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OVERSIGHT OF THE FEDERAL COMMUNICATIONS COMMISSION

WEDNESDAY, JULY 25, 2018

House of Representatives,
Subcommittee on Communications
and Technology,
Committee on Energy and Commerce,
Washington, D.C.

The subcommittee met, pursuant to notice, at 1:00 p.m., in Room 2123, Rayburn House Office Building, Hon. Marsha Blackburn [chairman of the subcommittee] presiding.

Present: Representatives Blackburn, Lance, Shimkus, Latta, Guthrie, Olson, Kinzinger, Bilirakis, Johnson, Long, Flores, Brooks, Collins, Walters, Costello, Walden (ex officio), Doyle, Welch, Clarke, Loeb sack, Ruiz, Dingell, Eshoo, Matsui, McNerney, and Pallone (ex officio).

Staff Present: Jon Adame, Policy Coordinator, C&T; Samantha Bopp, Staff Assistant; Karen Christian, General Counsel; Kelly Collins, Legislative Clerk, Energy/Environment; Kristine Fargotstein, Detailee, C&T; Sean Farrell, Professional Staff Member, C&T; Margaret Tucker Fogarty, Staff Assistant; Adam Fromm, Director of

Outreach and Coalitions; Brighton Haslett, Counsel, O&I; Elena Hernandez, Press Secretary; Paul Jackson, Professional Staff, DCCP; Bijan Koohmaraie, Counsel, DCCP; Tim Kurth, Deputy Chief Counsel, C&T; Lauren McCarty, Counsel, C&T; Drew McDowell, Executive Assistant; Brannon Rains, Staff Assistant; Evan Viau, Legislative Clerk, C&T; Greg Zerzan, Counsel, DCCP; Jeff Carroll, Minority Staff Director; Jennifer Epperson, Minority FCC Detailee; Alex Hoehn-Saric, Minority Chief Counsel, Communications and Technology; Jerry Leverich, Minority Counsel; Jourdan Lewis, Minority Staff Assistant; Dan Miller, Minority Policy Analyst; Tim Robinson, Minority Chief Counsel; and C.J. Young, Minority Press Secretary.

Mrs. Blackburn. The Subcommittee on Communications and Technology will now come to order. I want to thank our witnesses for being here. We appreciate having you before us today. And I recognize myself for 5 minutes for an opening.

And welcome to this hearing on Oversight of the Federal Communications Commission. Today's hearing marks the first time in 28 years that the FCC has appeared before this subcommittee having been reauthorized by Congress. So I am delighted to welcome the recently reauthorized commission here today. This reauthorization effort reflects bipartisan, bicameral support of the FCC and the important work it carries out each day to enhance public safety, technologies and alerts, strengthen our national security, increase broadband deployment, and protect consumers while fostering competition and innovation in the communications marketplace.

I hope today also demonstrates the importance of being reauthorized as each of the commissioners articulates how that action benefits the organization. I know we can deliver the same bipartisan accomplishment for your colleagues at the NTIA.

While the FCC is charged with many important tasks, one of the most critical roles it plays revolves around public safety, from working to ensure it that alerting technologies warn the public of impending emergencies to aiding in the restoration of communication networks and services following emergencies, the FCC is responsible for making sure our communication systems are there when Americans are most in need of lifesaving information. This work is furthered through the Nation's 911 service platform. With this year being the 50th anniversary of the first 911 call, we here in Congress have been actively working with both the FCC and the NTIA to improve the country's 911 systems and facilitate the transition to Next Gen 911 services. I am looking forward to hearing more today about the FCC's work to advance public safety before, during, and after emergencies the FCC has also worked closely with this subcommittee in our shared goal

of promoting broadband access and closing the digital divide. We all agree on the importance of bringing the benefits of broadband to all Americans, and this is especially true in rural America. RAY BAUM'S Act included a number of bipartisan provisions for members of this subcommittee and members of the full Energy and Commerce Committee that will help the FCC in removing Federal barriers to broadband deployment, increasing the amount of available spectrum in funding broadband. And just last week on a hearing on rural broadband, we heard from a variety of stakeholders on the impact of that legislation. I look forward to hearing more today on how the FCC has begun to implement the legislation.

I also look forward to hearing the Commission's recommendations on how we can improve connectivity for communities that are in desperate need of improvements to their education and healthcare services. It is this committee's primary role to conduct oversight of all the programs and policies overseen by the FCC, and I remain focused on our key priorities so we can focus the work of this commission.

And at this time, I yield the balance of my time to Mr. Lance for an opening statement.

[The prepared statement of Mrs. Blackburn follows:]

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Mr. Lance. Thank you very much, Chairman. This is the most important responsibility we have on this subcommittee, and certainly we believe that it is incredibly important that the Commission, which does such fine work, is responsive to our concerns. I commend all of the Commissioners for your work. It has been my honor to work with every member of the Commission. I want to continue to do so in as strong a capacity as possible. And moving forward, we have to make sure that we work in bipartisan cooperation on the issues so important to the American Nation.

Thank you, Chairman. I yield back the balance of my time.

[The prepared statement of Mr. Lance follows:]

***** COMMITTEE INSERT *****

Mrs. Blackburn. The gentleman yields back.

At this time, I recognize the subcommittee's ranking member, Mr. Doyle, for 5 minutes.

Mr. Doyle. Thank you, Madam Chair, for holding this very, very long overdue hearing. And thank you to the witnesses for, finally, after 9 long months, coming before this committee once again.

In the 9 months since our last hearing, the FCC has continued to expand its track record of anticonsumer, anti-small business, anti-innovation policies. It seems that at almost every opportunity, the Commission has chosen corporations over consumers and failed in its duty to uphold the public interest. In December of last year, the Commission voted to eliminate net neutrality protections that are supported by the vast majority of Americans from all sides of the political spectrum. Chairman Pai's comments regarding the quote/unquote, chicken littles who were concerned about the repeal should take a look at the public opinion polls that show the vast majority of his own party is opposed to the Commission's action. These rules protected consumers and small businesses, as well as entrepreneurs and innovators. I am happy to say that the Senate has already passed a resolution restoring these rules. And we hope that we have a vote on our own bipartisan resolution here in the House.

The rest of the Commission's agenda has been no better. They have proposed gutting Lifeline Program, which is an essential communications tool for millions of Americans, including veterans and seniors. The Commission has made a series of decisions to encourage consolidation among broadcasters, from eliminating the main studio rule to reinstating the UHF discount, weakening the kid vid rules, and proposing to change the congressionally established National Ownership Cap. It seems that each of these actions benefit broadcast corporations, and it leaves the public worse off.

The Chairman has claimed that he cares about rural broadband deployment, but the Commission in its zeal not to burden major wireless carriers with reporting where they have wireless service deployed imposed as part of Mobility Fund II a bizarre and onerous challenge process that requires rural providers to hire people to walk through cornfields and backyards trying to prove that communities don't have wireless service. And if those companies can't afford to send people up, the Commission will assume these communities are connected. Now tell me, how does that help the 24 million Americans without access to high-speed broadband?

In the same vein, how does making changes to the CBRS ban to make it less accessible to rural wireless providers who are deploying broadband in hard-to-reach communities enhance the Commission and this committee's shared goal of closing the digital divide? Well, it doesn't. This Commission's reckless actions on broadband data services and copper retirement were so corporate friendly that NTIA, the White House's adviser for telecommunications policy, recently said that they remain, quote, concerned, however, that streamlined regulatory requirements may place on Federal departments and agencies that rely on services subject to discontinuance in the untenable position of losing access to critical national security and public safety communications functionality.

How is the Commission putting the convenience of carriers above our Nation's national security and public safety needs? And that is besides the impact that these policies have on schools, libraries, hospitals, small businesses, and competitors that also rely on these services. What about Americans' privacy? Senator Wyden's office recently found that wireless carriers had been sharing the real-time location data of hundreds of millions of cell phones with third parties without consent from their users. That included sharing information with law enforcement agencies that used this data to

illicitly look up Americans' location data without a warrant or due process. And we don't even know the scope of this problem because the Commission was asleep at the wheel. I understand that the Commission is now investigating, but how are you so in the dark on an abuse that was a widespread industry practice? And what confidence can this committee have that the Commission will take appropriate enforcement action against carriers who have so recklessly shared our location data without our consent? Again and again, the Commission has failed in its obligations to uphold the public interest and has instead repeatedly sided with corporations over consumers. And in waiting 9 months to do this oversight hearing, this committee has been complicit in the Commission's action by turning a blind eye and being derelict in our responsibilities to provide oversight for this agency.

I would just add that, while I am pleased the Commission issued a hearing designation order for the Sinclair merger and in doing so acknowledged the near universal concerns about Sinclair's honesty and candor, I am extremely concerned that the President has weighted into this issue. I hope, Chairman Pai, that you can assure us the President's tweet last night will not cause the Commission to change course or affect the proceedings of an administrative law judge.

Thank you. And I yield back.

[The prepared statement of Mr. Doyle follows:]

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Mrs. Blackburn. The gentleman yields back.

Mr. Walden, the chairman of the full committee, is recognized for 5 minutes.

The Chairman. Well, thank you, Madam Chair. I want to thank you for your leadership on these topics. Specifically, I want to thank you for highlighting the improving emergency alert and 911 services, as well as your outreach to the minority on the NTIA reauthorization. You know, we have reauthorized the FCC for the first time in what 28 years on the RAY BAUM'S Act. In fact, I think that is the last time you were here to testify before us, Mr. Chairman.

The Commission's efforts in wildfire and hurricane response, its focus on emergency alerts and implementing improved call routing, location accuracy are key priorities for all of us. You know, when we reauthorized the FCC for the first time in two decades, we appreciated the Commission's input on our work. And thanks to the hard work of everyone on the committee, we were able to incorporate provisions from 18 bipartisan bills that now form RAY BAUM'S Act that is law. So here we do try to work together whenever we can on these issues, 18 bipartisan bills, the RAY BAUM'S Act, and I think we did 57 bills on opioids, virtually all of which were bipartisan.

So I look forward to hearing about the FCC's progress in implementing this important law, such as the broadcast repack. The Commission has been very busy doing good work on the repack. We provided an extra billion dollars and fixed some of the issues that were there to make sure that translators and FM radio stations could get their antennas moved, their equipment moved, so we can free up that spectrum.

And I know the Commission, under your leadership and others, successfully pulled off the biggest reverse auction in history. You brought to our attention, Mr. Chairman, the issue involving the illegality of the funds that came to the Commission. You couldn't put them anywhere legally, even though your predecessor did. And so we fixed that,

and I think that was important to take care of.

I want to thank you for coming out to my district last month, and we traveled around, we saw a health clinic and what telehealth means. I want to commend the Commission for the decision to lift the cap on the rural health telemedicine piece. That made a huge and positive difference for our rural clinics, when you added \$171 million over the \$400 million cap. You heard it firsthand when you were out there meeting with the clinic, and I appreciated the discussion we had with the broadcasters, the small ISPs. I think you got a taste for what the seventh or eighth largest congressional district in the country is, even though we never got out of one county, but we were there all day.

Commissioner O'Rielly and I have recently had conversations about the uphill challenge facing our radio industry, which I have some experience. My colleagues say I have a great voice for radio and a face for it too. They are not very nice possible. Radio, as you know, was my original story, and my father's as well. And I think it is a really important part of our country's framework and fabric of sharing information and entertainment. That fraternity of voices is sharing the same fate as newspapers unfortunately, which never gained the benefits of cross-ownership relief under the commission for some 15 years. Entities captured once again by regulations from another time. We seem trapped in this constant time warp that regulations of the seventies or the 1930s for that matter somehow work for the present day or beyond. And some obviously want to take us back to the regime of the 1930s.

We will discuss the changing media landscape today as well. Another sector that edge providers are disrupting, which is great news. It is yet another example of why I put the call out a year ago and then a few months ago inviting the CEOs of some of America's greatest innovative technology companies to please come here and share with us before this committee their concerns and recommendations on a wide range of topics.

The rhetoric around these issues has become like watching the opening of an old television show, waiting to get to the main programming. We sit here and listen to the same old falsehoods, that we ripped away privacy and net neutrality protections, while the reality is all we have done is restore bipartisan equilibrium and regulatory framework existed just 3 years ago. Little mom-and-pop startups kind of found their way through a light-touch regulatory framework. Though we now know those as old Facebook, Google, Netflix -- you name it -- all grew up in a light-touch framework, not with the 1930s way we regulated telephones.

In this committee room, we do have the benefit of hearing our critics speak out loud, though unlike other corrosive voices that seek to destroy our daily discourse.

As Chairman Pai knows all too well, be fearful if you are conservative and let your views be known. I am sorry for what you and your family have gone through. Whether you are on the right or the left, somewhere here we have to get back our humanity where we are not shouting at each other and threatening each other, but instead trying to work out our differences. We do that a lot in this committee. And we will continue to.

So, with that, Madam Chair, thank you for this hearing.

And I yield back the balance of my time.

[The prepared statement of The Chairman follows:]

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Mrs. Blackburn. The gentleman yields back.

At this time, I recognize the ranking member of the full committee, Mr. Pallone, for 5 minutes.

Mr. Pallone. Thank you, Madam Chairman.

The Federal Communications Commission is an independent agency created by and accountable to Congress. Congress gave the agency broad powers and the responsibility to protect consumers, advance competition, promote universal service at reasonable rates, and enhance public safety; in other words, to work in the public interest.

As the FCC's oversight committee, it is our duty to ensure the Commission's actions advance those goals and hold the Chairman and Commissioners accountable when the agency does not. Unfortunately, the Republican majority of this committee has been unwilling to follow through on its promise to hold quarterly oversight hearings with the FCC. This is the first oversight hearing in 9 months and only the third this Congress. During that time, the Commission has repeatedly acted contrary to its core mission. In a series of partisan votes, the agency dismantled protections for consumers and initiated numerous proceedings designed to benefit big corporations to the detriment of working class Americans and local communities.

By far, the most high-profile and controversial decision was the elimination of the FCC's net neutrality rules. Those safeguards protected the consumers, protected the small businesses, and protected free speech. Chairman Pai ignored the vast majority of the 24 million comments from individuals and businesses supporting net neutrality. It is not surprising that Chairman Pai's order faces massive consumer opposition. Public outrage from startup companies, working families, educators, healthcare professionals, veterans and so many others at townhalls and community centers have driven

congressional action. In May, the Republican-controlled Senate passed legislation that would reinstate net neutrality, Ranking Member Doyle is now championing that legislation here in the House. And it is not too late to stand with the American people and restore net neutrality. And I urge Speaker Ryan to bring this legislation up for a vote and stand with the bipartisan Members that have signed the petition to force one.

Sadly, the FCC's disregard for consumers does not end there. At a time when other agencies are separating children from their families at borders and violence in schools is far too commonplace, the Trump FCC wants to roll back rules that limit advertising to children and requires stations to air educational programming for kids. And this doesn't make sense. If the agency was serious about focusing on consumers, they would want to help parents searching for quality educational programming and shield children, not make them easier targets for big business.

In another example of siding with corporations over consumers, Chairman Pai's changes of the FCC's media ownership protections undermine competition, localism, and diversion viewpoints in favor of corporate consolidation. While the Commission rightfully acknowledged Sinclair's merger and related divestitures may violate the law, the rollback of the media ownership rules opens the door for the next Sinclair.

Universal service, critical to the most vulnerable populations, also has been undermined under Chairman Pai's leadership. The FCC's proposal to revise the Lifeline Program is a particularly egregious example. If adopted, this proposal could cut phone or internet service for approximately 8.3 million people. These are single mothers struggling to get by, veterans searching for jobs, and seniors on fixed incomes. They are at risk of being left behind. The FCC should be looking for ways to help these struggling participants in our economy and community and not just cut them off.

And, finally, while the Commission has worked to update the emergency alert

system, advance Next Generation 911, and implement the SANDy Act, it has fallen short in making cybersecurity a priority. The agency has retreated from the efforts of previous administrations at a time when cybercriminals, foreign and domestic, are becoming more aggressive. Today's communications networks connect businesses, consumers, and government agencies, and these networks drive a modern economy. But those same networks provide a target for cyber attacks by criminal gangs and nation-states.

