

**REMARKS OF FCC CHAIRMAN AJIT PAI
AT THE MOBILE WORLD CONGRESS LATIN AMERICAN DIALOGUE ROUNDTABLE**

BARCELONA, SPAIN

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Good Morning. Thank you for that warm welcome. I have been asked to talk today about America's 5G strategy. By now, most of you have already had two days of non-stop talk about 5G. So, I was trying to think of a way to mix things up—to keep it fresh. And I came up with an idea.

I will deliver my remarks in Spanish. Using Spanish worked at the Oscars for Roma, which won an Oscar as best foreign language film. So maybe switching to Spanish will work for me, too.

Again, you already know all about 5G, so I'm going to skip the section on the possibilities of next-generation networks and go straight to what we are doing at the Commission to promote 5G innovation.

At the FCC, we are pursuing a comprehensive strategy to facilitate 5G technology. We call it our 5G FAST Plan. It has three key components: (1) Pushing more spectrum into the marketplace; (2) Updating infrastructure policy; and (3) Modernizing outdated regulations. Let me walk you through some of our key activities in each area.

On spectrum, the first part of our plan, the FCC has moved aggressively to make more airwaves available for the commercial marketplace because the services and applications of tomorrow will require much more bandwidth.

We are pursuing an all-of-the-above approach, looking at opportunities in low-, mid-, and high-bands.

Let's take it from the top with the high-band spectrum. Just last month, the Commission successfully concluded bidding on the United States' first auction of millimeter wave spectrum for 5G services in a portion of the 28 GHz band. This auction awarded nearly 3,000 licenses and raised more than \$700 million in winning bids.

We're just getting warmed up. In a couple of weeks, on March 14 to be exact, we plan to start the bidding on a new auction of millimeter wave spectrum in the 24 GHz band.

Then, in the second half of 2019, we will be holding a single auction of the upper 37 GHz, 39 GHz, and 47 GHz spectrum bands. As I explained during a panel presentation yesterday, we had to get creative to resolve some of the incumbent interests in the 39 GHz band, and we will hold an incentive auction to resolve these encumbrances.

Altogether, these auctions will release almost 5 GHz of spectrum into the commercial marketplace for 5G.

On mid-band spectrum, we've been working on three separate proceeding to take spectrum that has been underutilized and to make it available for flexible use. Namely, we are looking at the 2.5 GHz band, the 3.5 GHz band, and the 3.7 to 4.2 GHz band, which many call the C-band. I won't get into the details of these proceeds, but, combined, we are looking at freeing up nearly 850 megahertz of spectrum for possible 5G deployments.

On low-band spectrum, we completed the world's first incentive auction in which spectrum in the 600 MHz band once used by TV broadcasters was sold to wireless companies. One major U.S. carrier is already building out spectrum acquired in this auction to get ready for 5G. In two weeks, the Commission will be voting on a proposal to take spectrum in the 900 MHz band that is currently designated for narrowband communications, like two-way dispatch radios and land transportation licensees, and repurpose some of these airwaves for broadband.

When I talk about an all-of-the-above approach to spectrum policy, that also includes unlicensed. We are currently working to allow unlicensed devices to use the 6 GHz band. This could enable faster Wi-Fi connections. It could also help mobile broadband companies by helping them offload traffic and ease congestion. And, in two weeks, we will vote on final rules in our Spectrum Horizons proceeding that would make 21.2 gigahertz of spectrum above 95 GHz available for unlicensed use across four frequency bands. To be clear, that's gigahertz, not megahertz, so we are talking about massive swaths of spectrum for unlicensed use.

As we provide spectrum to unleash new terrestrial licensed and unlicensed uses, we can't neglect the critical role played by satellite service.

I think we've managed to strike the right balance at the Commission. In our Spectrum Frontiers proceeding, we preserved the 48.2-50.2 GHz and 40-42 GHz bands for next generation satellite use. We also provided some additional flexibility in our earth station siting rules for the 28 GHz and 39 GHz bands.

We have also approved multiple petitions from companies like SpaceX and One Web so they can use low-earth-orbit satellite constellations systems to deliver new options for high-speed broadband service in unserved or poorly served rural areas. These networks hold the promise of facilitating significantly faster satellite broadband service with lower latency.

We voted to allow American devices to access the European global navigation satellite system called Galileo. This move should make GPS more precise, reliable, and resilient for U.S. consumers and businesses.

