

Attachment—Additional Questions for the Record

**Subcommittee on Communications and Technology
Hearing on
“Accountability and Oversight of the Federal Communications Commission”
December 5, 2019**

The Honorable Ajit Pai, Chairman, Federal Communications Commission

The Honorable Anna G. Eshoo (D-CA)

- 1. I’m pleased the Lifeline National Verifier now has automated connections with Centers for Medicare and Medicaid Services databases to verify Lifeline eligibility and that the FCC is working to establish a similar connection with the Department of Veterans Affairs for its Veterans and Survivors Pension Benefits program.**

Is the FCC working with the Department of Agriculture to establish automated connections for the Supplemental Nutrition Assistance Program (SNAP), given the significant overlap between recipients of SNAP and Lifeline?

Response: USAC has conferred with the Department of Agriculture, as well as other federal and state agencies and Tribal governments, on expanding the National Verifier to include available data sources for all qualifying eligibility programs. Currently, there is no nationwide database of SNAP recipients maintained at USDA or any other federal agency. Rather, that data is maintained at the state level. As a result, the National Verifier has built automated connections with 15 state systems with SNAP data, and USAC is working with additional states and territories to build new automated connections in 2020. The FCC and USAC remain willing to work with any state, territory, or district that is interested in establishing an automated eligibility verification connection with the National Verifier.

- 2. One goal of the National Verifier was to reduce waste, fraud, and abuse. Has the FCC tested the accuracy of the results of National Lifeline Accountability Database (NLAD) and National Verifier that ETCs receive? Are you aware of concerns that ETCs are receiving false information about Lifeline eligibility from NLAD or the National Verifier?**

Response: The Commission is not aware of concerns that ETCs are receiving false information about Lifeline eligibility from the NLAD or the National Verifier. USAC safeguards the accuracy of Lifeline eligibility results through comprehensive data integrity measures. These include prioritization of automated connections to federal and state data sources to minimize manual document review; adherence to a rigorous data matching process in establishing such connections; a dispute resolution process for consumers whose eligibility cannot be verified

through underlying source data; and centralized review of eligibility documentation by USAC and its vendor using uniform eligibility criteria and consistent quality control standards. USAC also regularly conducts sampling and audits of its systems and processes to ensure compliance with FCC rules.

- 3. The decision to increase minimum service standards was proposed in conjunction with a port freeze. Coupling these items was essential for increasing service, while also reducing waste, fraud, and abuse. Why is the FCC moving forward with just increasing minimum service standards which has caused carriers to cease providing Lifeline services?**

Response: On November 15, 2019, the Commission granted a partial waiver of the next update to the Lifeline minimum service standards for mobile broadband usage. Based on an industry proposal, the Commission increased the standard for mobile broadband usage from 2 GB to 3 GB on December 1, instead of the previously scheduled increase (set by the Commission in 2016) to 8.75 GB. In doing so, the Commission affirmed the need for better broadband for Lifeline’s low-income consumers while at the same time rejecting a much higher increase in the minimum data allowance that could have had a detrimental impact on the program and caused undue disruption to Lifeline subscribers. We are also unaware of any carrier that has ceased providing Lifeline services as a result of this modest increase in service standards.

- 4. The FCC found that “the large increase in the minimum standard for mobile broadband usage could unduly disrupt service to existing Lifeline subscribers.” Would the FCC suspend the implementation of next year’s minimum service standard if a similarly large increase is anticipated again?**

Response: The Commission’s *2016 Lifeline Order* set forth a formula to calculate the updated minimum service standard for mobile broadband usage based on certain data regarding consumer broadband usage and directed the FCC’s Wireline Competition Bureau to announce the results of that formula by July 31st each year. Because we do not yet know what the results of that calculation will be for December 2020, the Commission is not yet in a position to determine whether it would serve the public interest to waive the next minimum service standard update.

- 5. Is the FCC considering opening a new proceeding to revisit the appropriate formula for calculating minimum service standards for Lifeline mobile broadband service?**

Response: In the *2017 Lifeline Order and NPRM*, the Commission sought comment on, among other issues, the Lifeline Program’s minimum service standards and asked if it should “revise the formulas used to determine the minimum service standards or adjust the mechanisms by which the minimum service standards are updated.” The Commission received multiple comments on this issue, and it remains under consideration.

