



ORBCOMM Response - FCC Part 5 Application File No. 0976-EX-ST-2018 Swarm Technologies, Inc.

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To: Sara Spangelo <sara@swarm-technologies.com>

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Ms. Spangelo:

Please send a reply E-Mail to sonnenfeldt.walter@orbcomm.com to confirm that you have received this message and attachment.

This is in response to the request of Swarm Technologies, Inc. ("Swarm") for ORBCOMM's consent to the proposed FCC special temporary experimental use of VHF spectrum in the 137-138 MHz band in relation to the pending Swarm FCC Experimental Special Temporary Authority License Application (File No. 0976-EX-ST-2018, as amended on 1 August 2018, the "Application").

ORBCOMM understands that Swarm proposes FCC Rule Part 5 Experimental launch and operation of three (3) non-geostationary spacecraft to be utilized in conjunction with no more than two (2) associated earth stations, entailing use of one (1) bi-directional (uplink and downlink) 62.5 kHz channel centered at 137.95 MHz. We understand further that the proposed bi-directional single channel is to be operated using narrowband modulation with peak ERP power of 0.2 watts for both uplink and downlink transmissions. We also are relying on the information provided in the Application and your associated correspondence with us stating that the program of experimentation proposed in the Application will be conducted in full accordance with the technical parameters specified in the Application (as amended as of 1 August 2018 – see attached Amended FCC Form 442), and in full accordance with all applicable FCC Rules and policies, including but not limited to, Part 5 of the FCC Rules, and the out of band and spurious emissions limits set forth in Part 25 of the FCC Rules.

Based on the information stated above, ORBCOMM has no objection to grant of the Application to permit Swarm to conduct its proposed program of experimentation on a non-protected non-interference basis using the proposed above-described single bi-directional channel for three (3) non-geostationary spacecraft and no more than two (2) earth stations in accordance with Part 5 of the FCC's Rules.

We must underscore, however, that ORBCOMM's consent to temporary non-interference FCC Part 5 experimental use of any spectrum must in no way be construed as ORBCOMM's consent to coordination of shared use of spectrum under any other FCC Experimental license, or any other authorization regime (including but not limited to, authorization of spectrum use under Part 25 of the FCC Rules, international coordination of spectrum by the United States, or authorization for use of spectrum in any country other than the United States). We also must emphasize that ORBCOMM's consent to temporary non-interference FCC Part 5 experimental use of any spectrum is conditioned upon the spacecraft that Swarm proposes to launch and operate in the Application not being used for commercial operations of any kind by Swarm or any other party in any location in the world. Should ORBCOMM become aware that any of the above-stated conditions of its consent are not abided by or that the program of experimentation is otherwise not in accordance with Part 5 of the Commission's Rules, ORBCOMM reserves the right to revoke its consent and pursue whatever measures are necessary to resolve any such matters.

ORBCOMM has no other comments or objections to the Application at this time.

Best Regards,

Walter Sonnenfeldt

Vice President, Regulatory Affairs

ORBCOMM Inc.

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