

**Remarks at Economic Club of Florida**

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Thank you. I want to thank Dominic for that kind introduction and thanks also to the Economic Club of Florida for the invitation to speak here today.

For the past year, I've served as General Counsel of the Federal Communications Commission—the federal agency in Washington, DC that since 1934 has been responsible for regulating the ever-evolving technologies that we all use to communicate (including radio, television, telephones, and of course broadband Internet). The Commission has many responsibilities, and chief among them is the duty to promote competition, innovation, and investment in broadband and other communications technologies. This is important, because the more that businesses invest in and deploy new technologies, the closer we come to a world in which everyone (regardless of their economic status or geographic location) can communicate via the Internet. Today, when millions of Americans carry a supercomputer in their pockets that provides instant access to practically all the world's knowledge, communities and individuals who lack reliable Internet connectivity will be left behind in terms of educational and professional development. As

the chief legal advisor to the agency, it is my job to review the rules drafted by the Commission and oversee their defense in court. In that capacity, I have become keenly aware of how important it is to have the right legal rules in place to give as many Americans as possible the chance to succeed in the information economy.

In making regulatory choices, humility is an essential virtue. History shows that regulators are often poorly-equipped to anticipate exactly how new technologies will develop, and which applications will prove popular with consumers rather than die withering on the vine. Once adopted, federal rules have an uncanny way of sticking in place, through a combination of inertia, gridlock, and lobbying by incumbents who benefit from the existing regime. Technological development, by contrast, is much more dynamic—responding rapidly to shifts in consumer preferences and benefiting from trial-and-error experimentation.

Consider the shifts in communications technology that we've seen over the time the FCC has been in existence. We've moved from telegraphs and traditional landline telephones to wireless smartphones; from radio to broadcast to cable television to streaming movies on computers over Netflix and YouTube; from slow, clunky dial-up modems to lightning-fast broadband Internet connections. Not even the most clairvoyant regulator could have anticipated all of these shifts. It is equally difficult today

for regulators to determine the precise mix of business models, infrastructure and spectrum that entrepreneurs will need to build the communications networks of tomorrow.

In recent decades, two technological revolutions—still mostly conceptual when this Economic Club was founded in 1977—have dominated the communications landscape: the cell phone and the Internet. Chairman Pai and others have remarked on how the Commission's response to these two technological revolutions illustrate the difference that farsighted vs. shortsighted regulation can have on consumer welfare and economic growth.

With respect to mobile technology, we can all remember a world before cell phones, but most of us likely do not remember that the basic idea for the cell phone was first introduced to the public in 1945 in an article in the *Saturday Evening Post*. As former FCC Chief Economist Thomas Hazlett tells the story in his book *The Political Spectrum*, then-FCC Chairman J.K. Jett predicted that millions of Americans would soon be using "handie-talkies," and that the process for issuing licenses to deploy this new technology "won't be difficult."

But as it turns out, the FCC made a critical mistake: It decided it knew best exactly how important cellular technology would be to the American consumer. Deciding that cellular technology was a matter of "convenience or luxury," the Commission sharply limited the amount of spectrum available for

its use, with the result that demand for cellular services well outstripped supply for many years and development lagged, preventing widespread commercial application. The Commission instead decided that it would focus on allocating more spectrum to broadcast television. While broadcast was and remains an important medium for delivering content and information to consumers, the Commission overestimated the amount of spectrum that the public needed, with the result that some broadcast channels remained vacant (and we were all treated to the pleasant experience of watching snow on our screens when turning the dial on our old analog TVs). It turned out that there was enough spectrum for both broadcast and cellular technology. But because the FCC decided to pick winners and losers in the marketplace, the world lost potentially four decades of commercial development of mobile cellular technology. It was not until the 1980s, when the FCC finally allocated spectrum and issued licenses to facilitate the growth of "cellular radio," that cell phone technology proliferated. By 1987, Gordon Gekko in the hit movie *Wall Street* could trade Anacott Steel from his handy Motorola 8000X Dynatec, available for the low cost of \$5,000.