- 6. You’ve raised network security issues as a major concern of yours. Beyond supply chain issues, which the FCC and our Subcommittee have worked on, what other recommendations can you make relative to securing our nation’s**

wireless networks—for example, addressing SIM swaps, carriers’ usage of dated encryption and authentication algorithms, and the threats of cell simulators or IMSI catchers?

Response: In today’s increasingly connected world, safeguarding the security and integrity of America’s communications infrastructure has never been more important. The Commission has taken several targeted steps within our statutory authority to protect the nation’s communications networks from potential security threats. For example, the Commission recently adopted improvements to its submarine cable outage reporting requirements to focus reporting on significant disruptions including events with national security implications.

I have discussed my support for 5G security issues to be addressed early in the process. *See, e.g.,* Remarks of Chairman Ajit Pai at the Prague 5G Security Conference 2 (May 2, 2019), <https://docs.fcc.gov/public/attachments/DOC-357288A1.pdf> (last visited Nov. 29, 2019). Making the right choices before deployment is much easier than trying to correct mistakes once network construction and operation is well underway. 5G security decisions must be made with the long-term in mind and in coordination with our international partners (where possible). Last May, more than 140 representatives from 32 countries came together to develop the Prague Proposals, a consensus approach for protecting next-generation networks. As acknowledged in the Proposals, there are no universal solutions to security. Rather, “[t]he decision on the most optimal path forward when setting the proper measures to increase security should reflect unique social and legal frameworks, economy, privacy, technological self-sufficiency and other relevant factors important for each nation.” *See* <https://www.vlada.cz/en/media-centrum/aktualne/prague-5g-security-conference-announced-series-of-recommendations-the-prague-proposals-173422/>

Use of more advanced wireless protocols will also help to improve mobile security. According to publicly available information, AT&T has already discontinued its 2G network and Verizon Wireless and T-Mobile are expected to shut-down their 2G networks soon. Specifically, AT&T discontinued service on its 2G wireless network in January 2017. *See* https://about.att.com/innovationblog/2g_sunset. Consistent with its public statements, in its recently filed FCC Form 477 data, AT&T no longer reports having 2G service. Verizon Wireless stated that it planned to shut down its 2G CDMA network by the end of 2019. *See Applications of T-Mobile US, Inc., and Sprint Corp. for Consent to Transfer Control of Licenses and Authorizations, et al., Memorandum Opinion and Order, declaratory Ruling, and Order of Proposed Modification, WT Docket No. 18-197, FCC 19-103 at para. 335, n.1177 (2019) (Sprint/T-Mobile Order).* T-Mobile has stated that it will support 2G until December 2020 (*See* <https://www.geotab.com/blog/2g-network-shutdown/>), and Sprint has indicated that the termination of its CDMA network is not expected to commence prior to January 2021. *Sprint/T-Mobile Order at para. 298.* We are also aware, however, that certain much smaller carriers, typically in rural areas, have not announced their plans to switch-off their 2G networks, despite incentives they might have to use the most efficient technology/network. This could not only expose their users to vulnerabilities but also could create problems if a subscriber who roamed into a 2G-only area had 2G roaming disabled on his or her device—particularly in emergency call situations.

While the Commission has not taken a formal stance on the use of encryption, the issue has been addressed in the context of advisory committees. For example, the Commission uses the Communications Security, Reliability, and Interoperability Council (CSRIC), a Federal Advisory Committee, to promote the security, reliability, and resiliency of the Nation's communications systems. In 2009, FCC tasked the CSRIC to recommend best practices that encourage communications service providers to secure their networks. In 2011, CSRIC recommended that the Commission encourage communications service providers to incorporate standards-based encryption services on their networks. CSRIC recommended that communications service providers "incorporate cellular voice encryption services and ensure that such encryption services are enabled for end users" and "encourage the use of IPsec VPN, wireless TLS, or other end-to-end encryption services over the cellular/wireless network." While the Commission does not track service provider implementation of CSRIC best practices, they were developed and recommended by practitioners, which increases the likelihood that they will be implemented by communications providers. The Commission makes CSRIC best practices available to the public through a Commission-hosted database, which is available at <https://opendata.fcc.gov/Public-Safety/CSRIC-Best-Practices/qb45-rw2t/data>.

