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United States Senate

COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION

WASHINGTON, DC 20510-6125

WEBSITE: <http://commerce.senate.gov>

1007

DAVID SCHWETERT, STAFF DIRECTOR
KIM UPSKY, DEMOCRATIC STAFF DIRECTOR

September 9, 2015

The Honorable Anthony Foxx
Secretary
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

The Honorable Penny Pritzker
Secretary
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

The Honorable Tom Wheeler
Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Secretary Foxx, Secretary Pritzker, and Chairman Wheeler:

As members of the U.S. Senate Committee on Commerce, Science, and Transportation, we are dedicated to making spectrum available for private sector deployment and promoting efforts to increase safety on our nation's roadways. The demand for spectrum resources continues to expand, requiring the federal government to work harder to find ways to utilize limited spectrum resources more effectively and efficiently. At the same time, new technologies hold tremendous promise for improving vehicle safety and significantly reducing the number of fatalities.

The Federal Communications Commission (FCC) has allocated the 5.850-5.925 GHz band for Dedicated Short Range Communications (DSRC) uses such as vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communication. The FCC permits Intelligent Transportation Systems (ITS) to operate in this band for automotive safety and efficiency purposes. The *Middle Class Tax Relief and Job Creation Act of 2012* directed the National Telecommunications and Information Administration to study the possibility of allowing unlicensed operations to operate in the 5.9 GHz band. There currently is a pending proceeding where the FCC is considering permitting unlicensed technologies such as Wi-Fi to share this spectrum, so long as these technologies do not cause harmful interference to incumbent systems.

We are committed to finding the best path forward to protect the development and deployment of advanced automotive safety systems while also considering the need for additional unlicensed spectrum to meet the increasing demand for wireless broadband Internet services. There is broad support from interested parties, including the undersigned, for conducting tests that are fairly administered and can determine whether various sharing proposals do or do not cause harmful interference to incumbents, including primary incumbent satellite services operating in the 5.9 GHz band. Therefore, we strongly encourage your respective agencies to work together to facilitate testing that is built on the following principles and goals:

- The FCC, in close coordination with the Department of Transportation (DOT) and Department of Commerce (DOC), should take the lead to ensure that requisite spectrum testing and modelling is conducted so the government has all the information it needs to determine how best to proceed in terms of interference-avoidance and allocation of spectrum use rights in the 5.9 GHz band. DOT should continue to take the lead, in close coordination with the FCC and DOC, with respect to overseeing the development of 5.9 GHz DSRC technology, vehicle safety testing, and 5.9 GHz DSRC capabilities testing.
- With respect to its spectrum allocation and interference-avoidance analysis in the 5.9 GHz band, the FCC should take input from all relevant public and private sector stakeholders, including but not limited to DOT, DOC, the satellite industry, the ITS industry, the automobile industry, the telecommunications industry, and the Wi-Fi industry.
- Engineers should be responsible for the 5.9 GHz interference testing and for addressing 5.9 GHz compatibility issues.
- The testing should examine all reasonable options and mechanisms for sharing in the 5.9 GHz band and for the avoidance of harmful interference from unlicensed to authorized users and licensees in the 5.9 GHz band.
- The testing of various 5.9 GHz unlicensed sharing proposals should be conducted in a way that allows test proposals, results, and underlying data to be meaningfully compared and evaluated. Public and private participants in 5.9 GHz interference testing should coordinate with the FCC on their proposals.
- If a private sector party wants its 5.9 GHz unlicensed sharing proposal to be considered, the burden is on it to develop and present the proposal with sufficient specificity for consideration and testing and to make relevant test equipment and prototype devices available for testing. Similarly, DSRC devices to be protected should be made available for testing against unlicensed proposals.
- The FCC is free to foster or propose its own options for consideration, consistent with existing law.

- To the extent feasible, and with confidentiality mechanisms in place to protect trade secrets and commercially sensitive information if necessary, results and underlying data from any testing of 5.9 GHz unlicensed sharing proposals to be considered by the FCC should be made available to the public by placing such information in the FCC's open docket; the data and results from tests of DSRC systems cited in comments filed with the FCC or conducted previously using federal funds and resources should also be published, where feasible.
- To the extent practicable, 5.9 GHz interference testing should be completed by December 31, 2016.

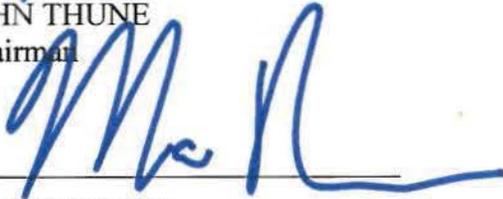
We understand a broad coalition of automakers, unlicensed spectrum advocates, and technology companies also submitted a letter today that endorses these principles and goals. We commend their efforts on this issue.

Thank you for your continued efforts to responsibly manage the nation's spectrum resources and promote safety on America's roads. We look forward to working closely with you as this matter moves forward.

Sincerely,



JOHN THUNE
Chairman



MARCO RUBIO
U.S. Senator



CORY A. BOOKER
U.S. Senator



The Honorable John Thune
Chairman
Committee on Commerce, Science,
& Transportation
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

Thank you for your September 9, 2015, letter raising the important issues of maximizing our country's spectrum resources, promoting private sector deployment, and improving vehicle safety. As you stated in your letter, the Department of Transportation (DOT), the Department of Commerce (Department), and the Federal Communications Commission (FCC) each has core, yet interdependent, roles to play in advancing these three goals.

