**SUBMITTED ELECTRONICALLY**

October 23, 2018

The Honorable Ajit Pai

Chairman

Federal Communications Commission

445 12th Street S.W.

Washington, DC 20554

Dear Chairman Pai:

**Re.:** **Ligado Networks LLC (“Ligado”)**

On behalf of the members of the Alliance of Automobile Manufacturers (“Alliance”)[[1]](#footnote-1), we write this ex parte communication to express concern about Ligado’s proposal to reallocate satellite spectrum near Global Positioning System (“GPS”) signals. The proposal seeks to accommodate the addition of an ancillary terrestrial component (“ATC”) which could pose a significant risk of harmful interference to current and future critical transportation safety applications that utilize GPS signals.

GPS is a critical technology for many current and future vehicle safety systems, including both Advanced Driver Assist Systems (“ADAS”) and Automated Driving Systems (“ADS”). The availability and accuracy of GPS offers increased safety for vehicles and other road users traveling on our nation’s roadways. Many of today’s vehicles are equipped with ADAS safety features or other systems that rely on precise GPS signals for position, navigation, in-vehicle security, remote diagnostics, emergency services and other applications. Ligado’s proposal could jeopardize the ability of GPS receivers to obtain an accurate signal, thereby putting such vehicle safety systems at risk.

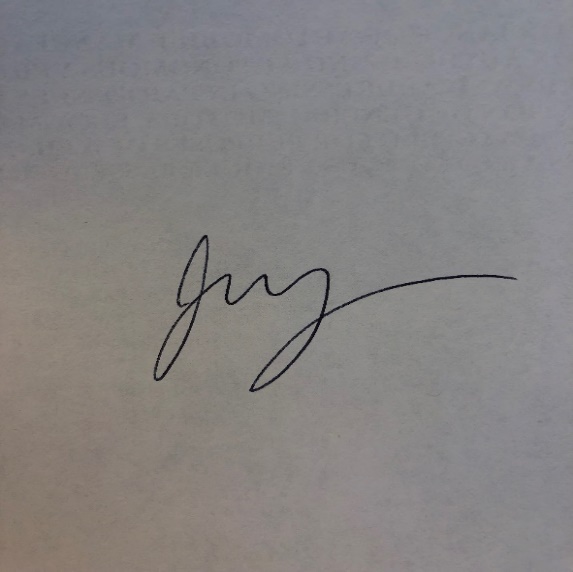
The United States Department of Transportation (US DOT) recently conducted an assessment to examine the maximum transmitted power levels of adjacent band radiofrequency (RF) systems that can be tolerated by GPS and Global Navigation Satellite System (GNSS) receivers. The purpose of the assessment was to understand the extent to which such adjacent band transmitters impact GPS/GNSS devices used for transportation safety purposes[[2]](#footnote-2). The study found that proposed operations similar to Ligado could harmfully impact the accuracy, availability, and integrity of GPS receivers used in transportation safety applications.

In addition to current vehicle safety technologies, GPS is an essential component in the future of intelligent transportation and ADS technologies. Many Alliance members are currently developing ADS-equipped vehicles, which provide a higher level of automation than current ADAS features. ADS-equipped vehicles often use input from a variety of vehicle sensors and high definition maps that may rely on GPS receivers to support vehicle operation. Thus, GPS is a crucial technology to enable ADS-equipped vehicles to successfully navigate our nation’s roadways and increase our transportation efficiency through optimal routing. Further, high precision GPS will enhance the vehicle’s ability to cooperate with other road users, which would provide a significant safety benefits to all road users.

In 2017, 37,133 fatalities occurred on our nation’s roadways[[3]](#footnote-3). According to US DOT, 94% of crashes are caused by human error. Thus, ADS-equipped vehicles and related safety technologies have the potential to significantly improve overall safety on our nation’s roadways. Additionally, ADS-equipped vehicles hold the promise to provide numerous economic and societal benefits, such as decreased congestion and fuel consumption, and increased access for the elderly and disabled.

As vehicles become more connected and include more automated safety features, it will be critical to ensure that these important, safety applications are free from harmful interference. Therefore, the Alliance urges the Federal Communications Commission to deny Ligado’s pending license modification as proposed, until testing and data validates that transportation safety applications will be protected from harmful interference.

Sincerely,

**ALLIANCE OF AUTOMOBILE MANUFACTURERS, INC.**

**Jonathan Weinberger**

**Vice President**

**Technology and Innovation Policy**

**CC: The Honorable Heidi King, *NHTSA Deputy Administrator***

**Mr. Robert Kreeb, *NHTSA Research***

1. The Alliance of Automobile Manufacturers is an association of 12 vehicle manufacturers which account

   for roughly 77% of all car and light truck sales in the United States. These members are BMW Group,

   FCA US LLC, Ford Motor Company, General Motors, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche Cars North America, Toyota, Volkswagen Group of America, and Volvo Car USA. [↑](#footnote-ref-1)
2. *See* U.S. Department of Transportation, “Global Positioning System (GPS) Adjacent Band Compatibility Assessment,” Final Report, at IV (Apr. 2018), <https://www.transportation.gov/sites/dot.gov/files/docs/subdoc/186/dot-gps-adjacent-band-final-reportapril2018.pdf> (“ABC Study”). [↑](#footnote-ref-2)
3. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812603>. [↑](#footnote-ref-3)