We updated our rules for Earth Stations in Motion, which will make it easier for consumers who need a broadband connection on a plane, on a train, or in an automobile to get online.

We launched the first review of the Commission's orbital debris rules since 2004, which will mitigate the risks of catastrophic accidents as we transition from the era of a couple thousand active communications satellites in orbit to many thousands.

And we streamlined the rules and licensing options for satellite operators, easing the path for the rollout of new services.

I've digressed slightly from our 5G FAST Plan, but before I get back on track, there's one more point I need to emphasize about spectrum.

On some issues, like spectrum for both terrestrial and space-based services, we simply cannot do it alone. In this regard, I'm pleased to note that many of the countries represented in this room have been working hard and steadily to advance regional proposals on spectrum harmonization for the 2019 ITU World Radio Conference. We bring different ideas to the table, but there are far more areas where we agree. We look forward to working together to set the course for the future of 5G.

Now, back to the 5G FAST Plan and part 2: updating infrastructure policy.

Analysts project that deploying 5G in the United States will require an estimated 800,000 new cell sites by 2025. For context, there are roughly 300,000 cell sites in the U.S. today.

Now, consider this. In the United States, it takes about one or two hours to install a small cell on a utility pole. But it can routinely take more than two *years* to get the approval to install it. Another problem is excessive fees imposed by short-sighted local governments. Siting fees per small cell can be as low as \$50 in some cities, but as high as \$5,000 elsewhere.

We cannot and will not let today's red tape strangle the 5G future. That's why the FCC has reformed our wireless infrastructure rules, and why we'll keep doing so.

Last year, we reformed our historic preservation and environmental regulations so that small cells don't have to jump through the same regulatory hoops as a 200-foot tower.

To speed up state and local reviews, we adopted rules that set a reasonable shot clock for cities to rule on small-cell siting applications. And it sets reasonable limits on siting fees, limits that allow localities to cover their costs.

In addition to these specific policy changes, we've made process reforms to better inform our infrastructure policies. At my first open meeting as FCC Chairman, I announced the establishment of the Broadband Deployment Advisory Committee, which was made up of outside experts from industry, government and the public interest community. For the past two years, this volunteer panel has become a vital source of strategies to promote better, faster, and cheaper broadband.

The third and final leg of the 5G FAST Plan is modernizing outdated regulations.

It's important to remember that 5G isn't just about wireless. To make 5G networks a success, you also need a lot of fiber for backhaul. To promote investment in the wired backbone of 5G networks, the FCC has been working to revise or repeal outdated rules.

For starters, we overturned the prior FCC's 2015 decision to heavily regulate the Internet like a slow-moving utility under rules developed in the 1930s. We've replaced it with a consistent national policy for broadband providers. This light-touch, market-based regulatory framework protects the free and open Internet and encourages infrastructure investment. And evidence abounds that our policy is working. For example, 2018 was a record-breaking year for fiber deployment in the United States, with buildout to nearly 6 million additional homes.

To make it cheaper and easier to string fiber lines on utility poles, we adopted a policy called "one-touch make-ready." This policy allows a single entity to do the advance work to make space for broadband infrastructure on a utility pole. It will substantially lower the cost and shorten the time to deploy broadband on utility poles, and thereby promote more deployment and competition.

We've modernized rules that required investment in maintaining out-of-date copper networks. This will direct more investment toward the resilient networks of the future, not the fading networks of the past.

We also deregulated the market for what we call Business Data Services. These are dedicated network connections used by businesses, non-profits, and government institutions to securely move large

amounts of data. Historically, these networks have been used credit card transactions and ATM withdrawals. In a 5G world, they will be critical for backhaul. By lifting rate regulation where there is competition, we are creating incentives for greater private investment in these modern fiber networks.

Our 5G networks must not only be fast, robust, and responsive. They need to be secure. To ensure the integrity of the supply chain, the FCC has proposed blocking the use of universal service funds for the purchase of equipment or services from companies that pose a national security risk. Beyond the FCC's investments, officials at the highest levels of our government are looking closely at this issue to make sure we do not put American information at risk.

That, my friends, is America's 5G FAST Plan. These next-generation wireless networks have the potential to grow our economies, create new jobs, and unleash new services and applications that will raise standards of living. I look forward to working with you to make this promise a reality.