



Apium, Inc.
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July 9, 2018

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Ligado Amendment to License Modification Applications
IB Docket No. 11-109; IBFS File Nos. SES-MOD-20151231-00981,
SAT-MOD-20151231-00090, and SAT-MOD-20151231-00091

Dear Ms. Dortch:

I encourage the FCC to grant the License Modification Application and Amendment of Ligado Networks to facilitate and promote the growth of new technologies such as those of my company, Apium, Inc.

At Apium, our mission is to develop and distribute technological innovations for inter-vehicle cooperation (“swarm robotics”). We are at the beginning of an era when increasing numbers of autonomous vehicles are being deployed for new uses on land, sea and air. The complexity of managing crowds of these vehicles, especially aerial and vehicular traffic, is going to require new communication methods, from the sort of inter-vehicle swarm communication our company develops to the country-wide networked coverage that Ligado aims to provide.

We have seen the value of Ligado’s satellite service—and how that benefit would only increase if Ligado were to launch a terrestrial network. Last summer, we worked with Ligado to demonstrate how a swarm of unmanned marine vehicles, controlled by Apium swarming software, could be remotely operated through Ligado’s satellite to interdict and turn back a rogue vessel that was approaching a restricted harbor area.

Ligado’s terrestrial network will greatly expand Apium’s vehicle management capabilities. Their combined networks will bring together high-bandwidth communication, improved location capability, and the redundancy of satellite connectivity. This dynamic system is crucial for the real-time operation of autonomous vehicles across the country.

Emerging applications such as Apium’s have much to gain from Ligado’s networks. These networks will facilitate the growth of creative, state-of-the-art technologies and help companies like ours capitalize on our innovations.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Tyler MacCready", written in a cursive style.

Tyler MacCready, PhD
Chief Executive Officer
Apium, Inc.