As the agency charged with promoting public safety, the FCC should work with and encourage companies to develop best practices, address vulnerabilities, and prepare for cybersecurity attacks. Since the FCC is shirking its responsibility, Congress should be conducting more oversight in the future.

So I want to thank the Chairman and Commissioners for appearing before us today and look forward to your testimony.

And I yield back, Madam Chair.

[The prepared statement of Mr. Pallone follows:]

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Mrs. Blackburn. The gentleman yields back.

And that concludes the member opening statements.

I remind all members that, pursuant to committee rules, all member's opening statements will be made a part of the record.

And we are going to try to get through our opening statements before votes are called around 1:40. So I want to thank all of you for being here today. Today's witnesses will have the opportunity to give their opening statements. It will be followed by a round of questions from members. Our panel today includes Chairman Pai, Commissioner O'Rielly, Commissioner Carr, and Commissioner Rosenworcel. We appreciate that you are here and that your testimony was prepared and submitted on time. We will go in order of seniority, which is the tradition in this subcommittee, and I begin with you today, Chairman Pai. You are recognized for 5 minutes for an opening statement.

**STATEMENTS OF AJIT PAI, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION;
MICHAEL O'RIELLY, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION;
BRENDAN CARR, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION; AND
JESSICA ROSENWORCEL, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION.**

STATEMENT OF AJIT PAI

Mr. Pai. Thank you, Chairman Blackburn, Ranking Member Doyle, and members of the subcommittee, thank you for holding this hearing. I appreciate this chance to update you on the FCC's work. But before I do, I would like to thank this subcommittee for its vital assistance. The RAY BAUM'S Act of 2018, which originated in this subcommittee, contained a host of provisions that are already having a positive impact on the FCC's work. Perhaps most importantly, it corrected a technical problem involving deposits for spectrum auctions. With this fix in place, the FCC is moving forward aggressively to hold auctions and move a substantial amount of high band spectrum into the commercial marketplace.

This year, we are commencing the 28 gigahertz band option, followed immediately by an option of the 24 gigahertz band. In the second half 2019, we intend to hold an auction of spectrums at 37, 39, and 47 gigahertz bands. Combined, these options will make almost 5 gigahertz of spectrum available and advanced America's global leadership in 5G, the next generation of wireless connectivity. None of this would have been possible without the subcommittee's leadership.

The FCC has also benefitted from the subcommittee's support in carrying out our top priority, closing the digital divide. Yesterday, the FCC kicked off its Connect America

Fund Phase II reverse auction, which will provide up to \$2 billion over the next decade to bring fixed broadband to unserved areas across rural America.

Earlier this year, we dedicated \$500 million in additional funding to assist small carriers deploying rural broadband. We proposed over \$1 billion to restore and improve communications networks in Puerto Rico and the Virgin Islands following the devastating 2017 hurricane season. And we boosted telemedicine's promise by extending funding in our rural healthcare program by 43 percent, \$171 million.

Funding aside, we are also modernizing our rules, cutting through the regulatory red tape and making it easier for broadband providers to invest in next generation networks. We have exempted small cells from the Federal historic preservation in environmental review processes that were designed for traditional cell towers. We have updated our business data services regulations. We have reformed our network transition rules to make it easier for companies to upgrade from the fading networks of yesterday toward the resilient networks of tomorrow. We are making it easier and cheaper for providers, including competitive entrants to get access to utility poles with One Touch Make Ready rules, as proposed by our Broadband Deployment Advisory Committee. And we have returned to the successful light-touch regulatory framework under which the internet flourished in the United States from the 1996 until 2015.

I am pleased to report that our policies to promote broadband deployment are working. According to a recent study in 2017, more commercial buildings in the United States added fiber connections than in any year since at least 2004. And according to figures released just today, it appears that broadband network investment in the United States increased by between \$1.5 billion and \$3 billion in 2017. Reversing the declines that occurred during the last 2 years of the prior administration. This increased investment is having a tangible and positive impact on American consumers.

I will give you just one example. VTel is a small internet service provider based in Springfield, Vermont. The company reported recently that because of recent FCC policies it, quote, committed \$4 million to purchase equipment and services to upgrade its LTE core to enable voice roaming and remedy WiFi calling to all of Vermont rural subscribers and to simultaneously begin rolling out faster mobile broadband that will start our transition to 5G. VTel concludes, and I quote again, it is quite optimistic about the future, and the current FCC is a significant reason for our optimism.

In short, we are on the right track, and I am confident that we will continue to see more positive results in the months ahead as more of our policies take hold.

I am also pleased by the amount of bipartisan cooperation we have seen at the FCC. This year, for example, fewer than 6 percent, or 1 in 16, of our over 100 votes have been party line. Of course, there will be times when we disagree. But my hope is the debate will be based on facts, consistent with law, and grounded in reality.

I will close on a personal note. I love this agency. I have worked at the FCC for most of the past 11 years, first as a staffer and then as an appointee. It has been a tremendous honor to lead this commission over the last 18 months. A major reason why is because I get to work alongside and have gotten to know the FCC's fantastic staff, those who race toward hurricane-hit areas to help, those who strive to make technologies available to Americans with disabilities, those who devote countless hours to representing our country abroad, and more.

As for me, the issues I have faced are challenging. The decisions I have made haven't always been easy, but so long as I have the privilege of serving as the Chairman of the FCC, I am going to find the facts, I am going to follow the law, and I am going to call 'em like I see 'em.

Chairman Blackburn, Ranking Member Doyle, members of the subcommittee,

thank you once again for holding this hearing. I look forward to answering your questions and to continuing to work with you and your staffs in the time to come.

[The prepared statement of Mr. Pai follows:]

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Mrs. Blackburn. The gentleman yields back.

Mr. O'Rielly, you are recognized.

STATEMENT OF MICHAEL O'RIELLY

Mr. O'Rielly. Thank you. My thanks to Chairman Blackburn, Ranking Member Doyle, and the members of the subcommittee for the honor to engage with you on so many important communications issues. At the outset, I would like to thank Representatives Lance, Tonko, and Collins and their cosponsors, many on the subcommittee, and the chairman and ranking member for their leadership on the PIRATE Act.

Under Chairman Pai's leadership, the Commission has made great strides in terminating unlawful pirate radioactivity, but without additional tools provided by Congress, we can only go so far to eliminate this harmful practice.

Today, I would like to highlight a few critical issues that have been a focus of mine. First, I firmly believe that the ongoing problem of 911 feed aversion by certain States and territories must end once and for all. Such diversion, beyond deceiving ratepayers, has real consequences for the public safety community and the American people in need of critical emergency assistance at some of the darkest moments in their lives.

The Commission's ninth annual report to this committee, which relied on self-reporting by States and territories, showed five States diverted almost \$130 million away from 911 enhancements and towards other unrelated purposes. Moreover, seven States and territories figured out that, instead of being labeled a diverter, they would rather just not submit the necessary paperwork. Take New York, a previously self-admitted diverter, which failed to respond to the Commission's data collection

inquiries, but sufficient public record information supported a finding that it is a substantial diverter of funds for non-public safety purposes.

There is some good news to report in that several States and territories have clarified their reported diversion or made commitments to prevent a recurrence. These include Illinois, New Mexico, Oklahoma, and Puerto Rico. However, not every State or territory has been a success story. Accordingly, I suggest additional Federal action, such as legislation proposed by Representatives Collins, Eshoo, and Lance, is necessary to address recalcitrant States, like New York, New Jersey, Rhode Island and Guam. Identifying and shaming these States has not adequately worked.

Second, the Commission is focused on taking every necessary and appropriate step to provide all Americans the opportunity to access broadband services. At the same time, the Commission's efforts should be examined in parallel with programs by other Federal agencies. Congress recently allocated as part of last year's Consolidated Appropriations Act 2018 an additional \$600 million for a new broadband pilot program to be administered by the Rural Utility Service, or RUS, and additional broadband funding is being considered as part of the Senate and House farm bills.

While efforts to provide RUS with new Federal money are commendable, there is a potential for certain problems to arise. In particular, there is a significant possibility that RUS programming could be used to subsidize areas that already have broadband or fund providers in competition with those that currently receive FCC subsidies or may have build-out plans that require them to provide service in the future. Additionally, the RUS program could be used to allow providers to serve favored institutions without serving more costly nearby areas.

Fundamentally, Federal funding should be targeted to addressing the \$14 million plus Americans without any broadband today. I would humbly suggest that only the

proper direction from the right leadership such as this subcommittee can prevent a bad outcome. As Congress concludes the farm bill this fall, I hope you will consider additional safeguards, including strict prohibitions on duplication with other existing programs, alignment of speed requirements, and a focus on the truly unserved.

Lastly, turning to spectrum policy, the Commission has been hard at work ensuring that sufficient spectrum is available for next generation wireless services. I recognized years ago that there was a need for solid mid-band play for wireless carriers to offer 5G services both domestically and internationally. The 3.7 to 4.2 gigahertz band or C band downlink is an attractive option for this purpose, as it provides significant continuous spectrum, and the largest satellite operators are receptive to reducing their spectrum footprint using a market-based spectrum reallocation approach. I also agree with Representatives Guthrie and Matsui, who recently noted to the Commission that the 6 gigahertz band is a necessary ingredient to address the need for more unlicensed spectrum and must be part of our final rules.

With that, I want to thank the subcommittee for holding this hearing. And I look forward to answering any questions you may have.

[The prepared statement of Mr. O'Rielly follows:]

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Mrs. Blackburn. The gentleman yields back.

Mr. Carr, you are recognized.

STATEMENT OF BRENDAN CARR

Mr. Carr. Thank you.

Chairman Blackburn, Ranking Member Doyle, distinguished members of the subcommittee, thank you for the invitation to testify. I have had the honor of working with you and your staffs as a commissioner for nearly a year. It has been a tremendously rewarding and productive time. I am proud of the work that the agency has accomplished. And I want to commend this subcommittee on its own notable achievements, from identifying additional spectrum in the RAY BAUM'S Act, enhancing public safety through the SANDy Act, to encouraging broadband deployment, including through the Precision Ag Act.

At the FCC, I focused on work we can do to help bring more broadband to more Americans. This has meant working closely with my colleagues at the Commission, but it has also meant spending time outside of D.C. to see firsthand our policies impact communities across the country.

Over the past 11 months, I have visited 17 States. I have benefitted from perspectives gained on the road, whether at a townhall in Chelsea, Michigan; a roundtable in Stanton, Nebraska; or at the kitchen table of family that wanted better, faster broadband. I spent time with the construction crews that are doing the hard, often gritty, work that goes into deploying broadband networks. In fact, in Arcadia, Indiana, Congresswoman Susan Brooks introduced me to two Hoosiers, Mark and Scott; they are brothers. They run a small fixed wireless provider. They are a scrappy

bunch, having climbed everything from barns to grain elevators to attach the antennas needed to bring broadband to Indiana's farmlands.

I have seen similar efforts in communities across the country. And it only underscores why the work of this subcommittee and the FCC is so important. We want every community to get a fair shot at next generation connectivity. One year ago, I noted the challenged we faced in extending American leadership in wireless as we moved from 4G to 5G networks. I testified about the need for the FCC to focus on two things, spectrum and infrastructure. The Commission has made substantial progress on both.

I want to focus this afternoon on the second part, on infrastructure. I appreciate that Chairman Pai asked me to lead the FCC's efforts on wireless infrastructure. We have already taken several steps to ensure our regulatory structures are 5G ready. As you know, 5G networks are going to look very different than the 3G and 4G deployments of the past. And the regulatory framework that worked for 100-foot towers won't work for new small cell deployments.

So we are working to modernize our approach. In March, we exempted small cells from certain Federal review procedures designed for those large 100-foot towers. This one step is expected to cut about 30 percent of the total cost of deploying small cells. This reform can help flip the business case for thousands of communities, particularly in rural areas that might otherwise miss out on next gen connectivity.

And one place where increased deployment will pay off is in healthcare. For years, the FCC has been supporting broadband deployment to healthcare facilities, but there is a new trend in telehealth, it is toward connected care everywhere. The delivery of high-tech, high-quality care is no longer limited to the confines of connected brick-and-mortar facilities. With remote patient monitoring and mobile health applications, we now have the technology to deliver healthcare directly to patients,

regardless of where they are located.

I saw this 2 weeks ago in the Mississippi Delta, which is ground zero for the country's diabetes epidemic. The delta is also a place where connected care is already making a difference. It is where I met Ms. Annie. She noticed the first signs of diabetes when she woke up one morning with blurred vision. After seeing a little progress with traditional care options, she signed up for a remote patient monitoring program. She showed me the iPad and the Bluetooth-enabled blood glucose monitor that she uses to track her care on a daily basis. She can check her blood sugar levels, and an app gives her instant feedback, including the steps she can take that day to stay healthy. With this technology, Ms. Annie's A1Cs levels have gone down, and she says she has never felt better. And research backs up Ms. Annie's results, showing significant cost savings and improved outcomes with connected care. So we should align public policy in support of this movement in telehealth.

That is why I am glad Chairman Pai asked me to lead the FCC's new telehealth initiative, which we will consider at our August meeting. The connected care pilot program aims to provide up to \$100 million to support connected care deployments focused on low-income patients.

I look forward to working with all stakeholders as we seek comment on establishing the program. Chairman Blackburn, Ranking Member Doyle, members of this committee, thank you again for holding this hearing. I welcome your questions.

[The prepared statement of Mr. Carr follows:]

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Mrs. Blackburn. The gentleman yields back.

Ms. Rosenworcel, you are recognized.

STATEMENT OF JESSICA ROSENWORCEL

Ms. Rosenworcel. Good afternoon, Chairman Blackburn, Ranking Member Doyle, and the other members of this subcommittee. Thank you for the opportunity to appear before you today. I believe the future belongs to the connected. No matter who you are or where you live in this country, you need access to modern communications to have a fair shot at 21st century success. Clearing the way for this connected future should be at the heart of everything we do at the Federal Communications Commission.

It has been 9 months to the day since we last appeared before you for an oversight hearing. Nine months is a long time. It is the equivalent of a school year so let me offer the equivalent of a quick year-end report. Too many Americans still lack access to broadband. Let me put a number on it. Right now, 24 million Americans do not have access to high-speed service. That is not acceptable. We need to do better. Too often during the last 9 months, the agency acted at the behest of corporate forces that surround it, shortchanging the American people. You can see that clearly with our rollback of net neutrality. You see it too with our efforts to foster the deployment of new networks but failure to fully engage those who need a voice in our policies, the cities and towns that should be our partner in the process, the Tribal communities that are entitled to government-to-government consultation, and the Department of Commerce, which just last week expressed concern about how our rushed reform could harm national security and public safety services.

Likewise, you see it in proposed reforms that undermine our lifeline program and the populations that rely on it, including those served by domestic violence shelters, military veterans, homeless youth, and the residents of Puerto Rico, who are still recovering from a harrowing storm and a grave humanitarian crisis.

Too often our procedures fall short of what good governance requires. Our mapping practices for broadband do not accurately reflect the State of connectivity on the ground. Our claim that the agency suffered a distributed denial of service attack following John Oliver's report on our net neutrality plan is just not credible.

In the meantime, the agency has ignored the fact that this public docket is flooded with fraud, including half a million comments from Russia and 2 million individuals with stolen identities. I believe these things need to be fixed.

So many people think that Washington is rigged against them. It saddens me when, on too many occasions during the last 9 months, this agency proved them right. But good report cards do not only look to the past; they also offer an eye to the future and take on what is possible.

I believe at this table, there is a desire to extend the reach of broadband service, lead the world in 5G wireless deployment, and bring the opportunities of the digital age to more people and more places. I see this same desire everywhere I go. In the last few weeks, I have been in rural New Mexico and urban New York. In both places, I have visited schools with students who lack broadband at home and, as a result, struggle with nightly school work. There are 12 million children in every State across the country with this problem. They fall into a homework gap that is the cruelest part of our digital divide.

But I also saw that these communities are trying to address there gap so that every student has a decent chance at digital age success. They are experimenting with

connective school busses. They are looking at loaning out hotspots in library, and they are exploring public WiFi in their communities. They deserve our support and a plan to address the homework gap so that no child is left offline. I still believe it is within our capability to produce one.