The FCC also re-chartered CSRIC through 2021. With regard to wireless communications, the re-chartered council is considering standard operating procedures for the security of 5G and 911 networks, and the security of the Session Initial Protocol used to initiate, maintain and terminate voice, video and messaging applications. The schedule for the delivery of final recommendations from CSRIC is available on the Commission's website at <https://www.fcc.gov/files/csric7wgdescriptionsdocx>.

Regarding SIM swaps, the FCC has a consumer guide on cellphone fraud that provides useful information on how consumers can protect themselves, available at <https://www.fcc.gov/consumers/guides/cell-phone-fraud>. I also have asked the Consumer and Governmental Affairs Bureau to review whether there are other steps consumers can take to protect themselves and what consumer education efforts may be beneficial.

Regarding IMSI catchers, the Commission takes the threat of rogue cell sites seriously. We work with our interagency partners to address the issue, using the tools (particularly related to equipment authorization and enforcement of Commission rules) provided by our existing authorities. The Commission places conditions on IMSI catcher equipment certifications: first, that marketing and sale of these devices shall be limited to federal, state, and local public safety law enforcement officials only; and second, that state and local law enforcement agencies must coordinate in advance with the FBI regarding the acquisition and use of the equipment.

- 7. Some are proposing allocating spectrum in the 6 GHz band for licensed use, by relocating incumbents to the 7 GHz band, though that band is currently occupied by government entities, including the Department of Defense. How long has the FCC been working with the federal government on allocation of 7 GHz?**

Response: The Commission is not working with federal entities, including the Department of Defense, regarding the relocation of 6 GHz incumbents to the 7 GHz band. Any potential relocation of 6 GHz band incumbents to the 7 GHz band would require either sharing between

the incumbent Federal users and relocated 6 GHz users, or relocation of the incumbent Federal users to other spectrum.

- 8. As you have recognized, the need for unlicensed spectrum is as high as ever, and it's growing. Some have raised concerns about harmful interference to microwave services if unlicensed devices would be allowed to operate in the 6 GHz band. Do you have the data necessary to create rules for these two services to coexist?**

Response: I have consistently stated that the Commission is committed to protecting incumbent systems in the 6 GHz band from harmful interference. The Commission provides for a robust and transparent rulemaking process to encourage all stakeholders and interested parties to file comments with supporting data and engineering studies and analyses. The record reflects several detailed technical studies and analyses relating to the potential impact of unlicensed use on incumbent use of the 6 GHz band and technical and operational methods to mitigate harmful interference. Our Office of Engineering and Technology has been evaluating a variety of issues, such as indoor and outdoor use cases and a variety of power levels, to discern whether and to what extent unlicensed operations can exist alongside incumbent uses. The Commission will ultimately be driven by the facts in the record, including the technical analysis that OET compiles.

- 9. One promising innovation in wildfire mitigation is the Falling Line Conductor that uses low-latency, private LTE networks to depower a broken line before it hits the ground and becomes a fire hazard. Do you have a view on how such technologies can help mitigate wildfire threats and the need for preemptive electrical shutoffs? When will the FCC complete its 900 MHz proceeding that impacts the ability of utilities to use such technologies?**

Response: I agree that new technologies can help mitigate public safety emergencies, such as wildfires. Robust, next-generation broadband networks can encourage the development of such technologies. That is why the FCC is pursuing a comprehensive strategy to Facilitate America's Superiority in 5G Technology (the 5G FAST Plan). The plan includes three key components: (1) pushing more spectrum into the marketplace; (2) updating infrastructure policy; and (3) modernizing outdated regulations. Under my leadership, the FCC has proposed to make a segment of the 900 MHz band available for mobile broadband. I am confident we will be able to move forward in that proceeding in the near future.