Let's now fast forward to another important moment in communications history—1996, when Congress had to decide what regulatory model to apply to emerging Internet technologies. A

constant temptation with regulators is to attempt to shoehorn new technologies into old regulatory models, or to borrow a Biblical metaphor, to put new wine in old wineskins. At the birth of the Internet, a debate emerged that only lawyers and Platonic philosophers could love (and that continues in some quarters to this day): Was Internet access more like telephone service or more like cable service? Should we treat the Internet as a public utility, like the old monopolist Ma Bell telephone network, complete with the potential for price regulation and common carriage requirements?

Luckily, regulators at the time had the foresight *not* to treat the Internet the same as traditional telephone service. Rather, they had the humility to recognize that perhaps this emerging market did not require heavy-handed government regulation to benefit consumers. Accordingly, in the 1996 amendments to the Communications Act, Congress declared that the Internet should be left to develop "unfettered by federal and state regulation." It decided that emerging "information services" should be subject to a light-touch, market-based regulatory regime. And for almost twenty years thereafter, the Commission embraced a bipartisan consensus that this light-touch approach should apply to the rapidly-developing broadband Internet access market.

The results speak for themselves: Broadband providers invested over \$1.5 trillion in new networks to connect Americans to new products and services; the Internet and social media have revolutionized how we interact and the world in which we live; and the Internet economy has created millions in new jobs and trillions of dollars in value for consumers.

This is a remarkable success story. Unfortunately, regulators are not always content to leave well-enough (or even fantastic enough) alone. In 2015, the Commission decided to depart from this bipartisan consensus and reclassify broadband Internet access as a "telecommunications service" under Title II of the Communications Act. In layman's terms, that means the Commission decided that the same utility-style framework that applied to the Ma Bell telephone system should apply to the dynamic and thriving Internet economy. The Commission imposed vague conduct rules on Internet service providers whose uncertain application threatened to chill the development of new technologies and prohibit popular services already in existence, such as free-data plans.

Predictably, in the wake of this decision, investment in broadband networks fell for two straight years—the first time this has happened outside a recession in the Internet era. And fulfilling the law of unintended consequences, the businesses hardest hit by these developments were not giant internet

service providers, but rather smaller and rural providers that lacked the resources to compete due to increased regulatory and legal costs.

So, how has the FCC under Chairman Pai learned from these historical lessons? I'd like to highlight three ways in which the Commission is introducing smarter regulation to help ensure that the future of communications is brighter than the past.

First, the Commission has reversed the Obama era's 2015 decision and restored the bipartisan consensus that existed since 1996 that applies a light-touch regulatory framework to the Internet.

Contrary to what some critics claim, the Commission's light-touch approach to regulation is not the same thing as no regulation. Rather, the Commission adopted a robust transparency regime in which broadband providers will need to disclose their network management practices, performance, and commercial terms of service. This will provide consumers with critical information when choosing among providers. Furthermore, to the extent that providers engage in practices that are anticompetitive or demonstrably harm consumers, they can be held accountable on a targeted, case-by-case basis by consumer protection and antitrust authorities. By adopting this light-touch approach, the Commission declined to make predictive judgments about what types of business practices should be

prohibited across the board—predictions that in the past proved notoriously unreliable and harmful to innovation and investment.

Second, the Commission is making available for public use a veritable cornucopia of spectrum (to borrow a timely Thanksgiving metaphor) to enable the private sector to develop the next generation of wireless technology. Remember that the spectrum allocation decisions the Commission made in the 1940s severely limited the development of cellular technology. Since that time, the Commission has thankfully become more trusting of the creative potential of free markets. In the 1980s, for example, the Commission authorized unlicensed use of spectrum in so-called “junk” bands that the supposed experts had decided lacked significant commercial potential. From these bands came two of the most revolutionary technologies of the Internet era—Bluetooth and Wi-Fi. Today, Chairman Pai is making more unlicensed spectrum available for public use, which means we could see more Wi-Fi capacity or even new applications that have not even been dreamed yet.

Also, since 1994, the Commission has held competitive spectrum auctions that rest on the simple, market-based principle that selling spectrum to the highest bidder is more likely to result in allocating this scarce commodity to the highest-valued user. These auctions enabled the United States to lead the world in the development of fourth-generation (or “4G”)

wireless technology ten years ago—that's the technology that powers most of our cell phones today.