Finally, I would be remiss if I did not mention the agency's recent decision regarding Sinclair broadcasting. When I last appeared before you 9 months ago, I alone expressed concern about how the agency had bent and twisted so many of its media policies to serve the business plans of this one company. This changed last week when the agency adopted an order designating the proposed Sinclair Tribune transaction for hearing. I want to thank my colleagues and the chairman in particular for the effort to reach consensus on this matter.

Let me close by saying thank you for having me at this hearing, and I look forward to any questions you may have.

[The prepared statement of Ms. Rosenworcel follows:]

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Mrs. Blackburn. I thank each of you for your testimony, and we are now going to move into our questions. And I am going to begin and recognize myself for 5 minutes for questions.

And, Chairman Pai, I am going to come to you. Public safety is something that we are focused on in the emergency alerts and our 911 systems. As you know, our Ranking Member Pallone's SANDy Act was included in the RAY BAUM'S Act, and it is a good solid bipartisan initiative to help with WiFi resources, bringing those to bear during an emergency. And while the EAS system is typically the primary tool, we saw the resiliency of cellular infrastructure in the aftermath of Hurricane Harvey and the widespread use of the WEA alerts. And how will the addition of opening up WiFi access points in times of emergency in addition to carrier location information and other inputs help a device create more precise location information to better enable our first responders to reach those that are in need of that emergency help?

Mr. Pai. Thank you, Chairman Blackburn, for the question and to you and to Ranking Member Pallone for your leadership on that legislation. One of the most critical elements of information that a first responder needs when a 911 call is placed is where is the caller. And I think that that the addition of more WiFi access points could help introduce even more detailed granular information about where that caller is. In combination with GPS information and cellular information, WiFi access points can give a more textured view to 911 call centers and help them pinpoint exactly where somebody is to be able dispatch help quicker.

Additionally, I think it is interesting that a lot of companies are thinking very forward, as is this subcommittee. For example, Apple recently announced in iOS 12 that it would incorporate the technology from a small startup called RapidSOS. One of my predecessors, Chairman Dennis Patrick, has talked about the fact that this technology

could use things like WiFi access points and other information to more accurately and quickly target people who are in a situation of need.

Mrs. Blackburn. And then looking at States and localities using the WEA system, you think this is going to help --

Mr. Pai. Absolutely.

Mrs. Blackburn. -- encourage that? I just -- when you think about needing that help that quickly and responders who are working so diligently to get resources to people, one of the things is we have worked on this issue -- and Ms. Brooks has worked on it some too with the Next Gen 911 -- is making certain that it is more reliable and more widely used. So --

Mr. Pai. Absolutely. I will give one quick example of why that is so. Recently, I visited the D.C. Office of Communications that handles 911 calls that are common to the District. And Karima Holmes, the director, told me that, every year, the District of Columbia gets approximately 10,000 emergency calls that are more properly routed to Maryland, and vice versa, Maryland gets 10,000 calls or more properly routed to the District because the caller is very near that border.

Imagine ubiquitous WiFi access points that could allow emergency responders to know when they have received that call in the 911 call center: Okay, we are getting a call from the District. We don't waste precious seconds trying to figure out exactly which jurisdiction needs to get that call. That could really save lives in a pinch.

Mrs. Blackburn. Commissioner Rosenworcel, I want to come to you on something. As you know, I have worked for years on the privacy issue, and I assume that you saw the letters that we sent to LocationSmart and Securus and 3C Interactive inquiring about the reports of the unauthorized disclosure of wireless subscribers' real-time location information. And I am pleased that you all are investigating this as well as we all are concerned about protecting consumer privacy. And on this broader topic, last night, I received a letter from our friends at the Electronic Privacy Information Center, and to quote from the letter, it says: It is clear that the FCC has the ability to enact internet privacy rules. The FCC has the authority to regulate companies such as Facebook and Google through ancillary jurisdiction.

Do you agree with that assertion?

Ms. Rosenworcel. No, I don't agree with that assertion.

Mrs. Blackburn. Okay. Do you believe that section 706 of the Telecommunications Act or any other provision gives the authority to the FCC to also regulate edge providers?

Ms. Rosenworcel. I don't believe it clearly gives us that authority, no.

Mrs. Blackburn. You do not. Thank you.

The gentlelady yields back, and I yield back, and I recognize Mr. Doyle for 5 minute.

Mr. Doyle. Thank you, Madam Chair.

Welcome back. It is good to see all of you.

I want to talk a little bit about rural broadband. The Commission received a letter on July 23rd from a group of 182 fixed wireless providers regarding the CBRS band. And they noted that, and I quote: Without census track sized licenses, we will have virtually no ability to acquire protected spectrum in this band. That would be an intolerable outcome that would harm or rural broadband businesses and inhibit our ability to grow. But worse, it would harm the millions of consumers for whom mid-band spectrum is the key to high-speed fixed broadband access.

I would note that, Chairman Pai, you tweeted that your parents are served by Wave Wireless, and, Commissioner Carr, in your testimony you referred to the good work of On-Ramp Indiana that serves Ms. Brooks' district. Both of these companies were part of the 182 companies that sent you that letter. So I would like to ask each of the Commissioners -- and this is just a simple yes-or-no question -- will you commit to maintaining census track licenses in this band?

Mr. Pai. Ranking Member Doyle, I have delegated this issue to Commissioner O'Rielly. He has recently provided a lot of analysis on this question so I don't want to presuppose what direction he wants to recommend for the full commission.

Mr. Doyle. As chair of the Commission, would you commit to having census track size license?

Mr. Pai. Frankly, Member Doyle, we don't want to presuppose the results. We

are still studying the issue. And I am looking at the issue along with Commissioner O'Rielly.

Mr. Doyle. Okay. Commissioner O'Rielly, he has dumped it on you, so what do you say?

Mr. O'Rielly. No, no.

Mr. Doyle. You do not support doing -- I like that direct answer. I don't agree with it, but I like it.

Yes, Commissioner Carr?

Mr. Carr. I haven't made my decision up yet on how to cast a vote in this proceeding.

Mr. Doyle. Thank you.

Ms. Rosenworcel. Yes, we are going to need smaller license sizes if we want wireless providers to serve rural America with this band.

Mr. Doyle. So one yes, one undecided, one no, and one abstention or --

Mr. Pai. I am still looking at the issue, Congressman.

Mr. Doyle. Undecided.

Mr. Pai. We haven't reached the end points. We are still in the sixth or seventh inning.

Mr. Doyle. Okay. Chairman Pai, I mentioned in my opening statement that many stakeholders, including the Federal Government, are very concerned about your plans regarding the discontinuance of service and changes to the BDS market could place our national security and public safety operations in an untenable position. Are you concerned that, in addition to the potential loss of service, that some BDS customers are telling us that they have had their bills increase by 175 percent? I am kind of concerned that it is not only putting the carriers interest over the public's, but it is endangering our

public safety, our national security, and leading to the huge rate increases for people to have this service. How do you respond to that?

Mr. Pai. Sorry, Congressman, I was thrown off there.

Mr. Doyle. That was strange; is that a phone ring?

Voice. It is a rattlesnake.

Mrs. Blackburn. It is Mr. Olson trying to play with new technology in the Communications and Technology Committee.

Mr. Olson. Guilty as charged.

Mrs. Blackburn. The gentleman apologizes. It is accepted.

And, Mr. Doyle, you are reclaiming your time.

Mr. Doyle. Thank you, Madam Chair.

Would you address some of the concerns that we are hearing about the BDS market?

Mr. Pai. Sure, and I will try to address those in turn. So, with respect to NTIA, we certainly welcome the submission. That is part of the reason why we have an open notice and comment process to take public input. If you look at the overall tenor of the NTIA letter, it is quite supportive of our approach, unless we do want to take those concerns into account.

Secondly, with respect to BDS overall, the price increases you described are precisely the reason why it was important to us in the BDS order last year to preserve FCC authority under section 201 and 202, as well as the ability of private companies to complain directly to the FCC under section 208. We will adjudicate any complaints we get about price discrimination that might be in violation of our rules.

Thirdly, if you look at the overall gist of our BDS approach, the notion is that price regulation deters fiber deployment. It does that for two different reasons. Number

one, if you are an owner of that infrastructure and there is heavy privacy regulation, you would have less incentive to build out additional infrastructure. Why would you? It is price regulated. Similarly, if you are a competitive entrant relying on that infrastructure, you would be less likely to build that infrastructure of your own. Why would you? The FCC has put a finger on the scale in terms of price regulation.

Our goal is to preserve that ability of competitive entrants -- people have complained to the FCC about unreasonable charges -- while also promoting an incentive to get more fiber out. And the results speak for themselves. If you looked at my opening statement, for the first time, over 50 percent of mid and large size commercial buildings in the United States are connected with fiber. We want every one of those buildings to be connected with fiber. We think this light-touch, market-based approach that started with Chairman Kennard back in the late 1990s is the right way to go.

Mr. Doyle. Let me ask you one last question, Chairman Pai, you are aware of Senator Wyden's letter to the FCC regarding the real-time location data and the company Securus Technologies.

Mr. Pai. Yes.

Mr. Doyle. On May 18th, Senator Wyden called on you to recuse yourself from the investigation based on your past work representing Securus. Have you recused yourself?

Mr. Pai. I have not, in consultation with the Office of General Counsel.

Mr. Doyle. And that was my next question, did you get an opinion from the FCC ethics office as to whether or not you should recuse yourself?

Mr. Pai. Yes, I did.

Mr. Doyle. Okay. Thank you.

Mrs. Blackburn. The gentleman's time has expired.

Mr. Walden, you are recognized for 5 minutes.

The Chairman. Thank you, Madam Chair.

I appreciate again the Commissioners being here. And I believe we have sent a letter as well to companies regarding the same issue. Obviously, we all care about privacy and about data location issues, something we have been pursuing for some time.

Chairman Pai, let's switch to the C band. It is our understanding the National Public Radio, commercial broadcasters, and cable companies depend on it for content distribution to about 100 million households. That is obviously a lot of people in every State, probably every congressional district. But one of the challenges to ensure noninterference with C band downlinks is to know the exact location of hundreds and potentially thousands of unregistered receive-only Earth stations. What is the Commission doing to identify the location of these Earth stations and ensure they are protected from potential harmful interference? And what steps is the Commission taking to balance these two goals of ensuring we win the race to 5G, which requires for mid-band spectrum, and the protection of the downlink the broadcasters and cable companies depend upon?

Mr. Pai. Thank you for the question, Chairman Walden. And I think you have put your finger on the two goals that we need to pair in this proceeding. And we tried to address the concern you have identified about the need to figure out where the stations are in a few different ways. For example, we have reduced the fees that are required to file some of these reports. Additionally, we have extended the timeframe by 90 days. So I believe October 17th now is when the deadline is for reporting.

In addition to that, we recognize that some of these entities are smaller; they might not have the resources to compile a full study that is required traditionally under FCC rules. And so it is important to me to streamline that process to allow them to get

as much information as they can into the record.

At the end of day, we are confident that steps like these will enable us to get a robust level of participation from those entities and enable us thereafter to make a fully informed decision about the appropriate disposition of the C band.

The Chairman. All right. Thank you. As you have heard from many Members on both sides of the aisle up here, we need to do more as a country to connect each other with high-speed data and broadband connections. So what can you tell us, Chairman, about the work the FCC is doing today to close this digital divide? What should we look forward to going forward? And what do you need from us?

Mr. Pai. Chairman Walden, I appreciate the question. We are doing a lot. And I don't want to use the remainder of your time, but what I will say is with the two critical tools in the toolbox that we have -- that is, modernization of our regulations and the wiser distribution of universal service funding -- we are making major steps towards closing the digital divide: I mean, the \$2 billion fixed broadband program that just started yesterday, the reverse auction for Connect America and Fund Phase II, the \$4.5 billion Mobility Fund Phase II that will start next year, and some of the initiatives that may appear smaller, but I can tell you, when I am on the ground in places like Pendleton, Oregon, and Oldsmar, Florida, and McClure, Ohio, they are not small. Telemedicine, this is one of things that American people just understand, especially in rural communities where it is hard to attract a specialist, like my parents -- who formerly were customers of Wave Wireless -- it is very difficult in some cases to get specialists. The only way that some of these folks in rural communities will get adequate healthcare is through telemedicine. And you saw the response for yourself, as did I, at Mirasol health clinic in Oregon when they heard the news that we are proposing to increase by 40 percent the budget for the rural healthcare. If you remember, they broke out into applause --

The Chairman. Yes.

Mr. Pai. -- because they recognize that this is a lifeline, quite literally, for some of these communities, and Pendleton and Hermiston are big cities in your district. There are a lot of smaller towns that will never see a specialist. I am really proud of the steps we have taken on the funding side to close the digital divide.

In terms of modernization too, we have done a lot to promote more infrastructure in rural areas, making it easier to build the towers, for example, in rural areas or lay fiber in cases where there might be not be a business case for deployment. And I think often about some of the visits I have had, including your district. I popped into Baker City, Oregon, where GeoNet told me that some of the steps we are taking, in terms of making it easier to gain access to poles or get more spectrum, those are the tools that are necessary for the smaller companies in particular, the ones that don't make the headlines, that nobody knows about; those are the things that will help them close the digital divide.

The Chairman. And 5G, as it rolls out, what do we need to be doing there?

Mr. Pai. I think for us at least spectrum and infrastructure are the critical inputs. With respect to spectrum, I outlined some of the steps we are taking to move very quickly. And having just come from a couple of conferences, where I can tell you that my counterparts abroad are both envious and interested about how quickly we are moving on the 5G, the United States is in the lead in terms of spectrum leadership.

As far as infrastructure goes, Commissioner Carr has done an able job in leading our wireless infrastructure efforts. We need to think nimbly and progressively about how to modernize our regulations. The world of a few very sparsely populated cell towers is fading away. The era of the small cell, hundreds of thousands of small cells being deployed, is almost here. And so our regulatory approach needs to be as nimble

as the industry that we are seeking to regulate.

The Chairman. My time has expired.

Madam Chair, thank you for having this hearing.

And to all the Commissioners, thank you for your participation and counsel.

Mrs. Blackburn. The gentleman yields back.

For everyone's awareness, votes have been called. Mr. Pallone is going to ask his questions. Then I will move to recess the subcommittee until we return from votes.

Mr. Pallone, you are recognized for 5 minutes.

Mr. Pallone. Thank you, Madam Chair.

Chairman Pai, I was glad to see the Commission vote to send the Sinclair Tribune transaction to an administrative law judge for review, despite the wishes of the President. And I have long had serious concerns about this merger, including this sham agreement Sinclair used to try and hide the scope of this transaction. That is why Ranking Member Doyle and I wrote to the GAO 2 weeks ago, asking them to review how these sham agreements affect localism, diversity, and competition. However, last night, President Trump tweeted and I quote: So sad and unfair that the FCC wouldn't approve the Sinclair Broadcast merger with Tribune. This would have been a great and much-needed conservative voice for and of the people. Liberal fake news NBC and Comcast gets approved, much bigger, but not Sinclair, disgraceful, end of quote.

The only thing that I find disgraceful is that the President is still trying to undermine the integrity of dedicated journalists by blatantly trying to enrich his friends and amplify his message at the expense of local news across the country.

So let me just ask you, yes or no -- we are running out of time -- if I can ask each of the panel, do you agree with the President's tweet, yes or no? We will start with the Chairman.

RPTR BRYANT

EDTR CRYSTAL

[1:58 p.m.]

Mr. Pai. Congressman, I stand by our decision.

Mr. Pallone. Okay.

Mr. O'Rielly. Congressman, that issue has been referred. I have to not answer that question.

Mr. Pallone. You don't want to answer. Okay.

Mr. Carr.

Mr. Carr. Congressman, thank you. I think the hearing designation order lays out the facts and the law as applied, in our view.

Mr. Pallone. All right.

And, Commissioner Rosenworcel.

Ms. Rosenworcel. I do not agree with that.

Mr. Pallone. All right.

Now, let me ask those questions of Chairman Pai. I know we only have 3 minutes or so.

