

## **PREPARED REMARKS**

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**AT THE 6<sup>TH</sup> ANNUAL AMERICAS SPECTRUM MANAGEMENT CONFERENCE**

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Good morning! Thank you, Ruth, for that introduction, and thank you to Forum Global for hosting this conference.

With such an impressive lineup of speakers over the next two days, it's an honor to be in the leadoff slot. For one, we have many FCC heavy hitters on deck. You'll be hearing from Commissioner O'Rielly, Julie Knapp, Don Stockdale, Jean Kiddoo, Evan Kwerel, Jose Albuquerque, and Ron Repasi. Here's hoping they don't have to do too much cleanup after I leave the stage.

I've been asked to talk about where we are with spectrum policy in the United States, and what lies ahead.

Conveniently, the Commission adopted a report a few weeks ago on the state of competition in the wireless industry, so let's start there. The good news is there's a lot of good news.

Consumer demand continues to rise. Mobile subscriptions were up 5% last year to about 400 million, which puts the mobile penetration rate at 121%. Roughly 80% of mobile subscribers use smartphones. The average subscriber uses 4 GB of data a month, up 34% from a year ago.

Not only are consumer demand and usage on the rise, so is consumer choice. In the last year, all four national carriers have rolled out new or improved unlimited plans.

Wireless speeds are also trending in a positive direction. The mean LTE download speed increased over 60% in 2016, rising to 23.5 Mbps.

But that doesn't mean that there aren't challenges.

Wireless service in rural areas still lags the national averages. While the Commission has been steadily working to close that coverage gap, much work remains.

Looking at the landscape with these facts in mind, Chairman Pai has two overarching goals at the top of the Commission's wireless agenda.

First, we want to unleash spectrum to meet growing consumer demand and enable new waves of wireless innovations that will grow our economy and improve the standard of living for the American people.

Obviously, one of the big opportunities that we're focusing on is facilitating the next-generation of technology and services, including 5G with its dramatic improvements in network speed, capacity, and responsiveness. CTIA estimates that 5G could create three million jobs and over \$500 billion in additional GDP growth over seven years, so, clearly, we need to get this right.

The second key goal of our wireless agenda is harnessing the power of spectrum to help bridge the digital divide. Expanding digital opportunity to Americans who have been sidelined in the mobile revolution will lift up these individuals and our nation – and it is a priority for Chairman Pai.

So, harnessing the power of spectrum to spur innovation and close the digital divide are our guiding priorities; now let's talk about the principles of spectrum management and the policies that flow from that.

One foundational principle is flexible use for wireless spectrum. Instead of mandating that a particular spectrum band be used with a specific type of wireless technology, the government should leave that choice to the private sector, which has a much better sense of consumer demand. The Commission has a role to play in crafting light-touch regulatory frameworks, with clear and technology-neutral rules. Basically, we want to put spectrum into the marketplace and then let the market and innovators go to work. Flexible use for spectrum is a proven practice. For decades, it has enabled wireless networks in the U.S. to evolve with technology and to do so much more quickly than if operators had to obtain government sign-off each step of the way.

Another principle is our commitment to continue to identify possibilities to put airwaves to more efficient use. Chairman Pai believes we need an all-of-the-above approach to this spectrum endeavor, looking at low-, mid-, and high-band spectrum.

How does that translate to policy?

On low-band spectrum, we've completed the first-ever incentive auction. And we're well into granting wireless licenses in the 600 MHz band. Just this week, T-Mobile and Fox announced a deal to re-pack WWOR-TV in New York by early 2018, more than a year ahead of schedule and T-Mobile has already announced 600 MHz service in parts of Wyoming, Maine and other states; so wireless consumers are enjoying more choice and competition as a result of the auction. For its part, the Commission is committed to continuing to work with industry – both broadcasters and the forward auction winners – to ensure a smooth post-auction transition.

In the mid-band, we recently began evaluating spectrum between 3.7 and 24 GHz, with a focus on the C band and the upper 6 GHz band for potential licensed and unlicensed use. We are seeking input on how existing rules can be modified to promote additional access to these and other “middle” bands. In addition to this work, Commissioner O'Rielly, who will speak to you tomorrow morning, is leading a review of our rules for the 3.5 GHz band to ensure they are designed to maximize investment. Proposed changes to the rules for that band are currently teed up for a Commission vote in less than two weeks.