- 10. YouMail reports that Americans received a record-breaking 5.7 billion robocalls in October, an increase of 25% from September. While I'm supportive of S. 151, the *Pallone-Thune TRACED Act*, I'd like to understand the FCC's enforcement efforts under its current statutory authorities.**

- a. How many employees are dedicated to investigating or enforcing violations of the TCPA? If you'd prefer to provide full-time equivalents, please also provide the number of employees whose primary responsibility is investigation or enforcement of TCPA violations.**

- b. How many investigations has the FCC opened in the last 12 months that involve potential violations of TCPA?**
- c. How many enforcement actions has the FCC taken in the last 12 months for violations of TCPA?**
- d. What is the average length of time between opening an investigation and taking an enforcement action for enforcement actions taken in the last 12 months?**

Response: The Enforcement Bureau has 12 full-time employees primarily dedicated to the investigation and enforcement of section 227, which includes both the TCPA and the Truth in Caller ID Act. In addition, other Commission personnel spend significant time on the investigation and enforcement of TCPA and Truth in Caller ID Act violations, including senior managers, analysts, and others who split their time among different enforcement priorities. We estimate that these additional personnel amount to the equivalent of four or five full-time employees. Many other people at the Commission work to combat TCPA and Truth in Caller ID Act abuses outside of the enforcement context.

From December 1, 2018, to present, the FCC has opened 38 investigations that involve potential violations of the TCPA. Of the numerous investigations opened from December 1, 2018 to present, we have taken four formal FCC actions against TCPA violators. Specifically, the FCC has issued three warning citations, which until recently (due to passage of the TRACED Act) were required by the Communications Act before the Commission could assess a monetary penalty against a non-licensee for TCPA violations. The Commission has also issued one Notice of Apparent Liability for Forfeiture proposing monetary penalties for spoofed robocalls that violate the Truth in Caller ID Act. Other TCPA and Truth in Caller ID Act investigations remain in the active investigation phase, during which Commission staff work to determine whether violations have occurred, to identify and locate violators, and to build an evidentiary record to support prosecution. Toward this end, Commission staff have issued hundreds of investigatory subpoenas over the past year to advance these investigations, which may culminate in enforcement actions depending on the facts adduced.

For the four enforcement actions issued from December 1, 2018 to present, the average length of time between opening an investigation and issuing a citation under the TCPA or an NAL under the Truth in Caller ID Act was 649 days. The Truth in Caller ID Act NAL was issued 548 days from the start of the investigation, and the three TCPA citations were issued an average of 680 days after an investigation began.

- 11. At a May 7th hearing of the Senate Subcommittee on Financial Services and General Government Appropriations titled “Review of the FY2020 Budget Request for the FCC & FTC,” FTC Chairman Joseph Simons said that there are certain U.S. carriers that cater to allowing foreign companies to robocall Americans. He stated that the FTC is aware of which carriers are causing the greatest problems but cannot do anything because the FTC lacks jurisdiction**

over such carriers. Senator John Kennedy asked you to look into the matter given the FCC's jurisdiction over these companies.

- a. Is the FCC aware of the identities of the carriers Chairman Simons is referring to?**
- b. How many carriers are on this list?**
- c. To the FCC's best estimation, what percentage of the robocalls in the U.S. travel through these carriers?**
- d. What are the names of the companies on this list?**
- e. How many of these carriers has the FCC opened investigations into?**
- f. How many of these carriers has the FCC taken enforcement actions against?**

Response: Although the Commission's Enforcement Bureau staff routinely works with the Federal Trade Commission (FTC) staff, the FTC did not disclose the names of the service providers referenced at the hearing until after the hearing. Since that time, the Enforcement Bureau has confirmed that almost every service provider cited is *not* a common carrier and thus is subject to FTC enforcement. The Enforcement Bureau did investigate the two service providers that appeared to be common carriers, but its investigation did not show a connection between these two carriers and any illegal robocalling campaigns.

Consistent with long-standing Commission policy to protect the confidentiality of our investigations, as well as those of our sister agency, I cannot identify the service providers at this point nor disclose additional information about them.

12. On June 11, 2019 at a USTelecom Forum on robocalls, you said "Now that the FCC has given you the legal clarity to block unwanted robocalls more aggressively, it's time for voice service providers to implement call blocking by default as soon as possible." I couldn't agree more. Have carriers responded to this call to action? Have companies raised legal, technical or other objections with these actions requested?