Given the President's politicalization of the Sinclair merger, will you commit to ensuring that a comprehensive and thorough review is conducted by the ALJ, insulated from the President or anyone purporting to speak on his behalf, yes or no?

Mr. Pai. Congressman, we have already issued the hearing designation order, and my understanding is that it is now within the purview of the administrative law judge under our rules.

Mr. Pallone. But, I mean, you are going to ensure that a comprehensive and thorough review is conducted by ALJ?

Mr. Pai. Consistent with the HDO. Those are the issues that will be -- have been referred to the ALJ, yes.

Mr. Pallone. Okay. If the President or anyone in the White House discusses or has discussed the Sinclair-Tribune merger with you or anyone at the FCC, will you commit to disclosing that in the public docket, yes or no?

Mr. Pai. Yes, except, Congressman, we have ex parte rules, because this is now a restricted proceeding. We are limited in what information we can receive and what we can put on the record. But consistent with our restricted ex parte rules, we would be happy to accommodate to the extent we can.

Mr. Pallone. Yes, basically. All right.

The President cites the need for a conservative voice. That is the thing that is most disconcerting to me, because I don't believe the FCC is supposed to make decisions based on what is conservative or liberal or Democrat or Republican or just be independent of the President.

So does the FCC consider conservative or liberal viewpoints as part of its merger review? In other words, do you care whether it is a conservative voice or not?

Mr. Pai. Congressman, I stick with the answer I gave on November 30, 2011, when I testified as a nominee. For every transaction that is before me, I will look at the facts, I will apply the law, and I will reach the judgment that is in the public interest. Nothing more, nothing less.

Mr. Pallone. I would just hope that we are not looking at this from an ideological point of view, which the President is trying to achieve.

The hearing designation order that the FCC unanimously voted to approve notes that Sinclair may have engaged in misrepresentations or a lack of candor in its statements to the Commission about the merger. Whether a licensee is lying to the Commission is a

serious allegation and stations have had their license revoked for making misrepresentations to the FCC.

So again to you, Chairman Pai, without commenting on the current proceeding, I am not asking you to do that, will the Commission conduct a factual inquiry into Sinclair's lack of candor regarding the licenses it currently holds either now or at the time of the renewal, yes or no?

Mr. Pai. Congressman, we have referred certain issues to the ALJ in the HDO. I can't comment, under advice of our general counsel, on anything having to do with that. And I view your question as being inextricably linked to some of the issues that we have referred to the ALJ.

Mr. Pallone. Okay. So the answer is no.

Commissioner Rosenworcel, would you like to add anything on that?

Ms. Rosenworcel. Well, I would point out that we have raised issues about the candor of this company before the FCC, the misrepresentations they made in the context of this transaction. And I think those are serious issues of character qualification under Title III of our statute. And to the extent that they have been identified as a problem here, we should be open to investigation in other contexts as well.

Mr. Pallone. All right. Thank you.

Thank you, Madam Chair.

Mrs. Blackburn. The gentleman yields back.

The committee stands in recess.

[Recess.]

Mrs. Blackburn. The committee will come to order.

Mr. Lance, you are recognized for 5 minutes for questions.

Mr. Lance. Thank you, Chairman.

Commissioner O'Rielly, in order to be the first in the world to deploy 5G, we need to set an aggressive schedule of auctions to make more low- and mid- and high-band spectrum commercially available. That is why Ranking Member Doyle and I have introduced the AIRWAVES Act, which does just that.

However, it is my understanding that no matter how ambitious we are in setting a schedule, there may be certain technological impediments to auctioning off spectrum in a timely fashion.

Is the FCC's auction IT out of date? And, if so, what effect does that have on the Commission's ability to keep up with the rest of the world in bringing more spectrum to market?

Mr. O'Rielly. Thank you for the question.

I don't know if I would use the word out of date or just not as advanced as it should be. It has limitations.

And to the question that Congressman Doyle raised regarding 3.5, part of the reason why I had to answer no in terms of census tract is because there was not going to be an actual auction that we were supposedly going to conduct on the census tracts. It was actually going to be a sealed bid for 74,000 licenses times 7, or half a million licenses, and that we were not capable of running with our software.

And it gets to the question, to your point, number of bands, people have asked for 24, 28, 37, 39, 47 all at once. We weren't and don't have the capability to run all of those at once.

The chairman has done a yeoman's job of scheduling spectrum, and I appreciate the work he has done. And two bands we are going to do this fall and three next fall. That is great. But in terms of what we are capable of doing with auction software, it should be much more advanced for the money that we are spending on it.

Mr. Lance. Thank you.

Do other members of the Commission have thoughts on this?

Commissioner Rosenworcel.

Ms. Rosenworcel. We all know that we want to lead the world in the wireless economy and in 5G, and I think it is a shame if our bureaucratic auction software doesn't allow us to do that. If that is a problem, we need to commit time, energy, and resources to fixing it. We shouldn't allow that to be an impediment.

Mr. Lance. Thank you.

Mr. Chairman.

Mr. Pai. I couldn't agree more with Commissioner Rosenworcel. That is why a few months ago I testified before the House and the Senate and asked for resources specifically devoted, in part, toward upgrading our IT infrastructure to allow us to do much more, much more quickly, with this software.

Mr. Lance. Thank you.

Chairman Pai, the Commission has had a petition from a New Jersey-based company, pdvWireless, and Enterprise Wireless Alliance before the Commission since the fall of 2014. The petition asks the Commission to update the rules around the lower 900-megahertz band to support broadband.

To your credit, you put the item out as an NOI last August. I, of course, take no position on the merits of that, that is for the Commission to decide. But as we approach the 1-year mark since the NOI, can you, Mr. Chairman, commit to moving the item to notice of proposed rulemaking soon?

Mr. Pai. Congressman, thank you for the question.

I can say that I am working with our staff, and we are drafting a notice of proposed rulemaking to follow up on the NOI that you have inquired about.

Mr. Lance. Thank you very much.

Mr. Chairman, from a global competitiveness perspective, we need to ensure that the U.S. wins the race to 5G. We can all agree on that. However, at the same time, we need to ensure we are bringing connectivity to rural America as well. We have made great strides, but clearly more needs to be done.

The AIRWAVES Act includes a rural dividend, setting aside 10 percent of proceeds from future spectrum auctions to deploy wireless in unserved and underserved, often rural areas. If this rural dividend were in place for the last two auctions, over \$6 billion would be used to fund rural deployment. And this funding would not come from taxpayers or be added to consumers' telephone bills.

Do you agree that this provides a creative solution to the challenges of deploying rural broadband?

Mr. Pai. Congressman, I commend you for your leadership on that issue. I agree with you 100 percent, so much so that in September of 2016, I gave a speech in which I outlined my agreement with the rural dividend proposal. Redirecting that money to rural broadband could have a major impact on closing that digital divide.

Mr. Lance. Thank you. I want to continue to work with all members of the Commission. I commend you for your public service.

I apologize for leaving. Congresswoman Brooks and I are on the Ethics Committee and the Ethics Committee is meeting now. Not about you, Congressman Shimkus, and not about me either.

But I want you to know that I commend the work of this very fine Commission, one of the most important agencies of the Federal Government.

Thank you, Chairman Blackburn.

Mrs. Blackburn. The gentleman yields back.

Mr. Welch is not here.

So, Mr. Loeb sack, you are recognized.

Mr. Loeb sack. Thank you, Madam Chair.

It is great to be here today with all these folks.

It is good to see you back on the Commission, Commissioner Rosenworcel. I really appreciate the time when you came into Iowa, to Newton and Baxter, Iowa, to talk about rural broadband. That was really a great opportunity for me to have you there.

I am happy to have the opportunity to have all of you here to testify, because I am always eager to discuss, of course, how we can build out rural broadband in Iowa and across the country and how we can improve mapping data -- that is my big topic today -- to ensure we are getting resources to the right places.

I am sure you know my bill that I worked on with Representative Costello over here. The Rural Wireless Access Act passed into law earlier this year and it directs you folks to improve and standardize the way the FCC collects wireless coverage data so that maps will accurately reflect wireless coverage.

We talked about this before when you were in northwest Iowa and some of the problems you had when you were losing coverage traveling to northwest Iowa.

I always like to say that better data means better maps and better resources and policies for the areas that are truly in need. And this isn't only about cell phones. Mobile broadband is particularly important in areas that lack fixed broadband services. With the passage of the Rural Wireless Access Act, Congress is speaking, I think, and we are saying that we need to get better maps and better data.

So I am sure you all know that the FCC will have 180 days after the conclusion of the Mobility Fund Phase II auction to promulgate regulations in accordance with the Rural Wireless Access Act. But nothing really is stopping you from doing that now, I would

argue, or at least sooner. And that is important, because the Mobility II auction will send more than \$4 billion, I think it is about \$4.5 billion, out the door, and primarily to rural areas.

So to me, this seems like a real missed opportunity. We have got to act now, it seems to me. The FCC has heard from industry that we need better maps. They heard from Congress that we need better maps. But the work to create better maps hasn't happened yet, and I think there is some frustration out there about that.

I understand that the Commission has agreed to -- I think this was back a couple months back maybe -- to push back the Mobility Fund II auction by 90 days to allow the current data challenge process to continue. But I am concerned that because of the incredible burdens with that process, the FCC's data still may not be fixed.

And I can tell you, rural America needs this broadband funding as quickly as possible. I think we can all agree with that.

Rather, I think the Commission could take this time to make the important fundamental reforms called for by my Rural Wireless Access Act ahead of schedule.

And, Commissioner Rosenworcel, you say in your testimony that, quote: "Too often our procedures fall short of what good governance requires. Our mapping practices for broadband do not accurately reflect the state of connectivity on the ground," unquote. And I think that is absolutely right.

So my question is to you, really, Commissioner Rosenworcel. When working to advance good governance and best practices, do you think it makes sense for the FCC to move forward with a challenge process that isn't working, or should we be making the real overhaul necessary to fix this problem in a more expedited way?

Ms. Rosenworcel. We have a problem with wireless service in rural America, and you cannot manage problems that you do not measure.

Right now, the FCC's mapping process for wireless service is basically asking the largest carriers whether or not they provide service in an area. And then we have invited local officials and small wireless carriers to contest that data.

But the process of contesting that data is cumbersome, it is difficult, it is long. It entails setting up an account, downloading 50 pages of information, getting multiple handsets, walking around in cornfields and elsewhere every half a kilometer and taking down information about signal strength and latency, then uploading that with the certification of an engineer and returning it to the FCC for our assessment.

I am going to argue that that process is too burdensome for most wireless communities to undertake. And as a result, I am worried about our Mobility Fund mapping as it stands today.

Mr. Loebsack. And, Chairman Pai, I would like you to respond as well, give you that opportunity, if you would like to respond to that.

Mr. Pai. Thank you, Congressman.

The system we inherited when I came into office in January 2017 was a free-for-all, frankly. Any carrier could use whatever technical standards it wanted to supply whatever information it wanted.

That wasn't good enough for me. If we were going to distribute \$4.5 billion of funding, I wanted to close the digital divide to serve unserved areas.

That is why, under my leadership, we started, on a unanimous basis, a bespoke one-time data collection for mobility to see exactly where coverage was and where it wasn't, with a standardized set of rules. And that is why I appreciate the concept behind your legislation.

We have extended the deadline, as you pointed out, for the challenge process, to give all types of entities the ability to challenge. We have broadened the categories that

can challenge. It is not just rural carriers, but State and local governments.

We have also extended waivers to everyone from Senator Joe Manchin of West Virginia to the Kansas Farm Bureau to be able to participate. Our own staff has done a lot of road shows, and I believe it is nine States currently and a number of webinars.

We have also created a map with just one unsubsidized competitor to allow companies, anybody, an easier way to pinpoint those areas that are ripe for challenge.

All of these steps, I agree, are complex. Nonetheless, something is better than nothing, and nothing is what we started with.

We are making progress slowly but surely, and I am confident when we hold that Mobility Fund auction, folks in Woden, folks in my home State, everyone will be able to get coverage ultimately because we did the very hard and dirty work collecting this data as best we could.

Mr. Loebsack. Well, thanks to all of you. And we will be staying in touch, I can promise. Thanks very much. Thank you.

Thank you, Madam Chair.

Mrs. Blackburn. And Broadband Loebsack, as we have come to know him at this committee, does yield back his time.

Mr. Shimkus, you are recognized.

Mr. Shimkus. Thank you, Madam Chairman.

Welcome, everybody. It is great to have you back.

I want to start with Commissioner O'Rielly. I want to just thank you for raising and addressing the 911 fee diversion issue. It is hard to talk about that when your State -- my State was good. Then it was bad. Now I think it is good again.

But as Congresswoman Eshoo and I have worked on 911, as many of you know, for a long time, States diverting that money is, in essence, stealing from the fund in which

they were paying into. So I just want to publicly thank you for that.

But sticking with you, I have been named to the farm bill as a conferee.

Mr. O'Rielly. Congratulations.

Mr. Shimkus. Yeah. Get my pitchforks out.

But one of the things that we want to -- one of the reasons why we are on there is the broadband deployment, and there are U.S. issues.

So how can we get the FCC, the RUS, and NTIA to work together so we are not duplicating functions or are actually working together to address -- everyone is talking about, right, rural broadband, connectivity. And so every member has mentioned that as part of their discussion. So I am looking for some advice and some consultation so that when I go in I can be impact.

Mr. O'Rielly. I would be more than pleased to provide more technical advice to you. There are extensive provisions in both the House and Senate farm bill. There is also the pilot program that was created as part of last year's budget bill. And they all have the potential, as I read them now, to provide duplication with existing programs we have at the FCC.

The chairman has done a wonderful job in working with different agencies. But if you look at -- you know, I was looking at language in terms of consultation. It requires consultation. So basically they will talk to us before the -- RUS, for instance, would talk to the FCC before a decision is made. But that doesn't get you a prohibition on duplication. It just requires a consultation.

Mr. Shimkus. So we then know about the duplication instead of being surprised about it.

Mr. O'Rielly. Yeah, we know where the limitations are.

And if you look at the House bill, for instance, it has different speed -- you know, it

wants 25/3 compared to where we are trying to fund. And I recognize our speeds in the funding that we do are less than what people would like, but we are trying to stretch our dollars as far as we possibly can with 14 million people -- or 24 million, depending if you count satellite or not -- unserved households today. That has been my primary concern.

So I would be more than pleased to work with you to try and figure out how to tighten the language to make sure we have duplication, that we have coordination throughout, rather than consultation.

Mr. Shimkus. I appreciate that.

And let me go to Commissioner Carr. And then if I have time I can open it up for other folks.

You have done some work already doing what we are trying to do in the SPEED Act, which is address on the deployment rightsizing historic and environmental rules, not reinventing the wheel if the siting tower is the same siting tower, but then you are going to put a 5G system on there.

Can you talk about what you have done in the Commission so far on that aspect?

Mr. Carr. Sure. Thank you, Congressman.

Mr. Shimkus. I think your mike is off.

Mr. Carr. Thank you, Congressman, for your leadership on these issues.

Some of the legislation that you have mentioned contains a lot of really great ideas. There is this global race that is ongoing to 5G. And winning that race isn't just about getting next-gen connectivity in New York or San Francisco. There are thousands of other communities that need their fair shot at 5G.

A big portion of 5G is going to be small cells. One of the challenges there is how do we make the economic case to get small cells everywhere? So by removing regulations that were really designed for 200-foot macro towers, having them continue to

apply to those towers, but putting an updated approach for these small cells can make a big difference in extending 5G everywhere.

Mr. Shimkus. So then let's just finish with this part of the debate. In our language, we are directed to Federal property, parklands and issues, because there is a perceived concern by smaller municipalities and stuff that you are going to -- we could, in the guise of rolling out 5G, that we are going to take away their rights to help in the local decisions.

Have you had any of those debates and discussions? And what are your thoughts about that?

Mr. Carr. We have had a lot of really good, really productive meetings with local elected officials, whether it is county commissioners. As I have been on the road, I was in Boston at the U.S. Conference of Mayors conference.

