May 6, 2020

Senator Jim Inhofe
Chairman
U.S. Senate Committee on Armed Services
228 Russell Office Building
Washington, DC 20510

Senator Jack Reed
Ranking Member
U.S. Senate Committee on Armed Services
228 Russell Senate Office Building
Washington, DC 20510

Dear Chairman Inhofe and Ranking Member Reed,

We are pleased to file this statement for the record in response to the Senate Armed Services Committee hearing, "Department of Defense Spectrum Policy and the Impact of the Federal Communications Commission's (FCC) Ligado Decision on National Security." We thank the Committee for holding this important hearing and for its leadership on spectrum issues impacting national security, public safety, and the future of our industries and professions.

Our coalition, made up of industries dependent upon and dedicated to protecting Global Positioning Systems (GPS) and satellite communications, strongly opposes the recent FCC Order that approved the Ligado Networks L-Band application.

Furthermore, the hurried nature of the circulation and consideration of the FCC Order itself – during a declared national emergency – left little opportunity to address the opposition of key government stakeholders like the Departments of Commerce, Defense, Homeland Security, and Transportation. Each of these government agencies, and others, expressed multiple reservations about the FCC evaluation process, the information it is based upon, and consideration of potential impacts. The FCC decision risks the operation of GPS and satellite communications, thus threatening the safety and security of military operations, civil aviation, first responders, agriculture, transportation, construction, maritime and weather forecasting activities.

Like these government agencies, the undersigned organizations share many of the same technical and procedural concerns about the FCC's process and decisions, including:

Ignores National Security – The FCC dismissed the national security and safety concerns of the Executive Branch – as personally reinforced by the Secretary of Defense, Deputy Secretary of Defense, and numerous other very senior officials – virtually without explanation. Additionally, rather than compare its analysis with that of the Executive branch, the commission said, in essence, "they are wrong" and decided against national security experts without further comment or engagement.

Risks Public Safety – Use of GPS is fundamental to the continued safe and effective operation of our industries and professions, where false or missing GPS data can easily result in a tragic accident. For example, the Terrain Awareness Warning Systems (TAWS) in passenger aircraft pulls aircraft position and velocity data from GPS. Moreover, the Department of Transportation's own technical studies show that Ligado's transmissions will have a significant impact on reliable GPS usage by low-level emergency helicopter operations, beyond line of sight drone operations, current driver assist systems, vehicle navigation, and port and maritime operations as far as a kilometer off shore. Ligado transmissions will also pose a threat to light aircraft and drone operations that use general purpose GPS receivers. This could result in aircraft and drones unknowingly crossing the path of, and conflicting with, other passenger aircraft, leading to loss of life.

Unfortunately, the FCC Order does not use recognized standards to safeguard GPS users, but instead implements its own measure of performance based on Ligado-commissioned testing of a limited number of GPS devices. Without the necessary assurance at this stage, the FCC is creating a dangerous dynamic and precedent that the appropriate action is only taken after interference, and perhaps an accident, has occurred.

These errors in the FCC Order are compounded by failing to adequately evaluate the wider impact Ligado will have on other satellite systems that are providing reliable and secure communications around the world, enabling a range of communications and safety applications. These satellite systems support the public's safety through services to government agencies, the aviation and maritime industries, first responders and search and rescue operations. A single Ligado transmitter could easily disable or disrupt satellite communications on an aircraft that carries hundreds of passengers, and other users requiring reliable communications coverage.

Wide-ranging Economic Impact - Ligado's proposal offers questionable benefits, let alone any 5G benefits, yet it is being implemented at the expense of GPS and satellite communications users nationwide that are at the forefront of American technical leadership and has generated more than $1.4 trillion in economic benefit for the U.S. economy. It would cost taxpayers billions of dollars to replace current GPS and satellite equipment, which otherwise would be put at significant risk by Ligado's deployment.

Outsources Enforcement – The FCC Order has created a process where Ligado will be in direct charge of GPS interference complaints, not the FCC. When Ligado receives a complaint, Ligado itself will determine if it is the source of the interference, what mitigations are necessary, and ultimately what mitigations are implemented. The FCC will only receive updates on how Ligado has addressed individual interference complaints on a quarterly basis. This does not appear to be a framework for the transparent and thorough investigation of reports by the FCC needed in such a critical area that has public safety implications.

For these reasons and many more, we are strongly urging the FCC to stay and reconsider its decisions on Ligado. It is in the interest of both national security and public safety to fully address all the overwhelming technical and safety concerns raised by public and private sector stakeholders. We thank the Committee for holding this hearing and appreciate your leadership on this topic.

Sincerely,

AccuWeather, Inc.
Aerospace Industries Association
Air Line Pilots Association International
Aircraft Owners and Pilots Association
Aireon
Airlines for America
Alaska Airlines
Alert Users Group
Alliance for Automotive Innovation
American Airlines
American Association of Airport Executives
American Association of Port Authorities
American Farm Bureau Federation
American Geophysical Union
American Meteorological Society
American Road & Transportation Builders Association
American Trucking Associations
American Weather and Climate Industry Association
Associated Equipment Distributors
Association for Unmanned Vehicle Systems International
Association of Equipment Manufacturers
Atlas Air Worldwide
Aviation Spectrum Resources Inc.
BoatU.S
Cargo Airline Association
Center for Sportfishing Policy
Coalition of Airline Pilots Associations
CoBank
Delta Air Lines
DTN Weather
FedEx Corporation
Frontier Airlines
General Aviation Manufacturers Association
GeoOptics, Inc
Geospatial Equipment & Technology Institute
Helicopter Association International
International Air Transport Association
Iridium
JetBlue
L3Harris
Lockheed Martin
Masters, Mates & Pilots Union
Microcom Environmental
Narayan Strategy
National Agricultural Aviation Association
National Air Transportation Association
National Defense Industries Association
National Society of Professional Surveyors
National Weather Association
NENA: The 9-1-1 Association
PlanetiQ
Polar Air Cargo Worldwide, Inc.
Regional Airline Association
Resilient Navigation and Timing Foundation
Satelles
Seafarers International Union
Semaphore Group
Skytrac
Southwest Airlines
Space Science and Engineering Center at University of Wisconsin-Madison
Spire Global
Subsurface Utility Engineering Association
The Vertical Flight Society
Trimble
U.S. Contract Tower Association
U.S. Geospatial Executives Organization
United Airlines
UPS