Response: While I understand that some carriers are implementing or planning to implement call blocking services by default, the Consumer and Governmental Affairs Bureau recently released a Public Notice seeking comment on the implementation and effectiveness of blocking measures. The data collected from this notice will inform a staff report that will be released in June 2020. I expect this first report will outline the availability of call blocking for consumers and the effectiveness of these tools. The notice also sought comment on any other relevant information related to the deployment of blocking services.

13. At the same USTelecom event in June, you said that “USTelecom has been particularly helpful in making sure that we can quickly trace scam robocalls to their originating source.”

- a. How successful has USTelecom’s Industry Traceback Group (ITG) been in combatting robocalls?**
- b. How many referrals has the ITG made to the FCC for enforcement actions?**
- c. How many of these have led to investigations?**
- d. Of those investigations, how many have led to enforcement actions?**

Response: The ITG’s work has been and continues to be instrumental in assisting the Commission in its battle against illegal robocalls. The ITG’s traceback process has streamlined and drastically shortened the amount of time needed to identify involved parties. Specifically, where it could have taken months to find the originator of a robocall campaign, it now typically only takes weeks or, in some instances, just a few days to gather such information.

The ITG’s traceback process continues to evolve and goes beyond merely identifying the robocalls’ origin. The process now provides the FCC more detailed information about the robocall campaigns, such as the subject matter of a robocall campaign and even transcripts or recordings of the calls. The creation of the ITG and its continued operation has led to greater awareness of the scope of the illegal robocalling problem and increased cooperation from service providers to work to end the abuse of illegal robocalls.

The information provided by the ITG to the Commission has led to or assisted in more than two dozen EB investigations over the past three years. Even referrals from the ITG or its member organizations that have not yet led to formal enforcement action have helped EB staff identify patterns in and common sources of robocall traffic.

The ITG also works with state attorneys general and other federal law enforcement that have jurisdiction over illegal robocalls. The ITG traceback process gives service providers valuable information about their customers—information that can prompt providers to more closely scrutinize their customers’ compliance with contractual TCPA obligations. The result is that repeat robocalling offenders are more readily identified and service providers can put a stop to bad robocalling traffic sooner, thereby protecting their own networks and their customers, which serves as another deterrent to illegal robocalling.

During the last three years, the ITG has made 34 referrals to the Commission. All ITG referrals have led to new, or have assisted in existing, Commission investigations. To date, we have issued one citation as a result of an ITG referral, and 27 referrals are part of active investigations.

14. A *Wall Street Journal* article titled “Small Companies Play Big Role in Robocall Scourge, but Remedies Are Elusive” states that “The FCC has asserted limited

jurisdiction over VoIP providers, an agency spokesman said.” What prevents or limits the FCC from using existing statutory authority to take enforcement actions against VoIP providers?

Response: The Commission has jurisdiction to take enforcement action against any entity—VoIP provider, common carrier, or marketing company—that violates the TCPA. However, as the *Wall Street Journal* article highlights, the myriad, and typically small, VoIP providers have an outsized role in carrying illegal robocall traffic. Moreover, VoIP providers typically do not have a certification or other authorization from the FCC. Therefore, it is more difficult to monitor and regulate their behavior.

However, Congress recently passed the TRACED Act, which will remove one significant impediment to enforcing section 227 against VoIP providers. Until recently, the Commission had to issue a warning or “citation” to entities that do not hold a Commission authorization. As a result of the TRACED Act, we may now proceed directly to a Notice of Apparent Liability and propose a monetary forfeiture. In addition, the Commission has taken steps to reduce the number of unwanted robocalls that reach consumers. For example, service providers may block robocalls to their customers under certain conditions.

15. The FCC’s “Report on Robocalls” (CG Docket No. 17-59; February 2019) states that “Five providers that had been identified as uncooperative in traceback have taken steps to participate going forward.” Have these five providers continued cooperating with traceback efforts? Do *any* providers remain that are not being cooperative?

Response: The information in the FCC’s February report concerning non-cooperative providers was based on information we obtained from USTelecom. Specifically, FCC Enforcement Bureau staff coordinated with the ITG about its experiences requesting the cooperation of providers in traceback investigations. These discussions identified five specific providers that had a track record of ignoring, denying, or failing to assist with ITG’s requests for traceback data.