These local officials deal with issues that we at the FCC will never deal with. If there is an ugly small cell that goes up somewhere, those local officials are the ones that are going to get the call about it, not us.

So I think at the end of the day, we can look to try to find some common ground because we share the same goal of getting more broadband deployed.

Mr. Shimkus. Again, my time has expired. I wish I would have had more time to talk to everybody.

And I yield back. Thanks.

Mrs. Blackburn. The gentleman yields back.

Mr. Welch, you are recognized.

Mr. Welch. Thank you very much.

I want to make three comments and then discuss two topics, rural broadband and the homework gap.

The comments are, number one, thank you for your help on the passage of the RAY BAUM'S Act.

Number two, I do commend you for your decision on Sinclair. Number one, you did it together. It is so, so important for us to find ways we can do things together. Number two, if we are going to have strong rural communities, we have to have local institutions, and there is no institution more important locally than local news.

And then three, Commissioner Carr, telehealth, that is a big opportunity for us and really, really essential.

The two topics I want to speak are about the rural buildout, and I am going to talk to you, Chairman Pai, a little bit about this. Commissioner Rosenworcel said you can't assess something if you can't measure it. You can't challenge rural broadband or make it universal unless we acknowledge that there is a real problem.

And what Congress said in 1996, it required the FCC to report annually on whether advanced telecommunication capability is being deployed to all Americans in a reasonable and timely fashion. In 2016, the Broadband Deployment Report, and you were serving on the Commission then, said, and you concurred with it, where it was critical of the buildout.

You said: I agree, "This administration's policies have failed to deliver 'advanced telecommunications capability' -- broadband -- to the American people in a reasonable and timely fashion." And you were explicit. "The standard set forth by Congress is not being met. Rural America is being left behind."

Fast forward to 2018. In the Broadband Deployment Report, this is under your leadership, there was a determination that "broadband services are now being deployed to all Americans on a reasonable and timely basis." And what you said in your statement is the current FCC is now meeting its statutory mandate to encourage the

deployment of broadband on a reasonable and timely basis.

That is not what Congress is requiring. It is not to encourage; it is to get the job done.

I want to spell out some of the facts that I understand to be the case, and you can tell me whether you agree or disagree.

Twenty-four million Americans lack access to fixed broadband at speeds of 25/3, the FCC standard. Do you agree with that or not?

Mr. Pai. I do.

Mr. Welch. Great.

Thirty-one percent of Americans in rural areas lack access to the broadband service. Do you agree with that?

Mr. Pai. I do.

Mr. Welch. All right.

Forty-four million Americans lack access to both fixed broadband at 25/3 speeds and mobile LTE broadband at 10/3 speeds.

Mr. Pai. I would have to double-check that number, but I don't have any reason to suspect it is incorrect.

Mr. Welch. Okay. So we are in agreement that there is a problem.

Mr. Pai. Correct.

Mr. Welch. And I hope we are in agreement that your job, FCC, all of you, is not to encourage, it is to get it done.

Mr. Pai. Absolutely.

Mr. Welch. Great. That is good.

Now, in listening to you -- not just today, but other times -- I have heard you talk about what you see as the benefits of deregulation, including the elimination of net

neutrality, correct?

Mr. Pai. Correct.

Mr. Welch. Let me be explicit. We could give you a pen and you could write a revocation of every single regulation that exists. Will that provide the financial incentive for broadband carriers to build out on dirt roads in Vermont and Iowa and Kansas where there is one house every half mile?

Mr. Pai. Congressman, this is the central problem. In too many parts this country there is no private business case for deployment. That is why our job --

Mr. Welch. That is my point. Deregulation won't get it done where there is no market opportunity.

Mr. Pai. That is not correct, Congressman. Look at the letter from VTel, which I appended to my testimony. VTel stated specifically that they are spending millions of dollars more because of these regulatory modifications.

Mr. Welch. Thank you. And thank you for bringing up VTel. And, in fact, I happen to be a VTel customer. And what they said in that letter is they are going to invest \$4 million more. We have got 100,000 people underserved in Vermont.

What you didn't indicate was that VTel was the recipient of a \$130 million ARRA grant. So that is kind of like relevant. There was actual public money that went into helping the broadband buildout.

So the fundamental question here, okay, because we have got agreement that we have got to get rural America wired, and every single day it is more important that we do that, but it is not going to happen just with deregulation. There has got to be some mapping. There has got to be a bolstered Universal Fund. There has got to be promotion of local competition. We had some people in here from rural communities that were having local companies that were doing really hard things and getting it done,

because their investment was in the community.

So I see my time is up and I didn't even get to the homework gap, Commissioner, which I applaud you for your work on. But this is a real ongoing problem.

I yield back.

Mrs. Blackburn. The gentleman yields back.

Mr. Latta, you are recognized.

Mr. Latta. Thank you, Madam Chair.

And thank you very much, FCC Commissioners, for being with us today.

Chairman Pai, technology such as the Internet of Things, artificial intelligence, blockchain are disrupting the markets and even changing our everyday lives. We need widespread broadband connectivity to drive these technologies to their potential.

Is the Commission focusing resources on learning more about these emerging technologies and how critical broadband access is to this discussion?

Mr. Pai. We are, Congressman. And thank you for that thoughtful question. I have personally spent, both because of professional obligations and personal interest, a lot of time thinking about these issues starting in the fall of 2017.

And that is part of the reason why recently I announced that the FCC would be hosting a forum later this year on the impact of artificial intelligence and machine learning, in particular on the communications sector, because I think we are simply scratching the surface in terms of the potential of some of these technologies. They have obviously disrupted a number of industries, and I think there is a useful focus for the FCC in thinking about how it could disrupt communications.

Similarly, I have been looking at a number of other technologies, virtual reality and augmented reality, blockchain, connected vehicles, and the like. I think we need to make sure that we are always keeping track of some of these technologies. It is hard,

because of both the depth and the breadth of some of these innovations.

But nonetheless, I have been talking to a number of experts, including our own chief technology officer, companies in Silicon Valley, and the like, about how to make sure that we are aware of some of these changes. And the transformation thus far has been tremendous, but I think over the next 5 to 10 years, it is going to be even more mind-blowing.

Mr. Latta. Thank you.

Commissioner O'Rielly, the RAY BAUM'S Act calls for the FCC and the NTIA to identify 100 megahertz of new unlicensed spectrum under 8 gigahertz by the end of 2022. What steps will the Commission take to free up much-needed unlicensed spectrum to support growing consumer demand for existing technologies and to provide innovation space for the technologies of the future?

Mr. O'Rielly. Absolutely. Thank you, Congressman.

I would only answer to your previous question to Chairman Pai, I would say also don't forget about narrow band. Narrow Band-IoT, very important. But I don't want to get sidetracked.

To your point on unlicensed, the Commission, and with the Chairman's great leadership, is going to move forward on a number of things, including in 6 gigahertz, where we are going to hopefully, assuming that an NOI or NPRM is adopted later this fall and moved to order sometime next year, provide additional spectrum for unlicensed purposes.

We have also been working, Commissioner Rosenworcel and I have been working extensively on 5.9. And I have also raised the question of whether 4.9 may be a place that we can work with to have unlicensed bands and services, because we have reached a maximum capacity. Five gigahertz is getting rather full in terms of services; 2.4 is

already full.

So unlicensed is going to have to be a very big portion of our consideration going forward.

Mr. Latta. Thank you.

Commissioner Carr, earlier this week the House passed the Precision Connectivity Act, and you have all been hearing a lot of questions coming from us, and especially when we are talking about rural broadband and getting that access out there.

This is a bipartisan bill that I authored with my friend the gentleman from Iowa, Mr. Loeb sack, which directs the Commission to set up a task force in collaboration with the Secretary of Agriculture, identify and measure gaps in broadband availability, and develop policy recommendations to promote rapid broadband expansion on agricultural land.

Do you believe the Commission can execute the requirements of the Precision Agriculture Connectivity Act?

Mr. Carr. Thank you, Congressman.

Yes, I do. I think it is an important issue, as you point out. The intensive amount of data and broadband that is used in agriculture today is quite mind-blowing. When you get outside of D.C. -- I was in Moline, Michigan -- you see the high bandwidth uses, from connected combines to drones that are taking detailed images down to the tiny dots of a leaf on a crop.

We need to find ways to get high-speed broadband for farmers and ranchers. I think this bill is one way that is going to do it.

Mr. Latta. Let me follow up with that. To what degree will it require a combination of the technologies in the wireline and wireless to meet that broadband challenge for the precision agriculture?

Mr. Carr. Ultimately, it is going to require a mix of technologies. Fiber is going to work some places, fixed wireless in other places. We are seeing a new generation of satellite technologies that can also help. So we are going to have a lot of different technologies that are making that last mile work.

Mr. Latta. Thank you very much.

And, Madam Chair, I yield back the balance of my time.

Mrs. Blackburn. The gentleman yields back.

Mrs. Dingell, you are recognized.

Mrs. Dingell. Thank you, Madam Chair.

Thank you, all of you, for being here this afternoon.

Chairman Pai, I want to begin with you and ask about your response -- or lack thereof -- to a letter that Mr. McNerney and myself sent regarding the DDoS attack that crashed the FCC's website during the net neutrality comment period, or what you told us had crashed it.

Last year, during a hearing that we were having, you indicated that you would follow up with the committee to provide information on what had actually happened. Then, in another hearing in October, you said -- and this is directly from the transcript -- you had provided a detailed response to the committee and, "I would be happy to provide that to you with some of the particulars in that regard."

The committee has never received it. We have not received it. And then you responded to a question for the record by saying you couldn't release the information to the committee. Now, since then, we have learned some information from the press about this, but we still have a lot more questions than answers and are still waiting for a response.

Would you agree, Chairman Pai, that there is something wrong when members of

the committee tasked with oversight of the FCC learn about issues from the press when we have been asking about them for more than a year?

Mr. Pai. Thank you for the question, Congresswoman.

In consultation with the Office of General Counsel following that particular hearing that you referenced, the general counsel opined that we require a letter from the committee in order to share certain information because of some of the sensitivity of that information. Should the committee issue such a letter, again, we would be happy to accommodate.

Additionally, I want you to know that we have been working with both the General Accountability Office -- of course, Congress' investigative arm -- as well as the Office of Inspector General at the FCC on these issues. And that has been ongoing for a number of different months. And so the fact that you might not have heard a lot of news from the FCC does not mean we haven't been working with these independent bodies to investigate these particular issues.

Mrs. Dingell. Well, I think this committee would think that we should have some information on this. And so you are saying from the subcommittee chair, the full committee? Who do you need to receive that letter from, since you haven't been asked enough by enough of us?

Mr. Pai. My understanding from the general counsel is that the committee --

Mrs. Dingell. What is your definition of committee? Does that mean Mr. Walden and Mr. Pallone need to send you a letter?

Mr. Pai. I believe that is correct.

Mrs. Dingell. Okay.

Madam Chair, can we talk to the full chair about this? Thank you.

All right. So then I would like to continue. Since there is already some public

information about the attack, will you commit to finally following up with the committee if we get this letter, to provide us with reports, requests, memoranda, service logs related to the DDoS attack, the FCC's protocol for documenting it, and what steps you are taking to mitigate events like this going forward?

Mr. Pai. Congresswoman, what I can tell you is that, again, we have been working cooperatively with the Office of Inspector General. The Inspector General has done a fantastic job investigating this issue. And I don't want to speak for him, but what I can say is that I would expect him to issue more information on this in the very near future.

Mrs. Dingell. Hopefully, to the committee that has jurisdiction.

Chairman Pai, let me also ask you about a letter that you were sent asking for an investigation into whether companies improperly sold TV viewer data to Cambridge Analytica. You punted this matter to the FTC, which I disagree with. But we did a followup letter asking further questions about this decision. It is critical that the FCC enforce privacy protections of the communications sector to the fullest extent.

When can we expect a response to this letter? And why did the FCC decline to conduct an investigation into this?

Mr. Pai. I appreciate the question, Congresswoman.

The agency is a creature of Congress. We can only exercise authority that Congress has delegated to the agency.

In this particular case, there are two specific authorities, Section 338 and Section 631. Those authorities extend to cable operators and satellite systems. Neither TiVo nor comScore is a satellite operator or a cable system. So we cannot exercise jurisdiction under them in the manner in which you requested.

Additionally, to the extent that you were asking about the company DISH and its

provision of aggregate data, that is a specific exception from the statutory authority that does not allow us to exercise jurisdiction.

And so it wasn't simply a punt, but a recognition of reality under the current law that the Federal Trade Commission can be and is expressly authorized under Section 5 of the FTC Act and other authorities to investigate this particular matter, and that is why we referred it to them. They are the primary privacy cop on the beat, and we want them to be able to look at this issue, consistent with your request.

Mrs. Dingell. I am out of time, so I can't keep asking. I had more.

Thank you. I yield back.

Mrs. Blackburn. The gentlelady yields back.

Mr. Guthrie, you are recognized.

Mr. Guthrie. Thank you.

Commissioner Carr, first, I want to talk to -- this isn't necessarily directly FCC, but it is something you have been working on I am very interested in here, and it is the skills gap and apprenticeships. I work with Susan Davis from California on another committee.

And I have the Wireless Infrastructure Association came to see me. And I believe -- I don't know if you were with them or somebody else -- that you actually climbed a tower recently. And they were trying to figure out how 5G deployment could be held up just by not having the skills of people able, men and women, to be able to go out and deploy 5G.

And I know I have like 6,500 open jobs in my community. If you show up with some skill -- some skill -- it is easy to do a living wage. If you show up with skills, I mean, you have a career.

And so I know that is an interest of you, in terms of this area. Could you talk

about things that you have worked in, in this area, what the skills gap is, and some things you think we should be able to do to help close that?

Mr. Carr. Yes. Thank you, Congressman, and thank you for your leadership on this issue. You mentioned I climbed a cell tower in Sioux Falls, California, and I demonstrated my own skills gap attempting to keep up with the people doing that.

But to your point, the skills gap, in my view, comes in two places. One, when you look at the deployment of next-generation network, 5G, these thousands of small cells, right now we potentially don't have the workforce in place that can do that work, the deployment of it, the consideration of the RF implications, in terms of where you set an antenna up to get coverage.

And then we also see it in communities being able to have the skills, take advantage once those connections are in place. I was in Detroit at a school that is trying to give either low-income people, people recently released from prison, the training and the job skills they need to take advantage of the digital economy.

To your point, I think there is more we can do on the apprenticeship side with streamlining those efforts to make it easier for people to move into this space. I have done some events with the Department of Labor geared towards that.

Mr. Guthrie. Thank you very much. And as I said, that moves towards careers instead of just jobs, and that is what we really want to reach out to help people with.

Also, Chairman Pai, in the RAY BAUM'S Act, Congresswoman Matsui and myself had the auction deposits bill that was included into that area.

My question is for you and Commissioner O'Rielly, I think Commissioner O'Rielly, you both brought that to our attention. Are you seeing any other barriers in the auction mechanics that may need statutory fix to streamline to make the auctions go smoother or better, both of you or either of you?

Mr. Pai. Thank you for the question, Congressman. Before I do that, I want to assure the subcommittee that we consulted with the general counsel, and had something happened to Commissioner Carr on that tower climb, the FCC still would have had a quorum sufficient to discharge its duties as prescribed by Congress.

But more seriously, we are so grateful to you, to Congresswoman Matsui, and to the entire subcommittee for your leadership in fixing that problem.

As I look at the lay of the land in terms of our legal authority, we have sufficient authority at this point, with the exception of the budgeting, the issues that I talked about earlier, to make sure that we can conduct auctions in an expeditious and productive way.

Mr. Guthrie. Thank you.

Mr. O' Rielly, I have another question for you if you want to answer that.

Mr. O' Rielly. I was going to answer to the point. I don't think it is a question of authority. I think it is a question of what this committee does very well, which is oversight and following up to make sure that the auction software is advanced to meet the goals for the future.

Mr. Guthrie. Okay, thank you.

And also for you, Commissioner O' Rielly.

Thank you for your support on the 6 gigahertz proceeding and your testimony. As you know, this is an important issue for the Spectrum Caucus.

Would you like to elaborate on the need for this spectrum and what timeframe you expect to see for the expected NPRM? If you could be more specific than maybe the fall or something like that.

