

**REMARKS OF FCC GENERAL COUNSEL THOMAS M. JOHNSON, JR.  
AT THE MEDIA INSTITUTE'S COMMUNICATION FORUM LUNCHEON**

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Thank you to the Media Institute for inviting me to speak today, and thank you for that kind introduction. I admire all that the Media Institute does to defend the freedom of speech and for its thoughtful work on communications policy.

For the past eighteen months, I've served as General Counsel of the Federal Communications Commission. As the chief legal advisor to the Commission, it is my job to review the rules that the Commission drafts and to oversee the defense of those rules in court. In doing that, I've witnessed how rapidly the ways we communicate and consume media are changing based on new technological developments.

But you don't need to be a communications lawyer to see the breakneck pace at which technology changes every aspect of our existence. Consider how technology has reshaped one of our oldest and most sacred rituals—the wedding. Instagram turns every wedding guest into a photographer, details are provided to guests on personalized websites, and you can register for that carving set you've always wanted on Amazon. Parents post it all on Facebook; friends commit more colorful moments to SnapChat. It's even possible today to ask your photographer to use a drone to take aerial footage of your wedding. (I know because I'm about to get married and I recently learned that flying a drone in restricted airspace in DC is a federal offense—that's what we General Counsels call an unacceptable risk.)

Who could have predicted all this in 1996, when the Communications Act was last substantially revised? If you were very prescient, you may have been able to predict the adoption of the technologies involved—mobile phones, drones, new wireless networks, and social media. But foreseeing all of these technologies and the ways they've altered nearly every aspect of our lives would have taken some serious clairvoyance. As Yogi Berra once said, "It's hard to make predictions, especially about the future."

And that is my topic for this afternoon: How difficult it is for regulators to predict how technology will develop and transform markets, and why that difficulty demands humility from our regulators. This is a particularly important lesson for the Commission, which stands at a unique crossroads between technology and innovation.

I'll start with a famously wrong prediction about technological progress and the delivery of mail, made by the US Postmaster General in 1959. He predicted that "Before man reaches the moon, your mail will be delivered within hours from New York to Australia by guided missiles. *We stand on the threshold of rocket mail.*" Well, Apollo 11 reached the moon ten years later, but sixty years later we have yet to send RSVPs via rocket.

It may shock this audience to learn that there have been flaws at times in the Commission's crystal ball as well. Consider the history of FM radio. FM was first unveiled at the Institute for Radio Engineers in 1935. It was met with rave reviews—engineers were astonished by the sound quality, and many predicted that FM radio would make AM radio obsolete.

The Commission was not so sure. In the beginning, the Commission doubted the technical viability of FM radio. And when the FCC was finally convinced that the technology would work, it allocated only a single megahertz for FM broadcast channels. The Commission reluctantly granted additional spectrum a few years later—in 1940—just in time for World War II to freeze civilian electronics production. If you were fortunate enough to purchase an FM radio regardless, that radio became worthless in 1945, when the Commission relocated FM frequencies up the dial. This effectively killed FM radio until 1960, when the Commission approved stereo broadcasting in FM. So, the Commission delayed the adoption of a superior technology for over 20 years. If not for the Commission, the greatest generation could have listened to Glenn Miller in high fidelity.

The history of mobile wireless regulation provides a similar cautionary tale. Few realize that cell phone technology was conceived in the 1940s—long before Zack Morris used his brick-sized Motorola to call Kelly Kapowski in the halls of Bayside High. In fact, the basic idea for the cell phone was first introduced to the public in 1945 in an article in the *Saturday Evening Post*.

Around that time, wireline carriers like AT&T urged the Commission to allocate capacity for a mobile wireless network. We didn't listen. 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 development lagged, preventing widespread commercial application. The Commission decided instead to devote more spectrum to broadcast television. While broadcast is 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 viewers were stuck with snow and static at the higher ends of the TV dial—and no mobile phones.

Eventually, the Commission discovered that there was enough spectrum for both broadcast and cellular technology. But the forty years it took for the Commission to recognize the potential of cellular technology cost the U.S. economy tens of billions of dollars, by one estimate, and delayed the commercial development of this technology by four decades.