The FCC sent a series of letters in the fall of 2018 to those providers (and others) requesting information and expressing our desire for greater cooperation with ITG. Afterward, those five providers took steps to cooperate better with ITG. We have not identified any additional specific providers that are refusing or failing to cooperate with ITG at present.

We anticipate that EB and ITG will continue to work together to identify potentially non-cooperative providers and to identify and solve other problems as they develop. In addition, pursuant to the TRACED Act, the Commission will establish rules to develop a process that will evaluate and report on private efforts to trace back the origin of suspected unlawful calls and identify providers that declined to participate in such private trace back efforts, including the reason, if any, for such non-participation.

The Honorable Doris Matsui (D-CA)

- 1. The Federal Communications Commission (FCC) is currently evaluating a license modification proposal for commercial wireless services in the L-Band. The FCC has taken more than four years to evaluate this proposal and it has created unsustainable uncertainty for both federal and private stakeholders in this process. This proposal has significant implications for the communications marketplace and requires a prompt resolution.**

Chairman Pai, do you believe you have sufficient information in the record to resolve this matter and when do you expect the FCC to act?

Response: The FCC is committed to resolving harmful interference concerns prior to allowing commercial terrestrial operations in the L-Band. While Ligado filed its original license modification plan in 2015, it filed an amendment to its applications on May 31, 2018, in an attempt to further address interference concerns raised by federal agencies. Commission staff sought and received comment on Ligado’s updated proposal, and federal agency testing has concluded.

Late last year, I submitted to the Interdepartment Radio Advisory Committee (IRAC), headed by the Department of Commerce’s National Telecommunications and Information Administration (NTIA), a draft FCC decision resolving Ligado’s request. On December 6, 2019, NTIA filed a letter with the FCC in which it noted that “federal agencies have significant concerns regarding the impact [of Ligado’s license modification proposal] to their missions, national security, and the U.S. economy” and, therefore, “NTIA, on behalf of the executive branch, is unable to recommend the Commission’s approval of the Ligado applications.” *See* Letter from Douglas W. Kinkoph, Deputy Assistant Secretary for Communications and Information (Acting), NTIA, to The Hon. Ajit Pai, Chairman, FCC, IB Docket Nos. 11-109 and 12-340 at 2 (filed Dec. 6, 2019). The Commission, through its engineers and technologists, are working diligently so that the Commission can make the appropriate decision in this proceeding. The Commission will move forward with a final decision informed by the full record and submissions from all stakeholders, after career staff have completed their technical analysis of the information provided by NTIA.

The Honorable Peter Welch (D-VT)

- 1. A lack of broadband connectivity can impact all aspects of our lives: keeping children on the wrong side of the homework gap from realizing their full potential, posing barriers to telehealth solutions that can improve care, keeping farmers from capitalizing on advancements in precision agriculture, and limiting economic opportunities for workers and small businesses. However, I have been encouraged by the Commission’s support of innovative solutions, specifically TV white space, that can enhance the pace, reach and cost-effectiveness of broadband deployment in rural communities. The adoption of a final order in the TV white space (TVWS) reconsideration proceeding earlier this year marked**

an important first step, and I encourage the Commission to build on this step by issuing a Further Notice of Proposed Rulemaking (FNPRM) to address remaining regulatory hurdles to greater TVWS deployment as soon as possible. By taking this step, the Commission can update its rules surrounding TVWS, which will increase the potential for rural broadband deployment and, subsequently, the availability and adoption of Internet of Things (IoT) applications throughout rural areas.

Will the Commission make the adoption of a TV White Space Further Notice of Proposed Rulemaking a priority to complete as soon as possible and no later than the first quarter in 2020?

Response: The Commission continues to work toward ensuring that White Space devices are positioned to offer providers flexibility in designing networks to reach end users, especially in rural and underserved areas. In our continuing efforts along these lines, we are evaluating a petition that seeks several rule changes to facilitate broader deployment of white space devices in rural areas and for Internet of Things applications. The Commission's staff has reviewed the comments and reply comments on the petition and are working on a Further Notice of Proposed Rulemaking that would explore the requested changes. I am aiming to circulate an item in the near future.