Mr. O' Rielly. Absolutely.

So the predominant bands that I mentioned before, 2.4 and 5 gigahertz, are congested. And so we need to add more unlicensed spectrum to the portfolio, for all

the benefits that they bring that I have talked about in the past. Commissioner Rosenworcel and I have worked together on this issue.

Six gigahertz is what I consider the second best option for additional unlicensed spectrum next to 5.9. We are working hard on that. It has been a very difficult slog to try and come to resolution.

But 6 gigahertz may be something we can move forward quicker. It is the uplink to C-band. C-band has the other component that the subcommittee has talked about a little bit earlier.

In terms of the point on the timing, that is something that the chairman -- I don't want to get ahead of him, but I think that the goal is to have NPRM this fall timeframe.

Mr. Guthrie. Commissioner Rosenworcel, do you have any comments on that?

Ms. Rosenworcel. No. I agree with much of what my colleague Commissioner O'Rielly said.

Unlicensed spectrum has historically been scraps in our airwaves. We have got to be intentional about it. We need more WiFi in our skies, and we have got opportunities in the 5.9 gigahertz span and 6 gigahertz span, and it is time to pursue them.

Mr. Guthrie. Well, thank you very much.

And my time is almost expired, so I will stop there. I yield back 15 seconds.

Mrs. Blackburn. The gentleman yields back.

Mr. McNerney, you are recognized.

Mr. McNerney. I thank the chair.

And I thank the Commissioners for your work. It can't be that easy, but hopefully rewarding.

Chairman Pai, it has been 2 months since we learned about the VPNFilter, the

Russian-linked malware that can be used to steal users' information, exploit devices, and block network traffic. Hundreds of thousands or more routers have been compromised. Yet consumers either know nothing about it or they have been left wondering if their router is affected and how to take action. And these are routers that are being rented from their ISPs.

Do you agree that the ISPs have a responsibility to inform consumers they lease routers to about known vulnerabilities? Can you answer yes or no?

Mr. Pai. Congressman, we do want to ensure that consumers get the information they need about the security of their equipment.

Mr. McNerney. Do the ISPs have a responsibility here?

Mr. Pai. Legally, I would have to look into it. But certainly, as a general business matter, I would hope that they would inform consumers about any risks to that equipment.

Mr. McNerney. Is the FCC doing anything to encourage ISPs to inform customers about this malware and how to update their routers or if their routers have been compromised?

Mr. Pai. Congressman, I have to be a little bit circumspect on this issue. I can't comment on things that might have some classification to them. But we would be happy to work with you to provide what information we can on the subject.

Mr. McNerney. Well, is the FCC doing anything at all to help protect customers against malware from their routers?

Mr. Pai. Again, there are certain issues I can't discuss. But generally speaking, yes, we do monitor any potential threats to equipment, and we work with the industry to make sure that they apprise customers about it.

Mr. McNerney. Commissioner Rosenworcel, do you think the FCC has a role in

protecting consumers from cybersecurity threats?

Ms. Rosenworcel. Yes, I think the FCC has a role in protecting consumers from cybersecurity threats.

I also think our equipment authorization process is of note here. Those routers have to be authorized by the agency, because they use radio frequency. We could certainly look into using our Part 15 process to certify that they will notify consumers of any malware or cyber risks associated with their use.

Mr. McNerney. Thank you for that answer.

The GAO has committed to investigating fake comments submitted to the FCC in the net neutrality repeal proceeding, and I understand that the New York attorney general is investigating as well. As it stands, we know that at least 2 million of these comments are fake, some even coming from Russian email addresses.

Commissioner Rosenworcel, is it your view that the FCC has been cooperating with law enforcement agencies?

Ms. Rosenworcel. I do not believe we have been cooperating with law enforcement agencies. I think that is a problem. Two million peoples' identities were stolen in our record. That is a Federal crime under Title 18. It is also a crime in many States. We should be referring these matters to State attorneys general and the Department of Justice.

Mr. McNerney. Thank you.

Chairman Pai, can you commit to ensuring that your office and the FCC as a whole will cooperate with these investigations?

Mr. Pai. Congressman, we have been cooperating with the General Accountability Office. As I said, the Office of Inspector General is looking into this issue.

In addition, I proactively have announced recently in a letter in response to

Senators Merkley and Toomey that we would be changing our process to ensure that some of the issues that arose last time, for example, 7.5 million comments in support of Title II using fakemailgenerator.com, 400,000 pro-Title II comments from a single address in Chelyabinsk, Russia, that those things don't happen.

As we are exploring the use of CAPTCHA and other potential solutions, assuming we get authorization from our appropriations committees, we are reprogramming of certain funds.

Mr. McNerney. Well, I am still waiting for a response for the report's -- and this is following up on Mrs. Dingell's comments -- report's request memoranda related to the alleged DDoS attack on the comment system, requesting these documents multiple times now, and hope that you will provide them sometime soon.

Mr. Pai. Congressman, again, to follow up on my response to Congresswoman Dingell, we have been working with the inspector general. He has done a fanatic job on this. And stay tuned, they will be issuing information.

In the meantime, additionally, as I said, in consultation with the general counsel, we require a letter from the committee in order to supply certain types of information that you are seeking.

Mr. McNerney. Are there any steps you are taking now to prevent comments from being filed in a manner that would impact your proceedings?

Mr. Pai. Yes, sir. So we are, as I said, exploring, in consultation with our career staff and the Office of Managing Director and others, solutions like CAPTCHA or other similar mechanisms to ensure the integrity of our proceedings.

The system we inherited in January 2017 was designed to be a fully open process that anyone can participate in, but we want to make sure that it is one that, again, respects the integrity of the FCC's processes and confirms the seriousness of our work.

Mr. McNerney. Thank you.

Commissioner Rosenworcel, last question. I am concerned about the proposed changes to the Lifeline Program. I am worried that, if adopted, it will only further widen the digital divide and be a major setback for vulnerable populations like veterans.

The proposed changes, could you give me an idea how that might affect veterans?

Ms. Rosenworcel. I appreciate the question. I am, in fact, the daughter of an Air Force veteran.

There are 1.3 million veterans in this country that rely on the Lifeline Program today. And, in fact, at the behest of Senator McCain and Senator Blumenthal, we expanded the program to include the Veterans Pension program so that more veterans could apply and participate, so that when they finish their service they can reacclimate to civilian life and have communications necessary to do so. I think it would be offensive if this agency decided to cut them off from communication service.

Mr. McNerney. I yield back.

Mrs. Blackburn. The gentleman yields back.

Mr. Olson, you are recognized.

Mr. Olson. I thank the chair.

And welcome to our four leaders of the FCC.

Chairman Pai, Texans back home in Texas 22 want me to thank you for standing up for a thriving internet. They are grateful for your actions to stop the false net neutrality rules of the previous administration.

You found out firsthand what my former boss, Texas Senator Phil Gramm, found out about killing a bad government program or rule: It is easier to kill a vampire than a bad government program. Yet you persevered. And now again to channel Phil Gramm: The previous rule is deader than Elvis.

It is again hurricane season. I would like to also thank you for coming down within days after Harvey hit Houston to help us on the ground recover with our telecommunication systems. I am hopeful this year is not like last year: Harvey, Irma, Maria, fires. We have to make sure we are prepared.

Can you update us on what the FCC has done to prepare for hurricanes and other disasters this year?

Mr. Pai. Thanks so much for the question, Congressman, and thank you and the folks in your district for hosting me when I was in Houston after Hurricane Harvey.

We are doing a number of things to make sure that our networks are as resilient as possible and that restoration is as quick as possible.

In terms of funding, we have extended funding to make sure in Puerto Rico and the Virgin Islands, for instance, that we can restore those networks as quickly as possible. And we have also extended a number of different waivers and streamlining orders to make sure that carriers can focus on rebuilding networks instead of paperwork to the FCC.

Additionally, we have engaged in a number of different experiments, for example, granting an experimental license to Google to use Project Loon to beam internet access from balloons. In a situation like that, we don't care what technology is used to get people back on the grid, we want them to get back on.

Additionally, we have been working to make sure that our wireless emergency system is much more resilient. I would be happy to talk about some of the different steps there, but the bottom line is we are making sure that these alerts are more targeted, are more informational, and the consumers don't tune them out.

An additional one that is specific to you that I thought I would mention, because a lot of people don't think about this, some 33 trillion gallons of water were dumped on

your part of Texas in the wake of Hurricane Harvey. That had a huge impact on those parts of the area that only had copper lines in the ground.

Copper degrades when it is under severe water pressure, and if it is exposed to water it is utterly useless. And those areas of Houston that had fiber were much more resilient. Either the cell towers didn't go down or the networks stayed up altogether.

And so I think that it is important when we talk about some of our copper retirement rules and other nitty-gritty wireline reforms that we have got is that there is a huge public safety benefit to doing this, NG911 and the rest. I think it is very important to keep that in mind.

All of these issues that we have been talking about previously have a public safety dimension that I think we should all recognize.

Mr. Olson. By the way, thank you for all those emergency messages that came over, warning tornado, warning floods, warnings swamped the whole system. With your work, it is targeted now to where it actually is. As opposed to hitting a whole county, it is hitting a city. And that is a big deal, because we were bombed. We got spammed by all these. It just became nothing after days of these buzzers going off. So thank you for acting quickly to make that happen.

Commissioner Carr, you have been leading the FCC in finding new ways to reduce government red tape that slows 5G deployment. Verizon has just announced it plans to launch 5G in Houston, Texas, later this year.

Can you tell me how your work will help expedite this rollout quickly in Houston?

Mr. Carr. Thanks very much, Congressman, for the question. I am glad to see that Houston is going to be on the leading edge of getting 5G.

That is something that we want to replicate across the country. So we have a number of reforms that we have already taken. That is going to reduce the cost of

deployment. That is going to make a big difference, particularly in costly, difficult-to-serve areas. We have a number of ideas that we are continuing to look at, at the Commission.

I also wanted to follow up on your earlier question. I was also in Houston at the Harris County 911 Center and saw the great work that they were able to do there in response to Hurricane Harvey.

Mr. Olson. And one last question. I am running out of time here, but this is for you, Chairman Pai.

As you probably know from my biography, I spent 9 years in the Navy, lieutenant commander, a leader in the Navy. You are the leader of this FCC, this Commission. You have a member who has climbed up a cell tower. As leader, don't you think you should follow his lead and climb up a cell tower as well, somewhere in South Dakota maybe?

Mr. Pai. That was a curve ball I had not prepared for, Congressman. Although Commissioner Carr is far younger and more nimble than I am, nonetheless, I will put my own life at risk to ascend perhaps a 10-foot tower to inspect a small cell somewhere in Houston once the deployment is ready.

Mr. Olson. I will go with you.

I yield back.

Mrs. Blackburn. And the gentleman will not only go with you, he will climb the tower.

Ms. Matsui, you are recognized.

Ms. Matsui. Thank you very much, Madam Chair.

And welcome to all the panelists. I don't have a climb-the-tower question here.

So but anyway, I want to follow up on my Spectrum Caucus co-chair, who is Brett

Guthrie, talking about 6 gigahertz. I understand the Commission is planning to move forward with NPRM to explore the possibility of opening the bands known as collectively 6-gigahertz band for unlicensed use in the fall.

Commissioner O'Rielly and Commissioner Rosenworcel, what interference protection to mitigation techniques, such as frequency coordination, could protect incumbents and allow unlicensed operations in this band?

Mr. O'Rielly. Well, thank you.

So those that have been interested in making 6 gigahertz available for unlicensed use have put forward engineering studies to show that the interference, harmful interference, would be minimal, and they have recommended a number of mitigation efforts. They will all have to be explored as part of the NPRM this fall.

Ms. Matsui. Okay.

Ms. Rosenworcel. We do have before us some engineering studies like my colleague referenced. The most important thing we can do is put this out for a rulemaking so that we make it possible for the 6-gigahertz band to be used for unlicensed service in the near future.

Ms. Matsui. Right. Great. Thank you.

Last week, I announced that I am working on legislation to direct the Department of Commerce to convene a working group of Federal and industry stakeholders to develop a consensus-based definition of blockchain.

Distributed ledger systems such as blockchain have particularly interesting potential applications in communication networks, including in IoT deployments and spectrum sharing. Next-generation networks, including 5G-capable radios, have the opportunity to ensure spectrum is being used as efficiently as possible.

But there currently is no common definition of blockchain, which could potentially

it hinder in its deployment, especially in those cases where sharing may be the only viable option.

Commissioner Rosenworcel, so what potential could blockchain have in increasing spectrum efficiency?

Ms. Rosenworcel. Thank you for the question and being so forward-thinking about this.

I have written some pieces for Wired and elsewhere where I have pointed out that spectrum is a scarce resource. We need to come up with more efficient ways to distribute it other than just traditional licensed and unlicensed regimes.

And using distributed ledger technology like blockchain could make that possible. We could see dynamic leasing. We could see lightweight leasing. We could see a lot more innovative uses of this scarce resource.

So I think what you are describing is the right way to go.

Ms. Matsui. Okay, thank you.

I want to move on to the C-band. I commend the FCC's work to identify the 3.7 to 4.2 gigahertz band as a potential core midrange band for next-generation networks. This band has propagation characteristics that make it ideal for reliable satellite distribution and particularly valuable for 5G mobile networks.

The NPRM that you unanimously approved earlier this month appropriately recognized that the Commission has insufficient information on incumbent operations that may need to be protected in the band. I appreciate the NPRM sought additional information on existing Earth station uses of C-band satellites as well as the previous application filing freeze.

Chairman Pai, how is the work to gather additional information on incumbent users going?

Mr. Pai. Thank you for the question, Congresswoman.

It is going well, in part because we have extended the time and the latitude that some of these folks have to register with us. We have extended the timeframe by 90 days, until October 17. We have streamlined the fees and the reports that are required for them to be able to report.

And so at the end of the day, this fall we hope to be able to come to you just to let you know that we have a much more robust picture of where these stations are in order to allow us to proceed to a fully informed decision about the fate of the C-band.

Ms. Matsui. Okay, fine. Thank you.

Mindful that clearing federally held spectrum is both critical in our effort to facilitate deployment of next-generation networks and a congressionally mandated preference, I am interested in new ways to ensure we are using spectrum more efficiently and innovatively.

Back in 2004, for instance, the FCC considered the role that opportunistic technologies and access systems could play in promoting leasing arrangements between commercial users and license holders.

Specifically, I am interested in a legislative framework that would further facilitate the opportunity for NTIA to coordinate with the FCC and allow Federal agencies to lease spectrum to commercial users.

Commissioner Carr, I know there is not much time, but how do you believe additional spectrum-sharing arrangements could balance the certainty and deployment needs of both commercial providers and government users?

Mr. Carr. Congresswoman, thank you for the question and thank you for your longstanding leadership on spectrum issues.

I think you are right. I think we need to put even more tools on the table, even

more options on the table, and we should be exploring all ways to get more spectrum out there for consumer use.

Ms. Matsui. Thank you.

And I just want to make a comment. In my work on this committee I have been focused on expanding access to telehealth services. So I thank you, Commissioner Carr, for your focus on them.

And with that, I yield back.

Mrs. Blackburn. The gentlelady's time has expired.

Mr. Johnson, you are recognized.

Mr. Johnson. Thank you, Madam Chairman.

And to our Commissioners, thank you all very much for being here.

Chairman Pai, earlier this year Congress provided funding to NTIA. We have talked a little bit about the mapping issue. We provided that funding to NTIA to update the national broadband map in coordination with the FCC.

How is that coordination effort going? And do you believe that a process that uses State and commercial data in addition to the material the Commission collects from the Form 477 process will render a more accurate and useful map?

Mr. Pai. I appreciate the question, Congressman, and your leadership on this issue.

I have personally spoken to the Administrator of NTIA about this issue. In addition to that, our staffs have been in touch to share expertise to make sure that they aren't reinventing any wheels and that we are all on the same page in terms of the need for mapping.

In terms of the second part of your question, which of course now I have forgotten. Sorry.

Mr. Johnson. It was, do you believe the process that uses State and commercial data in addition to the material from the 477 process will render a more accurate and useful map?

