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ONE HUNDRED FOURTEENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE

2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2927

Minority (202) 225-3641

July 14, 2016

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

Dear Chairman Wheeler:

U.S. leadership in the global mobile ecosystem has delivered tremendous innovation for American consumers and the U.S. economy. Today, 54 percent of all mobile subscribers in North America are on 4G LTE networks, compared to just 24 percent in Western Europe and Asia Pacific, and Americans more than doubled their mobile data usage from 2014 to 2015. Mobile broadband is becoming increasingly integrated in everyday life and business – and the next generation of wireless, 5G, is a game-changing technology. We urge the Federal Communications Commission (FCC) to take action this summer so that the United States can maintain its global mobile leadership as the world moves to 5G.

As an initial matter, we commend you for announcing that the FCC will take action in the *Spectrum Frontiers* proceeding this July. Other nations, including Japan and South Korea, are already committed to mining higher frequency bands like these as they vie to lead on 5G. In the U.S., these bands will pave the way for investment and innovation in both licensed and unlicensed offerings, providing consumers with much faster and more responsive broadband, and delivering connectivity to many more devices included in the developing Internet of Things market.

The FCC should adopt *Spectrum Frontier* service rules that will enable rapid investment and innovation in these bands. Established rules of the road, for example, the licensing approach adopted in advance of the AWS-3 auction that garnered more than \$40 billion in revenue, offer clarity with respect to licensed rights. At the same time, the FCC should make sure that existing services in these bands including satellites can continue to operate as they do today, and that there is a path for further deployment by incumbent operators. We also share the FCC's concerns with cybersecurity as new technologies develop, and urge the agency to continue to

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work through bodies like the Communications Security, Reliability and Interoperability Council (CSRIC) and standards groups to ensure 5G development incorporates security-by-design principles.

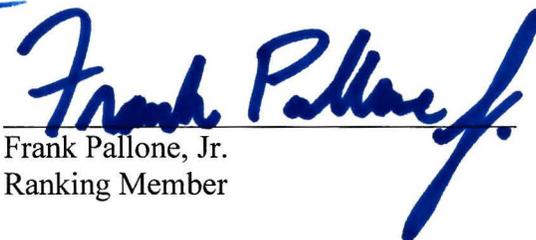
Finally, for 5G to be a success, the FCC must also take concrete steps toward more common-sense siting policies. 5G will involve more densified wireless networks, with smaller antennas that have a more limited physical presence and lesser impact. Siting policy should account for these small cell deployments. The FCC, therefore, should promptly complete its nationwide programmatic agreement proceeding to eliminate unnecessary review processes for collocating small wireless antennas.

Thank you for your consideration. We look forward to prompt action to advance the interests of 5G and U.S. consumers and business.

Sincerely,



Fred Upton
Chairman



Frank Pallone, Jr.
Ranking Member



FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

October 3, 2016

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Upton:

Thank you for your letter regarding the Commission's Spectrum Frontiers proceeding and for your leadership on supporting next generation wireless deployment. I share your commitment to ensuring the United States maintains its global leadership in wireless broadband.

The Spectrum Frontiers *Report and Order* repeats the proven formula that made the United States the world leader in 4G: (1) make spectrum available quickly and in sufficient amounts; (2) encourage and protect innovation-driving competition; and (3) stay out of the way of market-driven, private sector technological development. Fifth generation, or 5G, wireless connectivity promises quantum leaps forward in three key areas: speeds resembling fiber that are at least 10 times and maybe 100-times faster than today's 4G LTE networks; responsiveness less than one-thousandth of a second, enabling real-time communication; and network capacity multiples of what is available today.

The rules unanimously adopted by the Commission in the Spectrum Frontiers *Report and Order* open up almost 11 GHz of spectrum for flexible use spectrum for wireless broadband, including 3.85 GHz of licensed spectrum and 7 GHz of spectrum for unlicensed use. In doing so, the Commission made more spectrum available for flexible use wireless broadband than ever before. With the adoption of these rules, the U.S. is now the first country in the world to open high-band spectrum for 5G networks and technologies, creating a runway for U.S. companies to launch the technologies that will harness 5G's fiber-fast capabilities. The *Report and Order* adopts a balanced approach and flexible framework that builds off of years of successful spectrum policies with important updates to address the new shared use challenges in the bands.

The rules also create effective sharing schemes to ensure that diverse users can co-exist, and that incumbents can be protected and expand. Sharing is essential for the future of spectrum utilization. Many of the high-frequency bands we are making available for 5G currently have some satellite users, or at least the possibility of future satellite users. Our rules strike a balance that offers flexibility for satellite users to expand, while providing terrestrial licensees with predictability about the areas in which satellite will locate.

We share your view that clear service rules are necessary to enabling investment and innovation in spectrum. That is why, in the *Report and Order*, the Commission adopted detailed

service rules in the spectrum it made available, including licensing, operating, and technical requirements. These rules will give prospective operators both flexibility and certainty regarding the rules of the road in these bands. The Commission's flexible approach to service rules has been extremely successful in encouraging rapid deployment in other spectrum bands, and by continuing and expanding on that tradition, the *Report and Order* ensures that we'll see the same results in millimeter-wave spectrum.

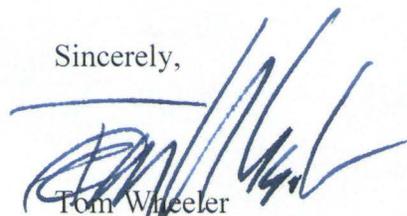
For the licensed spectrum it made available, the Commission mostly relied on traditional geographic-area licensing, as it has in many past proceedings such as AWS-3. At the same time, in order to address the future spectrum needs of both Federal and non-Federal users, the Commission adopted an innovative sharing framework in part of the 37 GHz band. This framework will allow Federal and non-Federal users to share on a coequal basis in part of the spectrum made available. Through the accompanying *Further Notice of Proposed Rulemaking (FNPRM)*, which proposes the use of additional dynamic, innovative sharing schemes in certain other millimeter-wave bands, we will continue to explore opportunities to leverage sharing tools to unlock even more spectrum in the future. The *FNPRM* proposes to make available an additional 18 GHz of spectrum, and it strongly signals the FCC's continued commitment to ensuring the U.S. leads in the next generation of wireless.

As you note, 5G networks must also be secure and cybersecurity issues need to be addressed during the design phase for the entire 5G ecosystem, including devices. The approach adopted in the *Report and Order* places the responsibility on industry to continue working to develop and communicate cybersecurity standards. We anticipate that a continuous dialogue between the FCC, industry, and standards bodies will stimulate industry development of a security framework for 5G and the Internet of Things that will evolve to accommodate new functions and security threats.

Finally, we share your opinion that the success of 5G will hinge upon the deployment of more densified wireless networks and are focused on promoting the common-sense siting policies that are essential for these new networks. We have successfully amended our nationwide programmatic agreement, which has streamlined the environmental and historic review process for many small cells. We have also tightened our 'shot clock' for siting application reviews. We will continue working to eliminate unnecessary infrastructure siting hurdles for small cells and to ensure that siting review fees and processes at the local level are fair and reasonable.

I appreciate your interest in this matter. Please let me know if I can be of any further assistance.

Sincerely,



Tom Wheeler



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October 3, 2016

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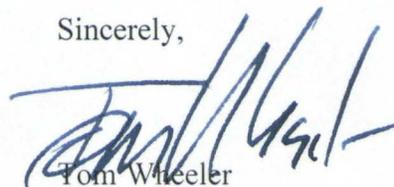
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