

**KEYNOTE ADDRESS OF FCC CHAIRMAN AJIT PAI  
AT THE REASON MEDIA AWARDS**

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Thank you to the Reason Foundation for inviting me to this fantastic event. And congratulations to tonight's award winners, including Flying Dog Brewery CEO Jim Caruso. In reading about Jim, the thought occurred to me: The FCC is charged with fining people who use obscenities, while the Reason Foundation gives them an award. Don't get me wrong; I'm generally fine with that. All I ask is that going forward, Jim not mention me or the FCC in any of his beer names.

I'm delighted to be at the Reason Media Awards for 2017. And I fully recognize that I'm probably not your first choice. After all, twelve months ago, the cover of *Reason* magazine featured Gary Johnson. And now, an appointee of President Trump is giving your keynote address. It brings to mind a famous lyric from the song that played at the end of the President's campaign rallies: "You can't always get what you want. But if you try sometimes, well you just might find you get what you need."

There's much that I admire about Reason. For decades, you have elevated our political discourse and advanced the cause of individual liberty. I'm especially a fan of your motto: Free minds and free markets.

The pre-dinner portion of tonight's program focused on free minds and the First Amendment. As you might have heard, I've recently said a little bit about that. So I'd like to focus my remarks tonight on free markets.

As someone who has worked in the communications field for most of the last two decades, I've had a front-row seat to one of the most incredible free-market success stories in history: the commercial Internet. What a fortunate turn it was when American policymakers of both parties picked markets over micromanagement in the 1990s. That allowed the Internet to develop quickly; anyone, anywhere could introduce a new product or service on this platform without having to ask the government for permission. The free market, not bureaucracy, would pick winners and losers.

And in the absence of heavy-handed regulation, private-sector broadband providers invested over \$1.5 trillion in networks to connect Americans to these new products and services. This hands-off approach worked beyond anyone's expectation. Companies that launched small became big, as Internet companies like Facebook, Amazon, Netflix, and Google became global leaders. And the broader Internet economy has transformed how we work and live, creating millions of new jobs and trillions of dollars in economic value for consumers.

Given this record, one might think that Americans would be brimming with hope about the future that technological innovation can bring us. But the reality is that we now see more skepticism about the impact of digital technology. Unfortunately, this skepticism poses a threat to the future of digital innovation. *Reason* magazine hit on this theme in its July issue, which covered "The Future of Work." The lead story featured the headline: "Are Robots Going to Steal Our Jobs?" The piece included ominous quotes from technologists, such as "The reality is that we are facing a jobless future: one in which most of the work done by humans will be done by machines."

Now, don't get me wrong. There are legitimate questions about the impact of automation on the workforce. But this issue highlights a larger concern that can make it difficult for government to be on the side of innovation. Before change occurs, it's often easier to identify and focus on those who will be hurt than those who will be helped, even if far more people will be helped in the end.

Perhaps the best example of this dynamic can be found at the Food and Drug Administration. The FDA's job is to keep us safe while at the same time giving the green light to potentially life-saving drugs. These responsibilities require a balancing act. But incentives often place a thumb on the scale against innovation.

The biggest worry for FDA reviewers is that they will approve a drug that turns out to be harmful. This anxiety makes perfect sense. If you approve a drug that can't be 100% guaranteed to be safe, there's a risk that people could get hurt. Then you'll be vilified in the press, dragged before Congress, and your professional reputation ruined. FDA regulators know what the consequences look like if they give a thumbs up to an unsafe drug, and they aren't pretty.

Hoover Institute fellow and 15-year FDA veteran Henry Miller once documented this problem in practice. Miller writes: "In the early 1980s, when I headed a team at the FDA that was reviewing the NDA for recombinant human insulin ... we were ready to recommend approval a mere four months after the application was submitted (at a time when the average time for NDA review was more than two and a half years). With quintessential bureaucratic reasoning, my supervisor refused to sign off on the approval – even though he agreed that the data provided compelling evidence of the drug's safety and effectiveness. 'If anything goes wrong,' he argued, 'think how bad it will look that we approved the drug so quickly.'"

But it's very different if they err in the opposite direction. If FDA reviewers refuse to approve a beneficial drug, few people will probably ever know about it. And so, even though disapproval could cause many people to die needlessly, there aren't likely to be identifiable victims. If the FDA makes that error, it's not likely to pay a public price. Indeed, the lives that could have been improved or saved are unlikely even to be acknowledged.

A review of this dynamic by the Independent Institute concludes that, "In anxiously seeking to avoid the risk of approving an unsafe drug, FDA officials often fall deeply into the inverse error, disallowing valuable drugs."