Mr. Pai. Our hope is that it will. And in the meantime, what we have done under my leadership over the last year and a half is to start a comprehensive review of the Form 477 process, to make sure that the information that we get is as granular, is as feasible, and is as usable as possible for all of the folks who need it, including NTIA, Congress, the FCC, and others.

Mr. Johnson. I know you know, and I think the other Commissioners agree, too, that an accurate map is important, and I appreciate what you said about not reinventing the wheel.

You know, this is not rocket science. We ought to be able to produce a map and we ought to be able to produce a map very, very quickly. An accurate map is the starting point for solving this problem. And it has been an issue that has just been dragging and dragging and dragging.

So whatever you folks can do to encourage and push that along, it really is important to rural areas where we are suffering with intellectual capital loss, the rural-urban divide being very real. You guys know that. I appreciate that.

Chairman Pai, cybersecurity is obviously a very important issue as well for our country, and there continues to be debate over which agency or which commission should take the lead on cybersecurity.

I know that the telecommunications industry works routinely with the Department of Homeland Security, and conversations that occur with DHS are held in confidence, and that is required by statute.

Obviously, that kind of protection of information encourages sharing of critical

and confidential information, which we all agree is the best way to safeguard our communication systems. I understand.

However, those same statutory protections do not exist at the FCC. So are you concerned that the FCC and DHS could work at cross-purposes, which may undermine cybersecurity?

Mr. Pai. Great question, Congressman. Cybersecurity is a critical issue, and it seems like every week there is a new story that draws our attention to that fact.

I am happy to report that over the last year and a half, we have had a very close and productive working relationship with the Department of Homeland Security. In fact, this very morning I spoke with DHS about some cybersecurity issues that have popped up.

And so we certainly want to make sure we are on the same page there. Our role under current law is to act in more of a consultative fashion with DHS, which has the lead in terms of cybersecurity.

Should Congress see fit to change the law -- currently, the only arguable source of authority would be Section 1 of the Communications Act, which is a very high-level, broad statement, which doesn't give us operative authority there, as well as arguably Section 222, which is more consumer proprietary network information. But should Congress change the law, we would dutifully administer it to make sure that our networks are secure.

And in the meantime, I will continue to work collaboratively with DHS and other Federal partners, including the intelligence community, to make sure that cybersecurity is reinforced as an important issue.

Mr. Johnson. Okay. And I can't get two questions in here, but I am going to try.

5G. You know, the United States won the race to 4G, increased our economy, according to some reports, by nearly \$100 billion and drove an 84 percent increase in

wireless-related jobs.

Because of that leadership, the wireless industry now supports over 4.7 million jobs and contributes \$475 billion annually to the U.S. economy, according to that Accenture report.

What should the FCC do to ensure that we maintain our global lead in 5G so that all of those economic and job benefits continue to occur here in the U.S.?

Mr. Pai. Congressman, exactly what we are doing. Being very aggressive on spectrum, holding the 28 and 24 gigahertz auctions this fall, 37, 39, and 47 gigahertz next year, in addition to looking at other bands, 3.7, 6 gigahertz, and others.

In terms of infrastructure, we need to make sure that we continue to modernize our regulations to incentivize the construction and use of the small cells and distributed antenna systems and other guts of the future 5G networks.

And I can tell you our work is having an impact not just on my own word, but I recently came from two conferences, one in Switzerland, one in Panama. And to hear from regulators everywhere around the world, from Algeria to Guyana, to even Trinidad and Tobago to Fiji, tell us they are looking to the United States for leadership because, as one regulator put it to me: You guys are doing it right and we follow your lead on this 5G issue.

That is something that I think reinforces the fact that we are doing the right thing.

Mr. Johnson. Let us know how we can help.

And with that, I yield back.

Mrs. Blackburn. The gentleman yields back.

Ms. Eshoo, you are recognized.

Ms. Eshoo. Thank you, Madam Chairwoman.

And welcome to the entire Commission.

Commissioner Rosenworcel said 9 months is a school year. It is also the length of time that it takes for a child to come into this world. So it has been a while. It has been a while. Welcome back.

I want to set the record straight on a couple of things first. I mean, it has been said that people are entitled to their opinions, but not their own facts. It has been cast about here today that it is somehow a fiction that my Republican friends destroyed net neutrality and wiped out privacy on the internet. That is not fiction; it is a fact.

On December 14, 2017, the Commission voted to upend the net neutrality rules that were in place and that had been tested in court. Nonetheless, that was rescinded.

On March 28, 2017, a CRA went sweeping through this committee. It was authored by our chairwoman, went through the full committee, went like a prairie fire through the House of Representatives, and removed all privacy protections from the internet. I know what I voted on. Obviously, I voted no. Others voted yes.

But to say that these things somehow are a rumor where people are referring to them and they are not so is simply not a fact. So I want to really set that down, because I think it is important too.

Mr. Chairman, I want to quickly follow up on Congressman McNerney's question where he specifically asked whether the FCC is cooperating with law enforcement agencies, et cetera, et cetera. Is that referred to the Bureau or to the Commission?

Mr. Pai. Sorry, Congresswoman, is what referred?

Ms. Eshoo. The investigations, referring the violations. Is that a referral to -- does the Bureau act on that or does the full Commission act on that?

Mr. Pai. If we are talking about the same thing, the letter was referred to our Office of General Counsel.

Ms. Eshoo. So what does that mean? What I want to know is, has there been a

referral to a law enforcement agency? That is what I think Congressman McNerney was asking you, but you talked about the GAO, I think the FTC, the I don't know whatnot, the IG, the FC.

So have you referred these violations to a law enforcement agency? That is what I would like to know. Yes or no?

Mr. Pai. Congresswoman, we have consulted with the Department of Justice.

Ms. Eshoo. No, no, no, no, no.

Mr. Pai. We don't have jurisdiction --

Mr. Eshoo. Has it been referred to? Has it been referred to for examination? Have you asked for an investigation of it?

Mr. Pai. Congresswoman, it is not our role to administer Title 18. That is a Department of Justice issue.

Ms. Eshoo. Well, I think you don't want to answer the question. I mean, I don't want to litigate it with you. I just want a yes or no.

Mr. Pai. Congresswoman, it is very simple. To the extent that we have jurisdiction here, we have worked with the Office of Inspector General. We have worked with the General Accountability Office.

Ms. Eshoo. I think I know what your, quote, answer is.

I want to get to something, and I don't have much time. It probably is going to be more of a statement than anything else.

It has been said that we have 24 million Americans that either have no broadband service or very slow broadband service in the country. Shame on all of us.

Is there a 5-year plan at the FCC on this? Some of it may belong in the private sector. Some of it you need authority from the Congress and our subcommittee.

Other actions the Commission can take. But when that is stitched together, we have

solved this issue.

Every time the Commission comes here, all of our subcommittee hearings, we go over and over and over and over this issue, and it is not getting any better.

So can someone enlighten me on this?

Yes, Commissioner.

Mr. O'Rielly. So, in fairness, the Commission has spent an incredible amount of work on this.

Ms. Eshoo. I think we all have, but I don't sense we are making progress.

Mr. O'Rielly. We have done the easy stuff, the easy locations. We are working on what I would consider the medium locations. We have an ongoing auction right now for the CAF Phase II auction.

What is left over from that and what is left over from our remote area -- or from our rate of return areas that don't get served under our program there is what are going to be the hardest --

Ms. Eshoo. So what will that knock out of the park, what you just described, of the 24 million?

Mr. O'Rielly. It is 14 million if you don't -- it is 24 million only if you don't count satellite that is serving 10 million people today with 25/3.

But it is important. I don't mean to say that 14 million should be ignored. But we are working on the really hard area. The Remote Areas Fund needs to be set up, and we are going to need additional funding that we don't have today.

And it will either require contributions from Congress in Federal dollars, which I have testified in favor of and the dollars went to other Federal agencies --

Ms. Eshoo. I backed you up on it.

Mr. O'Rielly. -- or it is going to require additional contributions from ratepayers

to the likes we haven't seen before.

Mrs. Blackburn. The gentlelady's time has expired.

Ms. Eshoo. Thank you very much.

Mrs. Blackburn. The gentlelady yields back.

Mr. Bilirakis, you are recognized.

Mr. Bilirakis. Thank you, Madam Chair, appreciate it so very much. And I welcome the Commission and the chairman.

And, Chairman, thank you very much for coming to my area and speaking to my constituents. I really appreciate it very much.

Chairman Pai, again, while you were in Tampa, the Tampa Bay area, you were able to review the testing that Charter was doing, Charter Communications was doing in and around the district. In particular, they are conducting trials in the 3.5 band, which is showing promise for better and faster rural coverage. At the same time, the 3.5 band is utilized by Federal radar systems, which is used by the Navy and Coast Guard on the Gulf Coast of Florida as well as other areas.

The environmental sensing capability, ESC, has been created to ensure these Federal uses are not interfered with, while also allowing shared spectrum with industry in preparing the 5G-enabled technology. This band provides a great opportunity for industry and competition as long as we ensure Federal systems remain secure.

What is the status of ESC implementation and interference sensitivity standards, please?

Mr. Pai. Thank you for the question, Congressman. And first and foremost, thank you for the hospitality you showed me, both in Tampa and in Oldsmar. It was a terrific visit to the district.

I am very excited about the possibilities of 3.5 gigahertz spectrum, in part because

of that trial you showed. I mean, to be able to see how Charter is using and how others potentially could use the spectrum to provide a seamless high-definition video experience as you are driving down the road. I mean, very simple application, but a very powerful one nonetheless for consumers.

The ESC is a critical part of that, and so I am happy to report that we are actively working with both NTIA and the Department of Defense on the testing. The testing is very complex, and so I can't give you a definitive timeframe on when it is going to be completed or what the results might show. But do know that we are working as quickly as possible to wrap that testing up to enable ESC to allow shared use of this valuable resource.

Mr. Bilirakis. Very good.

Commissioner O'Rielly, I know you are leading the charge on the 3.5. Do you have anything to add to that?

Mr. O'Rielly. I would agree with the Chairman on this, but I would say there are two parts. There is the SAS, which deals with the commercial users, and the ESC, which deals with the Federal users, and how we make sure we don't cause interference.

Those things, a couple months ago we thought we might separate them time-wise. I was briefed yesterday that it looks like things are lining up nicely. And I don't want to get ahead of myself, but I think Q1 of next year is not irrational, if not earlier.

We are hoping to do some things that I can't speak of, but hopefully will be able to announce some things regarding the SAS later this year and then the ESCs really soon after. So I think things are lining up pretty nicely along those decisions.

But can I go back to your earlier? And I don't want to use your time.

Mr. Bilirakis. Please.

Mr. O'Rielly. But you mentioned the point regarding Charter. To get back to Congressman Doyle's point regarding census tracts, Charter has advocated a different position, in terms of they haven't favored census tracts, they have favored counties. And so there are different positions than just census tracts, and I am trying to work out and try and find a commonality of the different entities that are seeking this.

I will tell you, those that have favored census tracts have not moved or advocated 1 inch from where they have been for the last number of years. They will not yield anything to where they have been. So it has been hard to try and find commonality amongst all these different positions. And you mentioned Charter, so I thought I would bring that up.

Mr. Bilirakis. Thank you very much. Thanks for the update.

Back in March, after a very long wait, the D.C. Circuit Court issued its opinion on the Telephone Consumer Protection Act. In particular, this ruling invalidated the definition of an auto dialer and also did away with the Commission's reassigned number and safe harbor rules.

In light of this opinion, what action is the FCC taking to establish valid TCPA definitions and rules that target bad actors, but do not put everyday Americans at risk to lawsuits?

Commissioner, Mr. Chairman, can you address that?

Mr. Pai. I would be happy to, Congressman.

We are still actively studying the results of the opinion in ACA International, and we are working with our staff on the way forward on some of the key issues they identified: the definition of auto dialer, the reassigned number database, revocation of consent, and the like.

So, again, I can't give you a specific timeframe, but we are actively looking at a

variety of TCPA issues as a result of the D.C. Circuit's opinion.

Mr. Bilirakis. Well, Madam Chair, I have got one more question, but I will go ahead and yield back my time and I will submit it for the record. I appreciate it. Thank you.

Mrs. Blackburn. I thank the gentleman. The gentleman yields back.

And, Mr. Flores, you are recognized.

Mr. Flores. Thank you, Madam Chairman.

Also, I want to thank all the members of the Commission for being with us today.

Let me compliment you on something. I think that the Commission has done an excellent job of taking the statutory authorities that you have gotten from Congress and to effectuate the rollout of 5G.

Based on what I have seen from the stakeholders in this space, we are moving much more quickly than I would have envisioned. We are going to have fixed wireless 5G in Houston as a test case at the end of this year.

That is amazing when you can talk about speeds up to 3 to 10 gigabits. That is amazing. So good work on getting that done.

And that also, I think, sets the stage for a cost-effective way to roll out rural broadband eventually. And I appreciate the work on that, to take care of the 24 million people that have been widely talked about during this hearing.

Commissioners Pai and O'Rielly, you both touched in your testimony about what you are doing in terms of making spectrum available for 5G, and part of that entails dealing with the FM radio stations that were left out during the original legislation.

My bill that deals with that was addressed in the RAY BAUM'S Act, and also we set aside the appropriations for you to do that. You have moved quickly to have an NPRM at your next hearing on August the 2nd. Can you give us a preview of what we can

expect in that regard, just in a few seconds?

Mr. Pai. Congressman, I certainly hope we will see a unanimous vote next week on my proposal, but I don't want to speak for my colleagues. But it is important for us to take that authority you gave us and run with it as quickly as possible, get public input on what the right procedures should be to protect full power/Class A TV stations, FM radio stations, and others as a result of the incentive auction.

Mr. Flores. Okay. Thank you.

Moving on to another subject, believe it or not, one of the biggest complaints that I am receiving from my constituency, which is generally happy, is that they are upset about robocalls. And I don't think that has come up today. And I know you all are taking steps in terms of stopping the spoofing of phone numbers and so forth.

Can you give us an update on where we stand in that regard? I guess who owns that among this group? Chairman Pai?

Mr. Pai. I drew the short straw.

Mr. Flores. You get all the big ones, don't you?

Mr. Pai. We are doing a lot, Congressman. Thanks for the question. This is an issue that frustrates me. Even last week when I was on vacation, I spent several minutes on a phone with several robocallers, trying to figure out who they were, how they got my information, and the like.

We are doing a lot. So over the last year and a half since I have been in office we have adopted a notice of inquiry on call authentication, essentially digital fingerprints for every single phone call. We have also in that regard blessed the private sector group called the Nancy, which is looking at call authentication.

Mr. Flores. Good.

Mr. Pai. Secondly, we are taking steps to allow carriers to block spoofed calls,

that is, calls that obviously aren't from your area code but nonetheless appear to be.

Additionally, we are taking very aggressive action in terms of enforcement. Oh, sorry, I should mention also the reassigned number database, to allow those legitimate callers to know whether or not a number has been reassigned to somebody who doesn't want to be called.

Additionally, on the back end, so to speak, taking very aggressive enforcement action. The largest fine ever imposed in the FCC's entire history was against a robocaller in Florida, about \$120 million. Additional multimillion dollar fines there, too.

I personally have spoken with some of my counterparts abroad, because a lot of these robocaller operations come from other countries and our jurisdiction only stops at the water's edge. And largely, they have been very willing to cooperate with us on that.

Mr. Flores. Good.

Do you need additional statutory authority at this stage of the game to be able to fight this epidemic?

Mr. Pai. I think we have a fairly broad authority, but to the extent that Congress is willing to give us more tools in terms of statutes of limitations or the like, we would love to work with you on that.

Mr. Flores. Okay. Let us know what you think you need.

I want to move to the mid-band spectrum in just the remaining minute that I have. Part of the mid-band spectrum of 5.9 gigahertz was set aside for what was called dedicated short-range communications, or DSRC. That is a part of the spectrum that could be used for autonomous trucking, autonomous vehicles. You can have vehicle-to-vehicle communications, vehicle-to-infrastructure communications.