I'll share one more example from 1961, when an FCC Commissioner infamously declared that there was "practically no chance communications space satellites will be used to provide better telephone, telegraph, television, or radio service inside the United States." The nascent satellite industry had different ideas. The satellite TV industry emerged in the 1970s, with companies like HBO, TBS, and CBN. Just last month, Amazon asked international regulators to provide spectrum rights for a constellation of 3,296 satellites for broadband internet connectivity. And of course, the Commission last year approved SpaceX launching a satellite internet constellation of over 12,000 satellites. Another wrong prediction.

The moral of each of these stories is the same—regulators are not good futurists. And what predictive powers regulators have are weakening as technological progress quickens and becomes even less predictable. Technologies that in my childhood were considered science fiction are now coming to market—digital personal assistants, augmented reality, and self-driving cars are just a few prominent examples. Only weeks ago, a Google subsidiary gained approval for a drone delivery service. And Elon Musk recently tweeted that Tesla is developing a sentient leaf blower. No one, including the Commission, knows what will happen next: the best we can do is keep our head down and try to avoid being struck by a delivery drone.

Consider also recent changes in the market for the delivery of video programming. In March, the Motion Picture Association of America reported that subscriptions to online video services surpassed cable subscriptions for the first time in 2018. That gap could continue to widen: subscriptions to streaming services like Netflix and Amazon Prime increased 27 percent in 2018, while cable subscriptions decreased by 2 percent. No wonder that more media companies, like Disney, are now creating their own streaming media platforms.

These developments have encouraged other companies that were not traditional content creators to enter the market. Apple has announced a subscription TV service, where you will be able to watch new content from Oprah and Steven Spielberg. And major wireless carriers are launching their own over-the-top TV streaming services and signing their own content distribution agreements.

The beneficiary of all this competition is the consumer: As streaming services produce more new shows, cable and broadcast companies respond with their own content. According to a recent *Wall Street Journal* report, in 2018, there were nearly 500 original scripted new shows across broadcast, cable, and streaming platforms—nearly double the number of new shows in 2011. And only some of that growth is attributable to streaming services—the absolute number of original scripted shows has also increased in traditional forms of media like cable and broadcast. So competition incentivizes investment in new content, and consumers benefit from the availability of more options.

As with the advent of mobile wireless, the Commission is again faced with the question of how to regulate a market that is being fundamentally changed by new technologies and a new competitive

landscape. Under the leadership of Chairman Pai, the Commission has strived to be as nimble as the industries that it regulates. The Commission has updated old rules to match the realities of today's marketplace and has worked hard to enable the deployment of new communications technologies that will improve the lives of all Americans.

In that spirit, I am pleased to make an announcement: Today, the Chairman's Office has circulated a draft Report and Order as part of the Commission's Modernization of Media Regulation Initiative, which updates the Commission's leased access rules. For those who are not familiar with those rules, the leased access rules direct cable operators to set aside channel capacity for commercial use by unaffiliated video programmers. The original purpose of these rules was, in large part, to promote diversity and competition in the video programming marketplace. These rules have largely been in place since the 90s, when many of us were still getting content from the New Releases section at Blockbuster. Back then, these rules were defended as necessary to ensure that even those programmers without a cable company could distribute their content to the public.

The Commission *did* attempt to update its leased access rules in 2008, but these updates would have made leased access more onerous, not less. In any event, the Commission's order revising the rules never went into effect due to a judicial stay and the Office of Management and Budget's refusal to approve the new rules under the Paperwork Reduction Act. So, the operative rules remain those that the Commission passed nearly a quarter-century ago.

The draft order cleans the slate by vacating the Commission's troubled 2008 order. It also acknowledges the explosion in available platforms to distribute programming. Because the Internet now provides flourishing alternate means of distribution for short-form programming, the draft order, among other things, eliminates the requirement that cable operators make leased access available on a part-time basis. In the same item, the Commission will also issue a further notice that will propose one modification to the leased access rate formula that would make leased access fee calculations specific to the tier on which the programming will be carried and asking what else the Commission can do to ensure that cable operators are adequately compensated for administrative costs. We will also seek comment on whether our leased access requirements can withstand First Amendment scrutiny today in light of changes in the video programming marketplace.