A much less important, but more public example of this dynamic comes from football. What should you do on fourth down? There's overwhelming statistical evidence that coaches should be going for it on fourth down more than they do, but they generally default to punting. Why? The consequences of going for it and failing can be disastrous and are immediate obvious for everyone, especially cranky fans, to see. Just ask Barry Switzer. But fans and announcers are conditioned not to dwell on the potentially significant benefits that are forgone when the decision is made to punt. (By the way, as a Chiefs fan, it pains me to say that the NFL coach that historically goes for it on fourth down the most is Bill Belichick.)

But enough about the FDA and football. Let's go back to digital technologies. Yes, there are some legitimate downsides that we can clearly see. But we shouldn't let that excuse us from considering the benefits that technology can bring.

Just a few weeks ago, I spoke at the Reagan Library in California. I mentioned something the President said to engineering students at Purdue University in 1987 that applies today.

"The computers I saw in your classrooms, the robots, and other high-tech devices—some fear that these innovations will destroy more jobs than they create, that technology is in some way the enemy of job formation; and yet we need only look at our nation's actual experience to see that this is not so. . . . It's true that over the years, adjustments have had to be made as older industries sometimes gave way to newer. But these adjustments were made, and today our nation employs some 113 million. No, technology is not the enemy of job creation but its parent, the very source of our economic dynamism and creativity."

For the record, this is pretty much the same argument *Reason* made in the Future of Work edition in July: that time and again, going as far back as 1589, when Queen Elizabeth I refused to grant a patent to a knitting machine, people have sounded the alarm that new technologies would destroy jobs. But what usually happens is that new technologies wind up boosting productivity, which allows business to cut prices and offer new products and services, which increases consumer demand, which requires more workers, and ultimately—more jobs are created than lost.

I share President Reagan’s view, and yours, that we should embrace technological innovation rather than fear it. After all, inventing the future is what Americans do. It would be foolish to reverse course and ditch the digital world when technological innovation is more critical than ever to our nation’s economic growth and global competitiveness.

So what does it mean for a government agency to be on the side of innovation? Having served on the FCC since 2012, I’ve certainly had time to think about that question. And I’ve come to the conclusion that the most effective strategy for seizing the opportunities of the digital age is promoting the power of free markets. Instead of viewing innovation as a problem to be regulated based on rules from the past, government should see innovation’s potential, guided by markets that embrace the future. Government can best serve the public interest by getting rid of the red tape that stifles innovation and progress.

Consider two examples from the FCC’s history: one in which we got it wrong and one in which we got it right.

For many of my generation, an early memory of seeing a cell phone was Gordon Gekko’s Motorola brick in the 1987 movie *Wall Street*. That phone cost \$4,000 and weighed nearly two pounds. And people thought it was the second coolest gadget of the 1980s—after Doc Brown’s flux capacitor. But did you know that the idea for cell phones, or “handie-talkies,” was promoted by my FCC predecessors as far back as 1945? For almost four decades, the technology for mobile telephone service was there. But it didn’t fully take off until 1982, when the FCC finally authorized cellular radio. Permission at long last caught up with potential. This chilling of innovation is what can happen when you leave decisions to central planners, not the free market.

On the flip side, the FCC took the opposite approach to another spectrum issue in the 1980s, and it paid off big-time. There were some airwaves so undesirable and unused that they were dubbed “junk” bands. The FCC wasn’t sure what to do with them, so they set some aside for what we call “unlicensed” spectrum. Basically, anyone can use this spectrum, provided that you don’t cause harmful interference to those using other spectrum. At first, the applications were things like baby monitors and garage door openers. But the real breakthroughs were Bluetooth, and, most important, Wi-Fi.

Moving from the FCC’s past to our present, I’d like to briefly discuss what the FCC is doing under my leadership to promote innovation.

One example that highlights the approach we are taking involves what is known as Next Gen TV. A week from today, the Commission will be voting to allow television broadcasters to fully enter the digital era by using the next-generation television standard on a voluntary, market-driven basis. This new transmission standard, known as ATSC 3.0, is the first one to marry the advantages of broadcasting and the Internet. And it could let broadcasters offer much better service in various ways, from 4K video to immersive audio to advanced emergency alerts to better accessibility options for Americans with disabilities.

To be sure, this innovation has its opponents. They dwell on the challenges inherent in any technological transition instead of embracing the benefits that innovation will bring. And they want to impose extensive government regulation that could strangle Next Gen TV in its infancy. To be sure, these opponents inherit a long tradition going all the way back to the late 19th century, when many denounced the development of the automobile. But this tradition is rooted in fear and opportunism, not freedom and opportunity.

And speaking of technological upgrades, we will also vote next week on making it easier for broadband providers to move from the copper networks of yesterday to the fiber networks of tomorrow. Some of these copper lines have been in the ground for a century. They're nowhere near as resilient or robust as fiber. But our rules too often still demand that companies maintain those fading networks. That comes at a cost to consumers. By definition, every dollar that a company spends propping up copper is a dollar that can't be spent building a next-generation network. That's the kind of red tape that needs to be cut.