The Honorable Yvette Clarke (D-NY)

- 1. Mr. Chairman, I'd like to raise the issue of diversity in media, specifically the lack of diversity. I believe American media needs to reflect America, but today, despite the explosion of options now available to consumers, it still does not.**

According to UCLA's College of Social Studies 2019 Hollywood Diversity Report that looks at diversity in the media industry, people of color accounted for only 19.8 percent of film leads, 12.6 percent of film directors, and 7.8 percent of film writers. On TV and digital, only a little over 20 percent of the lead actors are people of color and for script creators that number drops to around 10 percent.

There are some exceptions in the industry, Starz for example has done a very good job creating shows by and for traditionally underserved minority audiences, such as the top-rated "Power".

Others, like Comcast, have not. Just look at what happened to Gabrielle Union this week or what it is doing in the courts right now challenging a more than 150-year-old statute that prohibits racial discrimination in contracts.

As the Commission considers future media mergers, I urge it to examine very closely the impact that more consolidation would have on media diversity. I believe as these media companies grow larger and larger, it will not only reduce

competition and localism, but it will harm diversity and the diverse voices that deserve and need to be heard.

What role does the Commission play in promoting and expanding diversity in media? What actions do you plan to take as Chairman to ensure the Commission leads efforts to remedy lack of diversity on our airwaves?

Response: I believe that the Commission has an important role to play in promoting diversity. That's why I quickly moved to re-charter the agency's Advisory Committee on Diversity and Digital Empowerment in 2017, a Committee that had gone dormant under my predecessor. I tasked the Committee's leaders with developing real-world solutions to spur diversity and digital empowerment in under-served communities. The first iteration of the Committee quickly went to work and held a Supplier Diversity Conference and Workshop in June 2018, followed up by a March 2019 Symposium on Media Diversity. In addition, the Committee's Broadcast Diversity and Development Working Group coordinated very comprehensive comments in our broadcast incubator rulemaking proceeding in 2018, and the Committee's Diversity in Tech Working Group produced a diversity best practices report in 2019, capturing information it gleaned from industry. I was happy to re-charter this Committee last year for an additional two-year period, and I look forward to the recommendations that come from the group.

As mentioned above, with the help from the Diversity Committee, we took steps to create a broadcast incubator program to help new entrants—including women and minorities—find established broadcasters who will support them as they start out in the industry. This was an idea that had been discussed for decades, but the Commission had never taken any action. I was proud to bring this idea to fruition with the promise that it could help promote diversity of ownership in the broadcasting industry. But unfortunately, this program became a victim of the Third Circuit's misguided decision to vacate and remand our 2017 Reconsideration Order on the Media Ownership Quadrennial Review. Without explanation, the court also vacated and remanded the separate order that established the incubator program.

Finally, we have sought comment on a variety of diversity proposals as part of the 2018 Media Ownership Quadrennial Review. This action comes on the heels of the implementation of another diversity proposal: the relocation of the Commission's EEO functions from the Media Bureau to the Enforcement Bureau, a step supported by civil rights advocates.

2. Chairman Pai, I am concerned that the FCC under your leadership is not complying with the decisions of our federal courts.

a. How is the FCC planning to implement the Third Circuit Court of Appeals decision in the most-recent Prometheus v. FCC case? Specifically, how are you planning to ensure that the data about media ownership diversity is accurate and is used to evaluate how proposed media ownership rule changes will impact media ownership by women and people of color?

- b. Why didn't you ensure the FCC was in compliance with the previous Court of Appeals decisions which directed the FCC to analyze the impact of its rule changes on media ownership by women and people of color?**

Response: The Commission is currently evaluating its options with regard to seeking additional court review of the Third Circuit's decision last year. As noted at the time of the decision, I respectfully disagree with the majority's opinion in the case. I believe that the Commission adequately addressed the impact of modifying the media ownership rules on minority and female ownership. The Commission properly considered that impact based on the record developed and balanced that consideration against its statutory obligation to review the media ownership rules under section 202(h).