The Commission under Chairman Pai has modernized its media rules in other ways as well. More people are getting news alerts from Twitter and Facebook, watching breaking news on YouTube, and reading about the latest political developments on their favorite blog. So in 2017, the Commission updated its media ownership rules to reflect today's dynamic and evolving media landscape. Among other things, the Commission relaxed restrictions on the cross-ownership of media outlets that were adopted in a pre-Internet age when consumers had much more limited options for news and other content. When these rules were originally adopted, most American cities had only three major television stations; few homes subscribed to cable television; and people could only get local news from the single newspaper that served their city. Again, things have changed. The Commission's reforms will empower local broadcasters and newspapers to compete in an increasingly-crowded new media marketplace.

The Commission's attempts to modernize its media ownership rules have been the subject of ongoing litigation in the Third Circuit, in the long-running line of *Prometheus* cases. In March, we filed our brief in the fourth installment of this series, which we call, rather cinematically, *Prometheus IV*. The Third Circuit decided the first *Prometheus* case in 2005, which means that we have been litigating changes to these rules for about 15 years. We look forward to presenting oral argument once more before the Third Circuit sometime soon—and I'm hoping that the run time on that will be shorter than *Avengers: Endgame*.

One other rulemaking to watch concerning changes to the media landscape: The Commission has noticed potential changes to children's programming requirements, known as "Kid Vid." The Kid Vid rules impose on broadcasters the obligation to air a certain amount of educational and informational children's programming. The Kid Vid rules require that such programming be a certain length, and that it be aired regularly at certain times during the day. The Commission last updated those rules in 2006. That

may not seem like long ago, but for context, in 2006 Netflix subscribers were still getting their movies in a small red envelope delivered by mail.

Today, however, children's educational programming is available not only on broadcast television, but also through over-the-top providers, cable channels, and the Internet. In other words, your children don't have to run downstairs at 7 a.m. on Saturday morning like I did to watch shows like Sesame Street—they can sleep in and stream it whenever they'd like, from any number of devices. So, last year, the Commission issued a Notice of Proposed Rulemaking asking whether the current Kid Vid rules still make sense in today's media marketplace.

What has the Commission learned from its experiences with limited regulatory foresight and a rapidly changing technological landscape? That humility must be among the Commission's essential virtues. For the Commission, humility means recognizing that regulating emerging technologies is a fraught endeavor, and that in many cases the market may be better at solving a problem than regulation. And where we do regulate, we should be less prescriptive, more technology neutral, and willing to update regulations periodically to reflect changing market realities.

The Commission put this virtue on bold display last year, when it established the Office of Economics and Analytics—or OEA. Hayek famously said that “the curious task of economics is to demonstrate to men how little they really know about what they imagine they can design.” OEA—which formally began operating last December—will, among other things, perform a cost-benefit analysis of the Commission's major rulemakings to ensure that any new regulation is justified. And OEA will ensure that the Commission considers the costs and benefits of alternative approaches—including the alternative of not regulating at all. By establishing this office, which will tell the Commission “how little it knows about what it imagines it can design,” the Commission has injected humility into its organizational structure.

I have now violated my own injunction by bragging about the Commission's humility. And I'd like to conclude this speech by breaking one more rule and let you in on a prediction about the future of communications technology.

Given this crowd, I think I'm on safe ground with this one. We are on the precipice of developing a next-generation wireless, mobile communications network that will grow our GDP by billions and add millions of jobs to the American economy. This next generation technology promises faster speeds, lower latency, and higher capacity. Americans will be able to connect with friends and relatives across the globe in ways that our ancestors could only dream about. And we're going to need smart regulations to clear the red tape and incentivize the deployment of new infrastructure. This will be the future of connectivity.

I am speaking, of course, of rocket mail! It's finally coming. You heard it here first!

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