

# United States Senate

WASHINGTON, DC 20510

May 15, 2020

The Honorable Ajit Pai, Chairman  
The Honorable Michael O’Rielly, Commissioner  
The Honorable Jessica Rosenworcel, Commissioner  
The Honorable Geoffrey Starks, Commissioner  
The Honorable Brendan Carr, Commissioner  
Federal Communications Commission  
445 12th Street S.W.  
Washington, D.C. 20554

432

Re: LightSquared Technical Working Group Report, LightSquared License Modification Applications, IBFS FS Files Nos. SAT-MOD-20120928-00160, -00161, SES-MOD-20121001-00872, New LightSquared License Modification Applications IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, and SATMOD-20151231-00091, Ligado Amendment to License Modification Applications IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, and SATMOD-20151231-00091(the “Modification Applications”); IB Docket Nos. 12-340, 11-109, FCC 20-48

Dear Commissioners:

We write to express our concerns with the Order announced by the Federal Communications Commission (FCC) on April 20, 2020 granting Ligado’s application to deploy a terrestrial nationwide network to provide 5G services. We are concerned that the Order does not adequately protect adjacent band operations—including those related to the Global Positioning System (GPS) and satellite communications—from harmful interference that would impact countless commercial and military activities. Furthermore, the hurried nature of the circulation and consideration of the Order itself—during a national crisis, no less—was not conducive to addressing the many technical concerns raised by affected stakeholders.

As you know, this is not the first time the FCC has considered proposals from Ligado or its predecessor companies. Past Orders conditioned Ligado’s spectrum use on addressing GPS interference concerns, and those concerns have not gone away. With this specific docket item pending before the FCC for almost 10 years, we are concerned with the pace by the Commission to push through an Order first announced on April 16, the approval for which was declared two business days later. We believe this accelerated timeline was not adequate to address the significant stakeholder concerns for an Order of this magnitude.

Many of these concerns center around the significant risks the Ligado proposal poses to GPS functions and satellite communications. You understand how important reliable GPS and satellite communications are to our economic and national security. American families rely on its free precise timing and navigation for thousands of functions every day, including banking, logistics, agriculture, weather, and travel. The aviation community uses GPS and satellite communications for navigation, terrain and obstacle avoidance, and aircraft tracking necessary to safely operate commercial, business, military, and emergency response aviation activities, including medevac

May 15, 2020

and aerial firefighting. The agriculture industry uses GPS to facilitate precision-based practices that have facilitated dramatic improvements in productivity. The trucking and logistics industries rely on GPS for route planning and tracking of shipments and equipment to safely and efficiently move freight throughout the country. FCC's actions also threaten weather satellites, crucial to saving lives and property when tornadoes, hurricanes and floods strike. GPS also forms the backbone of countless military operations and applications.

We are concerned that the FCC has discounted testing and assessments conducted by nine federal agencies in the Interdepartment Radio Advisory Committee process—all expressing concerns that the Ligado plan would interfere with millions of GPS receivers and satellite services across the nation. Further, the FCC did not provide a technical forum to resolve the significant disconnects between this testing and Ligado's privately funded testing. Given the enormous impact this Order will have on our national GPS network and satellite communications services, we have significant reservations with the decision to move forward with this Order without a thorough and inclusive public discussion of technical risk.

Additionally, the Order's processes for remediation and mitigation of interference to GPS users remain unclear and wholly inadequate to a technology of this importance to the American way of life. Furthermore, creating an unclear and ill-defined standard based on a limited set of tests would impact GPS and satellite communications users dependent on them for safety of life operations. Setting a standard of not causing interference does not guarantee the performance and safety of their use with statistical certainty. A data driven performance based standard for what constitutes harmful interference guarantees the need for case-by-case reviews—which will require detailed technical consideration of geographic, temporal, atmospheric and other unique factors that could change on a daily if not hourly basis. With the FCC as the adjudicator of these case-by-case harmful interference disputes, we question whether such a process can realistically be expected to impartially review and take action on each dispute that arises across a nationwide network within a meaningful time period.

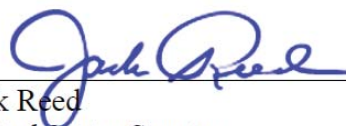
We are committed to ensuring that the United States continues its efforts to lead 5G development and deployment. However, we fear that the Ligado decision will actually slow ongoing work between the U.S. Department of Defense and leading 5G developers, in addition to interfering with the operation of GPS. For these reasons, we urge the Federal Communications Commission to immediately stay and reconsider their Order on this matter, more fully consider the technical concerns raised by numerous federal agencies and private sector stakeholders, and outline a path forward that adequately addresses these concerns.

Sincerely,



---

James M. Inhofe  
United States Senator



---

Jack Reed  
United States Senator

May 15, 2020



---

John Barrasso M.D.  
United States Senator



---

Michael F. Bennet  
United States Senator



---

John Boozman  
United States Senator



---

Susan M. Collins  
United States Senator



---

Kevin Cramer  
United States Senator



---

Tammy Duckworth  
United States Senator



---

Michael B. Enzi  
United States Senator



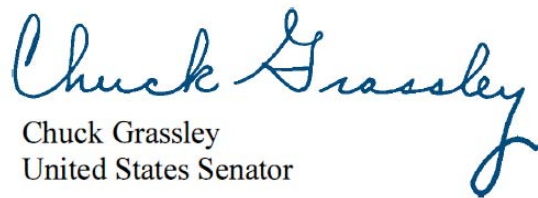
---

Joni K. Ernst  
United States Senator



---

Deb Fischer  
United States Senator



---

Chuck Grassley  
United States Senator



---

Mazie K. Hirono  
United States Senator



---

John Hoeven  
United States Senator

May 15, 2020



---

Cindy Hyde-Smith  
United States Senator



---

Doug Jones  
United States Senator



---

Angus S. King, Jr.  
United States Senator



---

Joe Manchin III  
United States Senator



---

Martha McSally  
United States Senator



---

Lisa Murkowski  
United States Senator



---

David Perdue  
United States Senator



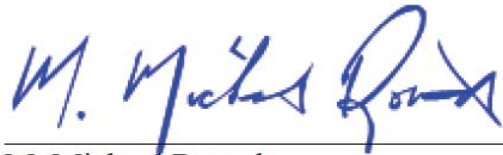
---

Gary C. Peters  
United States Senator



---

Rob Portman  
United States Senator




---

M. Michael Rounds  
United States Senator



---

Pat Roberts  
United States Senator



---

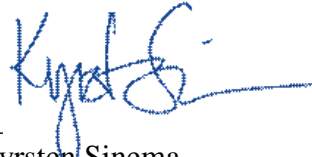
Rick Scott  
United States Senator



May 15, 2020



Jeanne Shaheen  
United States Senator



Kyrsten Sinema  
United States Senator



Dan Sullivan  
United States Senator



Sheldon Whitehouse  
United States Senator



Bill Cassidy, M.D.  
United States Senator



Maria Cantwell  
United States Senator