In your letter, you encouraged the FCC, in close coordination with the DOT and the Department, to take the lead in testing and modeling to ensure appropriate interference-avoidance and spectrum rights allocation in the 5850-5925 MHz (5.9 GHz) band. You also called upon the DOT to lead, in close coordination with the FCC and the Department, the development of 5.9 GHz Dedicated Short Range Communications (DSRC) technology, vehicle safety testing, and DSRC capabilities testing. Furthermore, you noted that the Middle Class Tax Relief and Job Creation Act of 2012 directed the Department's National Telecommunications and Information Administration (NTIA) to study the possibility of allowing unlicensed operations in the 5.9 GHz band.

Each of our agencies shares your commitment to finding the best method to develop, successfully test, and deploy advanced automotive safety systems while working to meet existing and future spectrum demands. Just as we have done in other instances, we are dedicated to moving forward with a collaborative approach that leverages each agency's core competencies.

We describe below our efforts to date and detail a joint pathway forward that incorporates the principles and goals articulated in your letter.

As you know, in August the DOT, consistent with its directive to test DSRC capabilities, released a DSRC-Unlicensed Device Test Plan. The DOT test plan describes tests to characterize the existing radio frequency signal environment and identify the impacts to DSRC operations if unlicensed devices operate in the 5.9 GHz band. The DOT test plan's stated

overarching goal is to assure “safe, reliable, and on demand access to 5850-5925 MHz spectrum for DSRC operation.”

The DOT test plan provides a valuable first step. As contemplated by your letter, the FCC, in accordance with its spectrum management expertise, and the DOT are currently devising, in close consultation with the NTIA, a complementary FCC-led test plan. The tests conducted to date combined with the results of this FCC test plan will provide reliable, real-world data on the performance of unlicensed devices that are designed to avoid interfering with DSRC operation in the 5.9 GHz band.

The FCC Test Plan: The FCC will begin by refreshing the record of its pending 5.9 GHz rulemaking proceeding to provide interested stakeholders the opportunity to provide further comment on sharing in the band as well as the opportunity to comment on the proposed FCC test plan. The FCC will also solicit the submittal of prototype unlicensed, interference-avoiding devices for testing.

The FCC, the DOT, and the NTIA will continue to collaborate, as well as engage with other stakeholders, and may make adjustments to the plan as it evolves. However, as currently envisioned, the test plan proposes collaborative testing by the DOT, the NTIA, and the FCC in three phases:

- *Phase I:* The first phase will involve testing at the FCC Laboratory in Columbia, Maryland, to determine the technical characteristics of prototype unlicensed devices and how they are designed to avoid causing harmful interference to DSRC. As part of the Phase I tests, the agencies will assess such parameters as the threshold at which a device detects DSRC signals on a channel and the amount of time required for a device to vacate the channel so as to avoid interference.
- *Phase II:* The second phase will be based largely on Section 6 of the DOT test plan and will involve basic field tests with a few vehicles at a DOT facility. The Phase II tests will determine whether the techniques to avoid interference that were evaluated in Phase I’s lab tests are effective in the field.
- *Phase III:* The third phase will involve tests with many more vehicles, more test devices, and real-world scenarios at a suitable facility. Phase III tests will consider many of the elements introduced in Sections 4, 5, and 9 of the DOT test plan.

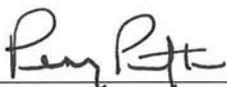
The three phases of the test plan are interdependent. It is, therefore, imperative – to ensure the future automotive safety and efficiency of the traveling public – that all three phases of the FCC test plan be completed before reaching any conclusions as to whether unlicensed devices can safely operate in the 5.9 GHz band. Engineers from each agency will carefully

examine the options and mechanisms for sharing in the 5.9 GHz band and closely scrutinize the myriad interference prevention approaches.

As you recommend in your letter, we will continue to engage a variety of stakeholders, including the auto industry, the unlicensed device interests, and the satellite interests. Each of our agencies has been meeting individually with a broad range of stakeholders to discuss this initiative, and together we are planning a joint stakeholder-interagency meeting to facilitate a more robust dialogue as we proceed in our collaborative effort.

Thank you very much for your interest in this matter, and we look forward to your continued partnership and support.

Sincerely,



Penny Pritzker
Secretary
Department of Commerce



Anthony Foxx
Secretary
Department of Transportation



Tom Wheeler
Chairman
Federal Communications Commission



The Honorable Cory A. Booker
United States Senate
Washington, DC 20510

Dear Senator Booker:

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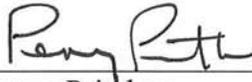
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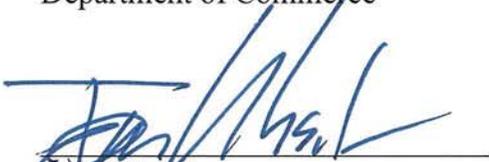
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The Honorable Marco Rubio
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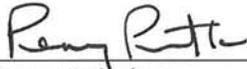
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