

**REMARKS OF FCC CHAIRMAN AJIT PAI
WHITE HOUSE 5G SUMMIT**

WASHINGTON, DC

SEPTEMBER 28, 2018

Good morning. It's great to be with you here at the White House. Thank you to National Economic Council Director Kudlow and his terrific staff for convening this event. It's an honor to join so many esteemed colleagues, including Administrator Redl, who is doing an outstanding job leading NTIA.

With senior leaders participating from across government, this meeting sends a powerful message: U.S. leadership in 5G technology is a national imperative for economic growth and competitiveness.

Why does 5G matter? Because it could effectively remove speed, responsiveness, and capacity as meaningful constraints on wireless innovation. Wireless networks will be 100 times faster, maybe more. The lag time between a device's request for data and the network's response will be less than one-tenth of what it is today. Wireless networks that today support 1,000 connected devices per square kilometer could instead support 1 million.

These are major advancements. And they'll open the door to new services and applications that will grow our economy and improve our standard of living. Smart transportation networks that link connected cars—reducing traffic, preventing accidents, and limiting pollution. Ubiquitous wireless sensors that enable healthcare professionals to remotely monitor your health and transmit data to your doctor before problems become emergencies. Connected devices that empower farms to apply precision agriculture. And much more, some of which we can't even conceive today.

These breakthroughs will boost our economy. An Accenture study pegs 5G's potential at 3 million new jobs, \$275 billion in private investment, and \$500 billion in new economic growth. (They had me at 3 million new jobs.)

So point one: We need to seize the opportunities of 5G. Point two: Time is of the essence. We are not alone in our pursuit of 5G. The U.S. is in the lead, thanks to our private sector as well as the work of the FCC, this Administration, and Congress. But China, South Korea, and many other countries are eager to claim this mantle.

To appreciate why, we need to understand the story of 4G. The U.S. was the first country to deploy 4G LTE networks at scale. For some time, even though we had less than 5% of the world's population, America was home to a majority of the world's 4G LTE subscribers. This made America the testbed for 4G innovation. It's no accident that the app economy was born here. The net result was an additional \$100 billion in annual GDP and countless benefits for American consumers.

Having seen our success in 4G, other countries are jockeying for 5G leadership. For the first-mover will be able to attract investment, talent, innovation—and ultimately results. We want and expect that to be the United States.

The story of 4G holds another lesson for us. U.S. success in 4G was driven primarily by the ingenuity and investment of our private sector, but the government's market-friendly policies were critical to setting the stage.

A big reason U.S. wireless companies drove 4G deployment was that the federal government acted early to transition from analog to digital television. This allowed the FCC to auction low-band spectrum in the 700 MHz band—high-quality spectrum used to deploy LTE services. In addition, the FCC resisted a government-led process for setting technical standards for new LTE networks. Instead, we let private companies develop these standards.

So what is the FCC doing to make sure the U.S. continues to lead in 5G?

Our strategy is the 5G FAST plan—a plan to Facilitate America’s Superiority in 5G Technology. The plan includes three key solutions: freeing up spectrum, promoting wireless infrastructure, and modernizing regulations. Let me briefly walk through some highlights in each area.

First: spectrum. The FCC has been extremely aggressive in making more airwaves available for the commercial marketplace. We’ve conducted the world’s first incentive auction in which spectrum once used by TV broadcasters was sold to wireless companies in order to expand bandwidth and coverage for consumers. We’ve scheduled America’s first two high-band 5G spectrum auctions to begin later this year. We’re on track to auction off three more bands next year. We’re exploring how to repurpose mid-band spectrum for new wireless applications, from rural broadband coverage to the next generation of Wi-Fi. And we’re working hard with other federal agencies to free up spectrum currently held by the federal government (which for some time has held a majority of lower-band airwaves). The auctions to come will not only deliver more wireless services to more consumers but also raise billions of dollars in non-tax revenue for our nation. And to put these efforts in perspective: We are aiming to free up more spectrum than is currently held by every mobile broadband provider *combined*.

Second: infrastructure. This is vital to 5G. All the spectrum in the world won’t make a difference if we don’t have the physical infrastructure to carry 5G traffic. That’s going to be a challenge. For the 5G networks of the future will look very different from the 4G networks we know today. Today, we see 200-foot cell towers intermittently dotting the landscape. But tomorrow’s 5G networks will rely more heavily on “small cells”—more inconspicuous equipment, perhaps no larger than a backpack, more densely deployed and operating at much lower power (the closer an antenna is to a phone, the less power is required to connect the two). We’ll need an estimated 800,000 new cell sites by 2025. For perspective, we have barely a quarter of those today. We’ll also need a lot more fiber optic lines to connect all these small cells to the networks’ core.

But we will not have the hundreds of thousands of small cells and miles of fiber needed for 5G unless we have a regulatory approval process that encourages deployment. Consider this: It takes roughly 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 that antenna. Another problem is short-sighted local arbitrage on fees. Siting fees per small cell can be as low as \$50 in an investment-friendly place like Phoenix, but as high as \$5,000 elsewhere.

We cannot let today’s red tape strangle the 5G future. That’s why the FCC has reformed its wireless infrastructure rules, and why we’ll keep doing so. Earlier this 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. And just two days ago, we approved an important order promoting 5G infrastructure. It sets a reasonable 60-day 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. I should note that FCC Commissioner Brendan Carr has been a real leader on this particular issue.

That’s spectrum and infrastructure. Third: modernizing regulations. The FCC is revising or repealing outdated rules to promote investment in the wired backbone of 5G networks. For instance, when I became Chairman, FCC regulations made it too hard for carriers to transition from the fading copper networks of the past to the fiber networks of tomorrow. So we’ve updated those rules to help companies focus on fiber deployment. We’re also making it cheaper and easier to string fiber lines on utility poles with one-touch make ready, which is critical for carrying 5G traffic to and from small cells.

Speaking of replacing outdated regulations, we also overturned the Obama Administration’s 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 that protects the free and open Internet and encourages infrastructure investment.

The steps we're taking under the 5G FAST plan are critical to advancing 5G. But for the U.S. to set the pace, we'll all need to do our part. Today's gathering is evidence that leaders across the Administration are committed to tackling this challenge. I look forward to working with all of you to lead the world in 5G, to grow our economy, and to deliver digital opportunity to the American people.