September 14, 2016

**Via Electronic Filing (IBFS)**

Jose Albuquerque, Chief
Satellite Division, International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: License Application of Spire Global, Inc.
File No. SAT-LOA-20151123-00078

Dear Mr. Albuquerque:

We are pleased to inform you that, in connection with the above-referenced license application of Spire Global, Inc. ("Spire") seeking a satellite authorization (the "Spire Application"), ORBCOMM License Corp. ("ORBCOMM") and Spire have reached agreement (the "Agreement") concerning measures they will undertake to mitigate the risk of in-orbit collisions between the Spire satellite system (FCC Call Sign S2946) and the ORBCOMM satellite system (FCC Call Sign S2103) and to minimize the effect on operations of their respective satellite systems with regards to any related conjunction alerts, as detailed in this letter.

Specifically, pursuant to the Agreement, unless Spire applies for and obtains additional FCC authority, which would be subject to the FCC's public notice and comment requirements prior to grant, Spire shall not launch or operate any satellite under its satellite authorization (FCC Call Sign S2946) in an orbit[1] that intersects with the FCC-authorized 715 km target orbital altitude of the ORBCOMM Generation 2 ("OG2") satellites,[2] except for the eight (8) satellites (the "SHERPA Lemur-2" satellites) manifested on the Spaceflight, Inc. SHERPA secondary payload mission for deployment into a 450 x 720 km 98 degree inclined elliptical orbit on the SpaceX Falcon 9 Formosat-5 launch. By a separate submission to be filed concurrently with the submission of this executed Agreement, ORBCOMM is withdrawing its Petition to Dismiss, Deny, or Hold in Abeyance the Spire Application, thereby removing its objection to the grant of the Spire Application.[3]

Additionally, pursuant to the Agreement, to minimize the occurrence of "false positive" conjunction alerts, and to maximize the effectiveness of any collision avoidance maneuvers that may need be performed, Spire and ORBCOMM shall use reasonable best efforts to designate respective contact representatives and contact procedures to provide each other global navigation

[1] The maximum apogee for a Lemur-2 satellite in elliptical or circular orbit, authorized pursuant to any grant of the Spire Application, will be 650 km. *See* Exhibit A, Spire Application, File No. SAT-LOA-20151123-00078, at 6 (November 23, 2015).

[2] *See* Application of ORBCOMM License Corp., File No. SAT-AMD-20140116-00006 (granted March 26, 2014).

[3] *See* ORBCOMM License Corp. Petition to Dismiss, Deny, or Hold in Abeyance, File No. SAT-LOA-20151123-00078 (filed Feb. 22, 2016).

satellite system ("GNSS")-derived spacecraft position data[4] no later than 4 hours after a conjunction alert that has been generated by the Joint Space Operations Center ("JSpOC"), or no later than 4 hours after ORBCOMM notifies Spire that the Space Data Association ("SDA") or any other duly recognized conjunction reporting entity has issued a conjunction alert involving any OG2 satellite and SHERPA Lemur-2 satellite.[5] In the event that a conjunction alert occurs, the parties shall use their reasonable best efforts to acquire and exchange GNSS-derived position data for the involved spacecraft, which efforts shall include any necessary interruption or alteration of spacecraft operation to prioritize the collection and dissemination of GNSS-derived spacecraft position data. Further, Spire and ORBCOMM agree that Spire shall provide Spaceflight, Inc. and SpaceX a copy of this Agreement and Spire's FCC authorization relating to the launch and operation of the SHERPA Lemur-2 satellites. The parties agree that the terms of the Agreement may be amended, but only by written mutual agreement of the parties.

Spire and ORBCOMM therefore request the Commission to adopt the following text as license conditions to the grant of the Spire Application:

- Spire and ORBCOMM have entered into an agreement concerning measures they will undertake to mitigate the risk of in-orbit collisions between the Spire satellite system (FCC Call Sign S2946) and the ORBCOMM satellite system (FCC Call Sign S2103) and to minimize the effect on operations of their respective satellite systems with regards to any related conjunction alerts. The launch and operation of the SHERPA Lemur-2 satellites in a manner consistent with that agreement, as may be amended by mutual written agreement of the parties from time to time, is a condition of the Commission's grant of authorization for the SHERPA Lemur-2 satellites.
- During the remaining term of this license, unless Spire applies for and obtains additional FCC authority, which would be subject to the FCC's public notice and comment requirements prior to grant, Spire is not authorized to launch or operate any satellite in an orbit that intersects with the 715 km orbital altitude, except for the eight (8) Spire satellites manifested on the Spaceflight, Inc. SHERPA secondary payload mission for deployment into a 450 x 720 km 98 degree inclined elliptical orbit on the SpaceX Falcon 9 Formosat-5 launch.
- All Spire Lemur-2 satellites shall have onboard GNSS capability with position determination accuracy of less than 20 meters.

[4] The SHERPA Lemur-2 satellites shall have onboard GNSS capability with position determination accuracy of less than 20 meters.

[5] A conjunction alert shall trigger the position data collection and exchange requirements set forth in this Agreement if the resulting probability of collision exceeds 1:10,000 (calculated using Alfano's method). In that event, the parties shall collect and exchange GNSS samples until the Probability of Collision (PoC) is reduced below this threshold, or the time of closest approach has passed, and each party will exchange the most recent ephemerides based on GNSS-derived position estimates with each other via a mutually agreed method of correspondence.

Please direct any questions regarding this letter to the undersigned.

Respectfully submitted,

DocuSigned by:
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