and applications should be accepted until the coordination with government entities is completed. This interpretation would create a potentially endless processing round that eliminates any certainty otherwise provided to participants who file within the established window.

2. *Granting the requested waiver would be inconsistent with the public interest.*

It would be contrary to the public interest to grant Swarm's waiver request. Swarm's generic assertion of public policy benefits from a new technology can be made by any future applicant at any time and is not sufficient to meet the Commission's high bar for waiver. Given the unanswered concerns regarding Swarm's system and the delay it would cause to all other participants, the public interest actually requires the opposite of Swarm's request: the Commission should apply its processing-round cut-off rule as written.

The claim that it would be "punitive" to deny Swarm's waiver request is also unfounded. Swarm acknowledges that the FCC "will almost certainly meet" its goal of acting on all current processing-round applications within the year. After this, it should not take a significant additional period of time for the Commission to initiate another processing round, if warranted.

Accordingly, the Commission should affirm the current processing round and, if appropriate, open a subsequent processing round where Swarm and other interested parties have an opportunity to demonstrate their ability to co-exist with prior-round licensees. To do otherwise would be an open invitation to all NGSO system operators to file applications at any time after the close of a processing round, eliminating the regulatory certainty afforded by the processing-round system. This approach and resulting regulatory certainty serve the public

interest and are consistent with the Commission’s intent when it adopted its processing-round rules.

B. Swarm Fails to Address Shortcomings in its Petition.

Swarm has yet to provide clarity or support for its assertion that it is “willing to operate on a non-interference basis with other users.”¹⁵ Swarm is required to provide the Commission with technical demonstrations showing that its operations will not cause harmful interference to authorized participants, but it will be difficult for Swarm to make this showing until the current processing-round coordination process is complete. Myriota has designed its NVNG UHF system to achieve a high degree of flexibility and spectral efficiency in order to facilitate frequency sharing, however this does not mean that its system is prepared to accommodate all comers on an equal basis well after the processing round has closed. Such a requirement would be inconsistent with Commission precedent and the requirements of this processing round.¹⁶

Swarm has also not explained how its Carrier Sense Multiple Access and Collision Avoidance (“CSMA/CA”) protocol will avoid uplink interference in the 399.9-400.05 MHz (earth-to-space) band, making no reference to uplink interference at all.¹⁷ Swarm cannot guarantee uplink interference will not occur and it remains unclear if Swarm’s entry into the band can be accommodated.

The expectation that systems will be able to share the band does not open the door for late filers to join this closed processing round and operate on an equal basis. In order to integrate new entrants, the spectrum environment must be settled so that the new entrant can demonstrate

¹⁵ See *Swarm Petition* at 34.

¹⁶ See *Public Notice*.

¹⁷ See *Swarm Opposition*.

they will not cause harmful interference to authorized systems. Here, that process cannot begin until after the conclusion of coordination discussions among processing-round participants who filed applications in accordance with the Commission's rules.

II. CONCLUSION

Swarm has neither met the Commission's high bar for waiver of the processing-round rules nor clearly defined its operational capabilities to prevent harmful interference to other NVNG UHF operators. To ensure that certainty and efficiency of the Commission's process is maintained, the Commission should consider Swarm's application following the completion of coordination among current processing-round participants.

Respectfully submitted,

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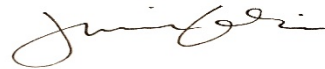
CERTIFICATE OF SERVICE

I, Jennifer White, do hereby certify that on June 11, 2020, I served a true and correct copy of this Reply of Myriota Pty. Ltd. by electronic mail on the following:

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