Here too, this proposal has its detractors. They refuse to let go of the past and stoke fears about the future. They also complain, ironically, that we don't have enough Internet access or more competition—precisely what we'd get by ridding the rust from our regulations. Incidentally, I find it amusing that many of those who reject the two proposals I've just discussed describe themselves as “progressives.” What's progressive about standing in the way of progress? It's understandable when Walter Sobchak announced that he was living in the past; at least he had 3,000 years of beautiful tradition to fall back on. But here? Dude.

I should mention that next week's votes follow several other steps we've taken this year to encourage innovation.

Just last month, we granted an experimental license to Google's parent company, Alphabet, to provide emergency cellular service in Puerto Rico. The license was for an initiative called Project Loon, which uses a network of balloons to provide wireless connectivity to users on the ground. And today, it was announced that this service has connected over 100,000 Puerto Ricans.

We've also authorized the first-ever LTE-unlicensed—or LTE-U—devices. This allows wireless companies to share the road, so to speak, with other unlicensed uses. For consumers, this allows the best of both worlds: a more robust, seamless experience when their devices are using cellular networks and the continued enjoyment of Wi-Fi.

We've also approved market access for the next generation of satellite constellations. These low- and mid-earth orbit satellites aim to supply high-speed Internet access to hard-to-serve areas.

We've also changed our experimental spectrum licensing program and launched a new website to make it easier for parties to register proposed new experiments. This new type of license makes it easier for all types of tinkerers—including universities, research labs, health care facilities, and manufacturers of radio frequency equipment—to develop new technologies and services.

We're also promoting something I'm particularly excited about: next-generation wireless connectivity, commonly known as 5G. 5G could lead to exponential growth in the Internet of Things, major advances in augmented and virtual reality, cooperative collision avoidance for cars, and remote robotic surgery. And those are just the things we can already foresee.

To seize the 5G future, and to accommodate the ongoing surge in mobile data traffic, the FCC is working hard to get more licensed and unlicensed spectrum into the marketplace. And we're focused on cutting the regulatory roadblocks at the federal, state, and local levels that often make it too difficult to deploy the physical infrastructure that will be critical to 5G networks.

It's not just policy that we're changing; it's process, too. You know as I do that one of the most powerful forces in government is inertia. To ensure that innovators don't get stuck by it, we've set up a new process. If someone seeks approval of a new technology or service, we'll make a decision within one year. No more waiting indefinitely for an answer. This process implements a part of the Communications Act—Section 7. You've probably never heard of it, and for good reason—it's been on the books for decades, but it's never been enforced. At long last, it will be. (Now, I realize that one year

probably sounds like a long time to you, but remember, this is the agency that held back cellphones for four decades.)

One final point: the most effective way to promote innovation is to get more competition into the marketplace. Competitive markets have delivered far greater benefits to consumers than heavy-handed dictates ever have. That's why—across the board—we are revising and removing regulatory barriers to infrastructure investment. To give one example, I want all types of companies to be competing in the broadband marketplace: cable, wireline, mobile, fixed wireless, satellite, and more.

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When it's after 9:00 PM and you're talking about infrastructure investment, you know it's time to wrap things up. And befitting tonight's host and the irreverent tenor of the evening, I'm going to conclude with a lesson from my favorite libertarian philosophers: South Park co-creators Trey Parker and Matt Stone.

Back in 2010, there was a South Park episode where the local KFC is shut down because of a new state law banning fast food. This leads to Cartman getting involved in a black market selling fried chicken. At the same time, the KFC is replaced by a medical marijuana dispensary, and Stan's dad, Randy, and some other locals hatch a plan to give themselves cancer so they can get pot legally. Those of you who have seen the episode know that this synopsis has been sanitized.

Why do I mention this? Well, as absurd as it is, South Park captured something important about how government regulations crafted with the best of intentions often have unintended consequences. Yes, it's exaggerated, but there's an important point here for policymakers to keep in mind when weighing the future of technology.

Whenever a technological innovation creates uncertainty, some will always have the knee-jerk reaction to presume it's bad and demand that we do whatever's necessary to maintain the status quo. Strangle it with a study. Call for a commission. Bemoan those supposedly left behind. Stipulate absolute certainty. Regulate new services with the paradigms of old.

But we should be wary of that temptation. History tells us that it is not preemptive regulation, but innovation made possible by competitive free markets, that best guarantees consumer welfare. The future can be bright, if only we choose to let the light in.

With that, I'll close by offering a toast: to free minds and free markets. As fans of Flying Dog's IPA might say, that's The Truth.