Meanwhile, high-band spectrum has been garnering a lot of attention lately, particularly because of its suitability for 5G. Last summer, our *Spectrum Frontiers Order* opened up nearly 11 GHz of spectrum in the bands above 24 GHz for mobile use. We continue to move full speed ahead so that operators have a clear path to launching 5G and other innovative millimeter-wave services in the United States. That means continued pursuit of the three bands we identified in that order—28 GHz, 37 GHz, and 39 GHz. It also means opening up additional bands for flexible, commercial use. Last month, Chairman Pai announced that, by the end of the year, he intends to present the next phase of our work in the high bands, which will continue the Commission's efforts to make this spectrum available for commercial use. Our goals are clear: to make sure the U.S. continues to lead in 5G and to enable wireless consumers to benefit from these technologies sooner rather than later.

Let me briefly discuss one potential stumbling block as we move to roll out 5G that Chairman Pai raised in his recent testimony to Congress. Presently, the Communications Act requires that upfront payments made by bidders in spectrum auctions be deposited in “an interest bearing account at a financial institution designated . . . by the Commission (after consultation with the Secretary of the Treasury).” Here's the problem: recent regulatory requirements for the collateralization and capitalization of deposits have dissuaded private institutions from holding upfront payments. Public institutions have indicated going forward they have no interest in establishing the special purpose accounts that would be necessary

to offer such services. As a result, no financial institution is now willing to accommodate the holding of upfront payments in an interest bearing account for a large spectrum auction. So the Commission currently has no way to comply with the law or move forward with a large spectrum auction.

However, there is good news on this front. Just yesterday, the House Energy and Commerce Subcommittee on Communications and Technology advanced an FCC reauthorization draft discussion bill that would fix this, allowing the Commission to again be able to hold large spectrum auctions. Getting this proposal signed into law would have a big impact on our ability to move forward with the mid-band and high-band spectrum auctions that are necessary for 5G deployment.

I know this is a spectrum management conference, but it's also important to point out that unleashing wireless innovation also requires investment in wireless infrastructure. Of course, this is particularly true for our 5G future, which will rely on tens, if not hundreds, of thousands of small cells.

Across the board, Chairman Pai has tasked our bureau chiefs with reviewing our rules to identify regulations that are overly burdensome and in need of revision or outright deletion. One of our biggest projects stemming from this charge took off in the spring when the Commission launched several initiatives to reduce barriers to infrastructure deployment.

For instance, Chairman Pai stood up the Broadband Deployment Advisory Committee (BDAC) to bring together representatives from all key stakeholder groups and task them with recommending solutions to some of the challenges we have been hearing about. In April, the Commission voted to launch its own examination of processes affecting the speed and cost of infrastructure deployment in the context of both wireless and wireline infrastructure. This includes siting issues related to historic preservation, environmental assessment and local zoning laws; it also includes possibilities for pole attachment reform, potentially adding new shot clocks to speed up state and local review, and solving the long-standing problem of twilight towers. We are looking forward to getting BDAC's recommendations next month and moving forward on issues raised in the two infrastructure dockets soon.

Of course, there are certain areas where private carriers lack the economic incentives to build, no matter how many regulations you clear. To connect these areas and bring 4G LTE service to rural Americans who don't have it today, Phase II of our Mobility Fund will invest \$4.53 billion over the next decade. And we're disbursing that money in an efficient, fiscally responsible way by using a competitive reverse auction to allocate these funds to private providers.

With limited resources, we need to think creatively about ways to connect remote areas, and we have. This June, the Commission approved a plan allowing a company to use satellites in low-Earth orbit to provide high-speed broadband. This could be a promising option for those living in hard-to-serve areas. Other satellite companies are interested in doing the same and the Commission is currently processing several of those applications, signaling the possible emergence of a viable new competitive option for broadband in rural communities.

My last point brings me back to spectrum management. Both regionally and globally, spectrum harmonization makes coordination between neighboring countries easier and allows synergies and economies of scale that result in lower prices and a wider range of broadband services and devices. Harmonization is an important objective for spectrum management and helps countries gain maximum economic and social benefits from spectrum resources.

That, at a high level, is what Chairman Pai is doing to unleash wireless innovation and expand digital opportunity to all Americans. Realizing the full potential of most of these initiatives requires engagement with stakeholders in this room. That collaboration continues with today's conference and not

just with me – but with all my FCC colleagues that you will hear from over the next few days. I look forward to working with you as we move forward with these important initiatives. Thank you.