There seems to be -- let me say this. Other people want to use that for unlicensed WiFi and things like that to try to offload some data transmission from the SDR

bands. This section seems to be congested or subject to future congestion. What do you see for the future of the 5.9 gigahertz part of the spectrum?

Mr. Pai. It is a good question, Congressman. And Commissioners O'Rielly and Rosenworcel have long been advocating for this, as have Congresswoman Eshoo and I, in an op-ed we did a few years ago.

We are working actively with our Office of Engineering and Technology at the FCC, along with the NTIA and NHTSA, the Department of Transportation and others, to figure out the way forward. So right now we are in phase I of testing. There has been a report that is in draft mode that we have shared with our Federal partners. We hope to be able to move forward on that soon.

Ultimately, this has to be a collaborative effort. There are a lot of different agencies with different equities here. But ultimately, we want to make the highest-valued use of this spectrum.

Mr. Flores. Okay.

I have some more stakeholders at home that are working on this. The Texas Transportation Institute is trying to design the trucking system of the future, and so they are pretty worried about what happens in this band. So we will send some supplemental questions for you.

Mr. Pai. Okay. Thank you.

Mr. Flores. Thank you.

Mrs. Blackburn. The gentleman yields back.

Mr. Collins, you are recognized.

Mr. Collins. Thank you, Madam Chair.

Commissioner O'Rielly, I will maybe spend my time talking about the, what do we want to call it, the 911 diversion, the Fee Integrity Act that we are putting forward. You

were kind enough to come visit.

In my area, we went to a PSAP in Niagara County, which does not have the latest technology. They are quite frustrated. They don't have the moneys to get there. And because of your visit, we got a lot of press on this, we shined the light on New York State's diversion.

So maybe just for the record to get this out there, New York has about 13 million cell phones. With 20 million people, that kind of makes sense. Little kids may not have them. The States set their own fee, which in this case New York set the highest fee in the Nation at \$1.20 per month for the cell phones, raising \$185 million for the 911, what is supposed to be for the 911 service.

But, as our bill would forbid, New York State is diverting about 40 percent of that money to the general fund to be wasted in Albany. And that is about \$75 million a year that should be going to upgrade PSAPs, like we have in Niagara County that are in woeful need of it. Instead, the money is just being frittered away in Albany.

So our bill would put that \$75 million back on the table, not only for New York, New Jersey, Guam and a few others that seem to have no interest short of some laws that would forbid this.

And I will tell you, most of the folks in our district were astounded to know that the 911 service charge that is on their cell phone bill every day was not all going for 911 service. They did not have a subtraction for New York State diversion, a 911 fee and then New York State diversion.

So your visit was well-received in a bipartisan way. Certainly, all of the counties which are struggling for funds and want to update, they want to know when a call comes in who is calling, where they are instantly so they can dispatch the people, that everything is moving together.

And some of these PSAPs are decades old. And in some cases, Erie County where I live, there are literally a dozen or more PSAPs. They aren't even consolidated within a county, because this sheriff's department wants theirs, this city police wants theirs, some fire issues. Even though all the cell phone calls go to one place and there are not too many land lines, people are somewhat protective of it.

So, again, I want to thank you for helping us shine a light on this. And to further put this forward, Niagara County, where we were, we have done some research since then, over the last 5 years they have paid \$10 million -- this is not a large county -- \$10 million have gone into Albany as part of the \$1.20 per phone.

And while New York State diverted 40 percent, that still should have left \$6 million to come back to Niagara County. But since each State makes its own rules -- New York State I think tends to favor the downstate areas -- only \$2 million came back to Niagara County.

So they paid in \$10 million, with their residents thinking this \$10 million is supposed to help our PSAP in Niagara County. Lo and behold, only \$2 million came in.

I can assure you, if that other \$8 million, or even if the State diverted, if the remaining \$4 million had come in, they would have upgraded that PSAP. Residents would be safer. Those working in those PSAPs, which is a very hard, frustrating job, would feel better when they go home at night.

So with your input, I just want to point out again one of the things that this bill would do is to have the States not only stop diverting, but we would have the FCC better define what would be a use, because the minute they stop diverting they may say: Well, for public safety we are going to fix that pothole over here. Well, no, this is in need of some Federal oversight.

And, again, if you want to make a couple of comments. I know I burned up most

of the clock, but I wanted to get this all on the record.

So Commissioner O'Rielly.

Mr. O'Rielly. I can't thank you enough for your leadership on this issue. It is great to be home in Niagara County.

Your point is well-taken in terms of the \$10 million and only receiving back \$2 million. So the consumers in my hometown are paying for it twice. Not only are they paying the 911 fees that are being diverted, but then they are having to pay higher local residential taxes where the budgets are coming from. And so Niagara County, property taxes went up to fund the extra \$8 million shortfall. And so they are being hit twice on this.

And the New York government has made clear that they have no intention of changing this. Rhode Island has no interest right now in terms of solving their problem. New Jersey has the same problem. I was just talking to some folks from Guam and the same issues. We have some work to do on this front. I would love continuing to work with you under your leadership.

Mr. Collins. You shined a light on it. You were very helpful in that. Thank you all for your time today. This is also not a partisan issue whatsoever.

So, Madam Chair, I yield back.

Mr. O'Rielly. Public safety issue.

Mrs. Blackburn. The gentleman yields back.

Mr. Costello, you are recognized.

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[3:47 p.m.]

Mr. Costello. Thank you, Madam Chair.

I want to first just say, since I have been on this committee, I have done my best to delve into these issues, and they are very sophisticated, the things that each of you deal with on a day-to-day basis. And I just want to commend each of you for your expertise and the time that you dedicate to our country and to the FCC and to the industry for trying to get it right.

With that, I want to ask Commissioner O'Rielly a question. Some of my colleagues on the other side of the dais today have articulated their interest in giving the FCC more of a presence on cybersecurity issues. While the concern over cybersecurity and supply chain vulnerability is certainly well-founded, it is my understanding that the FCC is not and should not play a lead role -- I emphasize lead role -- on identifying and mitigating these vulnerabilities. The FCC has a long tradition of deferring to expert agencies in the executive branch with the relevant intelligence and national security expertise. For example, the FCC routinely refers applications for transfers of certain licenses to an informal working group in the executive branch known as Team Telecom to review the national security implications of each such transaction.

Do you believe the FCC has anything new or unique to add to our Nation's cybersecurity work, or do the intelligence and national security agencies currently have a good handle on these issues?

Mr. O'Rielly. So I have to be careful in terms of what I can say in the public, but I do believe that the authority has been provided by Congress -- so it is not my question; it is in the statute, who the Congress gave authority to was to other agencies besides the

FCC on the issue of cybersecurity. And so that is not something that I believe we have great authority to act. If Congress changes that authority, that is one thing. But I do believe that we work well with what is -- what you reference Team Telecom. There is a need to reform Team Telecom, and I have advocated some reforms to that. But I do believe that we do not have the primary role. We do have functions that we can add to that conversation.

Mr. Costello. And that is why I direct the question. The reforms that you have advocated, does that contemplate that you do have existing expertise that could be lent if the statute was broadened to enable you to do that?

Mr. O'Rielly. The changes that I am seeking is more formal structure for Team Telecom and addressing the timing of the decisions that are made by them and making sure that interaction between the FCC and Team Telecom actually is beneficial. We have applications that sit at Team Telecom under the last administration for quite a long time period. That is problematic for those that have applied. It doesn't we are undermining our national security one iota; it means we have a better, more efficient government.

Mr. Costello. So, if I were to characterize while you agree that cybersecurity is a deeply serious issue, you do not feel that placing more jurisdiction within the FCC or having the FCC exercise additional jurisdiction, be it within the statute or broadening the statute, would be well placed because we have existing intelligence agencies that are already fully capable of doing that, and the FCC does not have anything additional to add. Is that correct? Did I just, like, say too much?

Mr. O'Rielly. You -- there is a lot to -- I would agree with an awful lot of what you said. We will continue to have conversations with those entities, but I think that they have a great deal of authority and are capable of providing us the information as it relates

to applications that are submitted for our consideration.

Mr. Costello. Okay. I do have a question for Commission Carr, but does anyone have anything to add to that real briefly?

Okay. Telehealth, as you are aware, the prospect of telehealth holds exponential benefits for patients, families, and the healthcare system at large. But on the issue of access for rural America, Commissioner Carr, what can we expect to come out of the 3-year pilot program? What sort of job creation can rural communities expect from increased investment of the development of telehealth technologies?

Mr. Carr. Thanks so much for the question.

These are some of the things that we want to tee up in this notice of inquiry that is up for a vote. We have seen some great examples of telehealth, remote patient monitoring technologies, and a significantly improved outcome for low-income patients, including in rural America, as I mentioned in my testimony, in the Mississippi Delta.

We have also seen significant cost savings. One program I mentioned in the Mississippi Delta, if just 20 percent of the diabetic population in the Magnolia State enrolled in that type of a program, we would be projected to save about \$189 million in terms of the State's Medicaid expenses.

Mr. Costello. Very good. Anyone else to add on that? Yes.

Mr. Pai. I will simply add that I agree with everything Commissioner Carr said. A few months ago, President Kennedy's first FCC chairman, Newt Minow, and I wrote an op-ed, a bipartisan op-ed that emphasized the importance of telemedicine. And Commissioner Carr has expounded these principles very well. And if you look at some of the cases we identified -- schools in Scottsville, Kentucky, that for the first time are able to treat students because there is no pediatrician in all of Allen County, Kentucky; if you look at the Veterans Affairs facilities in Lecanto, Florida, and Boise, Idaho, where they are

providing veterans mental health consultations and experts around the country -- if you look at all of these great things that the FCC is doing in collaboration with the public and private sectors, we could really dramatically improve health outcomes for millions of Americans. And here too I think we are only scratching the surface of its potential.

And that has a direct impact on you as well. Instead of spending a lot of money on an emergency room visit, if we do proactive health treatments for some of these folks, we can save a lot of money for the system but, more importantly, save lives and improve health outcomes.

Mr. Costello. Thank you.

I yield back.

Mrs. Blackburn. The gentleman yields back.

Seeing that there are no further -- oh Kinzinger came in. Oh, hi.

Mr. Kinzinger. I bought you guys another 5 minutes. You are welcome.

Thank you.

Mrs. Blackburn. There you go. You are recognized.

Mr. Kinzinger. Thank you, Madam Chair.

And thank you all for being here and all your service to the country and what you do. And I really appreciate it.

I recently reintroduced the FCC Transparency Act, which would require the Commission to publish on its website any documents to be considered and voted upon at least 21 days in advance. In reality, it is simply a codification of the most important aspects of the transparency process currently in place at the FCC.

I realize that most of the Commission has weighed in publicly on my bill. But just to have your opinions as part of record for this, I want to ask each of you, do you support the current transparency processes in place at the FCC, and by extension, do you support

the FCC Transparency Act?

We will start with you, Mr. Chairman.

Mr. Pai. Absolutely, Congressman. Thank you for your leadership.

Mr. O'Rielly. Yes. I concur. I agree wholeheartedly with your bill.

Mr. Carr. Yes and yes. I think it codifies good government, and it is a step in the right direction.

Ms. Rosenworcel. Yes, for items that are placed on our monthly agenda meeting.

Mr. Kinzinger. Thank you.

Commissioner O'Rielly, your actions to roll back the so called kid vid rules is born out of recognition that there is so much choice today in terms of children's programming. Whether it is on a tablet, an Apple TV, a Roku, or traditional broadcast TV service, you argue that the government need not mandate specific programing to any one outlet. And to be clear, I support families and children having access to good educational programing, but I do watch some TV, and I would argue that competition and consumer choice have never been greater, not only for children's programming but for all audiences.

If you don't mind, briefly summarize you assessment of the video marketplace and choices available to consumers.

Mr. O'Rielly. Well, thank you. I will say I take only issue with your idea of rollback. We are trying to provide greater flexibility on the kid vid issue. As you highlighted, the marketplace has changed incredibly since 1990 when the statute, the Children's Television Act was enacted, in 2000 -- and 1996, when the rules by the FCC were put in place, and 2004, when they were modified extensively. So the world has changed, and we have a much broader marketplace. It is not just your three broadcast

channels on Saturday morning. It is a plethora of cable options, and it is a ton of options for those over the top.

Now there has been concern, what happens for the family that doesn't have any of that except broadcast television? And we have tried to address that in the NPRM and are going to take comments on giving the opportunity and the flexibility for broadcasters to move that signal that they have on a primary channel today to a multicast channel so programming will still be available to those over-the-air-only households. So I would argue it is a greater flexibility without harming children that we are seeking to do hopefully later this year.

Mr. Kinzinger. Thank you.

Also, as a co-chair of the bipartisan Rural Broadband Caucus, my colleagues and I have worked diligently to close the digital divide between urban and rural. In the 21st century, broadband access is vital for employers, and employees, educators, and students, doctors, and patients and ag. Broadband access also allows people to participate in digital commerce, which provides a convenience to our rural constituents while bolstering both their local economy and the national economy.

I am proud that my provisions and others I supported, including the Rural Spectrum Accessibility Act and the Improving Broadband Access for Veterans Act, were included in the RAY BAUM'S Act and signed into law in March. And I am also proud that my fellow caucus co-chairs and I asked for and received robust resources for rural broadband infrastructure in the fiscal year 2018 omni, to the tune of \$600 million in new money.

While broadband and telecom work continues, we are taking big steps toward ensuring rural Americans have the tools that they need to flourish. So, Commissioner O'Rielly, you focused in your testimony on the various funding streams being allocated

toward rural broadband. We all want to bridge the digital divide, but I share your concern about the coordination of funding between agencies. We have to ensure that we are not being redundant resources by pouring money into the same areas from different agencies.

Do you have ideas on how these agencies can better coordinate and how best to prevent the government from subsidizing the overbuilding of areas that are currently served?

Mr. O'Rielly. I do, and I would love to provide technical advice to your team to help -- you know, ways that I thought -- I really appreciate the efforts and commendable efforts in the work in terms of the pilot program that was created as part of the consolidated appropriations and efforts that are ongoing in the farm bills today, very beneficial. We want to get to exactly what you highlighted -- there is not the duplication, make sure the speeds do not become a mechanism to overbuild -- and I think there are ways to draft that and include language. It hasn't been adopted. In past efforts, people have asked for language to be provided; didn't quite get there. And I think there is that opportunity to correct that going forward.

Mr. Kinzinger. In the last 30 seconds, I will just make a point, versus ask a question, which is, on the issue of stingrays or IMSI, which is: There has been a lot of ink lately about the fact that some of these devices have been located around sensitive areas. We made multiple requests to multiple agencies about how do we deal with this issue.

I would like to make the point that, whether it is FCC or other agencies, we will encourage everybody to work together to figure out how to address this situation because I think it is a concern from a national security perspective and something that ought to be addressed.

So, with that, Madam Chair, I thank you. And I yield back the balance of my time.

Mrs. Blackburn. The gentleman yields back. And now there are no further members, and we thank you all very much.

Before we conclude, I ask unanimous consent to enter the following documents into the record: a letter from the Credit Union National Association; a letter from the Utilities Technology Council; a letter to the FCC on 911 fee diversion; a U.S. Telecom blog post; a letter to the FCC on TCPA; a letter from Anthem and its affiliated health plans; a GAO report on Lifeline.

Without objection so ordered and Mr. Doyle.

[The information follows:]

***** INSERT 3-1 *****

Mr. Doyle. Thank you, Madam Chair.

I would like to make unanimous consent to add to the record the letter from wireless ISPs to the FCC regarding the CBRS band; Chairman Pai's tweet with the CEO of Wave Wireless; an article from Ars Technica regarding a letter and tweet made part of record; NTIA's letter to the FCC regarding copper retirement; and a letter from Senator Wyden to the FCC regarding Securus.

Mrs. Blackburn. Without objection so ordered.

[The information follows:]

***** INSERT 3-2 *****

Mrs. Blackburn. Pursuant to committee rules, members are reminded that they have 10 business days in which to submit additional questions.

And we remind you that you have 10 business days in which to respond.

Seeing no further business to come before the committee, the committee is adjourned.

[Whereupon, at 4:00 p.m., the subcommittee was adjourned.]