Now, the Commission is holding auctions to help clear the way for the United States to lead once again in the development of fifth-generation (or "5G") wireless technology. This next generation technology promises faster speeds, higher capacity, and lower latency or lag times. The net result is more reliable real-time service, which will help enable applications that previously could only be imagined in science-fiction—from driverless cars to drone delivery to remote surgery and medical diagnosis.

One recent study estimates that 5G development could create 3 million new jobs, \$275 billion in private investment, and \$500 billion in new economic growth. To unlock this economic potential, the Commission is auctioning off high-band, millimeter-wave spectrum that makes 5G technology possible. The Commission is also auctioning off more mid-band spectrum for "flexible" use—meaning that market participants, rather than central planners, will have more say in determining how best to use it.

Third, the Commission is clearing away regulatory red tape that no longer makes sense for the coming 5G world. In the past, federal, state, and local regulatory approvals were designed for earlier generations of wireless technology that relied primarily

on large macro towers to transmit wireless signals. 5G infrastructure, by contrast, requires a denser network of smaller facilities called "small cells," often times no larger than the size of a pizza box. These smaller facilities do not pose the same risk of environmental or aesthetic disruption as did the 200-foot tall macro towers more typical of earlier generations of wireless technology. Accordingly, the Commission has taken a fresh look at and streamlined its rules to promote the rapid and efficient deployment of 5G infrastructure. Former General Counsel and now-Commissioner Brendan Carr is leading this effort and it's been exciting to work with him on the legal defense of these important rules.

What does the Commission have to show for these new reforms? Well, the latest studies show that investment in broadband once again increased in 2017 after this new shift in regulatory approach from the Pai administration. We're moving once more in the right direction.

But the 5G era promises to present challenges as well as opportunities. As I stated at the outset, there are still many communities that lack adequate access to computers and the Internet. If these primarily poorer and rural communities miss out on the 5G revolution, a vicious cycle will ensue: They will continue to lack the resources to compete effectively in today's labor markets and thus continue to have trouble investing in

communications networks. One of the Chairman's core commitments is to promote access to information and communications technologies to close this harmful "digital divide." This is one area where targeted federal involvement in areas where it is uneconomical to build out new networks can correct for market failure and help ensure that all Americans have the connectivity they need to succeed. To that end, the Commission oversees an annual Universal Service Fund budget that includes billions of dollars for the deployment of and provision of broadband and other services in hard-to-reach rural and high cost areas; as well as similar funds that support schools, libraries, and rural healthcare.

To cite one example, the FCC completed a reverse auction last August (part of the Connect America Fund) that plans to award a total of \$1.49 billion over a ten-year period to deploy broadband to high-cost areas. That includes over \$5 million to the State of Florida, with \$1.3 million allotted to almost 2,300 residential locations here in the Florida panhandle. The Commission has also identified areas in the panhandle that will be eligible for an upcoming Mobility Fund II reverse auction, which will award up to \$4.5 billion over a ten-year period to deploy 4G LTE service to rural areas that lack adequate 4G service. All told, Florida receives approximately \$61 million annually in high-cost support from the Commission and has

received a total of \$1.27 billion in support for schools and libraries since our E-Rate program was established in the 1990s.

Another key area in which the Commission takes an active federal role, as set forth in Section 1 of the Communications Act, is in promoting public safety, and that includes assisting in relief efforts following natural disasters like Hurricane Michael. Among other things, the FCC publishes disaster information reports so that emergency personnel and the public can see where outages are occurring and can track the pace of recovery. Monitoring the progress after Hurricane Michael, Chairman Pai encouraged carriers to credit consumers for bills for those areas experiencing extended outages and a number of carriers have since answered that call.

To be sure, a lot of work remains to be done to advance the goal of universal service. But the Commission under Chairman Pai has consistently made regulatory choices that will spur innovation, create jobs, and give more Americans access to critical information technologies like the Internet. I am excited to be part of the team that is putting the legal structure in place to protect and defend Internet freedom. But I'm even more excited to learn what entrepreneurs and business leaders like the people in this room will do with that freedom to make the world of tomorrow a better and more connected place.

Thank you again for the opportunity to speak here today.  
With that, I will take your questions.