In the meantime, now that the mandate has issued, the Media Bureau recently took three actions: (1) release of an Order reinstating the 2016 Quadrennial Review Media Ownership Rules; (2) release of a Public Notice outlining steps that applicants must take to ensure pending and future license transfer applications comply with the reinstated rules; and (3) release of a Public Notice outlining the steps that licensees with pending license renewal application must take to amend their application to demonstrate compliance with the reinstated rules.

The Honorable Tom O'Halleran (D-AZ)

- 1. Chairman Pai, the Intergovernmental Advisory Committee recently made recommendations to the FCC to address regulatory barriers to telemedicine. One of these recommendations was to expand types of eligible equipment that may be considered a reimbursable cost under the Rural Health Care Program.**
 - a. Has the Commission given this recommendation, and others, further consideration for future rulemakings?**

Response: Broadband plays a critical role in providing patients in rural areas with high-quality healthcare services, and the Commission has taken numerous steps to best ensure that the Rural Health Care Program enables health care providers can afford the connectivity they need to treat their patients. In 2018, for the first time in the Rural Health Care Program's two-decade history, the Commission increased its funding cap to ensure that the program could meet the demands of modern telemedicine. And in 2019, the Commission adopted significant reforms to the program that will ensure transparency and efficiency so that funding can go as far as possible. The Commission sought comment on a \$100 million Connected Care Pilot Program that would explore ways to use universal service funding to support technologies that directly connect doctors with their patients, including whether that equipment is eligible for support. The Commission received comments from a number of stakeholders discussing which services, technologies, and equipment the proposed pilot should support. Commission staff are currently reviewing the record in that proceeding.

- 2. Chairman Pai, beyond the Tribal Priority Window within the upcoming 2.5 GHz spectrum auction, it is clear that more needs to be done to prioritize broadband**

buildout to Indian Country. I also understand the Office of Native American Policy and Native American Communications Task Force work closely on providing recommendations to the Commission to increase tribal broadband deployment. Tribal consultation and engagement are critical to the success of internet connectivity increasing across Indian Country.

- a. As the Office of Native American Policy consists of only two staff members and housed within the Consumer & Governmental Affairs Bureau, has the Commission considered or given feedback on how the Office of Native American Policy could be expanded or elevated to better perform its duties?**

Response: Closing the digital divide for all Americans is my number one priority. I agree with you that Tribal consultation and engagement is critical in the Commission's goal to increase telecommunications services to Tribal lands. I recognize that there are particular challenges in providing communications services on Tribal lands, but I believe that the Commission's Office of Native Affairs and Policy (ONAP) has the resources it needs to be successful in its mission as the Commission's primary point of contact on Native issues, including Tribal consultation and outreach.

ONAP has five full-time staff working on Tribal consultations and related issues. In addition, ONAP receives substantial daily support from an experienced Deputy Bureau Chief charged with primary responsibility for overseeing the office, as well as additional support from other Bureau-level legal advisors. Within the Bureau, ONAP greatly benefits from the synergies with other CGB offices, including routine coordination with staff in the Office of Intergovernmental Affairs and other Bureau-level specialists. In addition, like other offices in a small agency of under 1,500 FTEs, ONAP does not work in isolation, but rather coordinates on a regular basis with subject-matter experts in the Wireless Telecommunications Bureau, the Wireline Competition Bureau, and the Media Bureau, as well as the Office of Engineering and Technology, the Office of Economics and Analytics and the Office of Managing Director on items of significant Tribal interest. These experts not only advise ONAP on an ongoing basis, they also partner with ONAP to address and conduct Tribal consultations and related outreach. As currently structured, the Office has the ability to be flexible in its approach and work across the agency to obtain the best results for Tribes. For example, ONAP and WTB subject-matter experts jointly conducted consultations related to the 2.5 GHz proceeding and have partnered to execute the Commission's extensive outreach efforts to ensure all federally recognized Tribes are aware of and know how to participate in the rural Tribal Priority Window for new licenses in this band.

Using this same model, ONAP staff partners with subject-matter experts in other Bureaus and Offices to provide Native communities with training and consultation workshops, as well as additional outreach through participation in conferences and meetings involving Tribal governments. For example, ONAP and other FCC staff conducted four in-person Tribal workshops in 2019, participated in other Tribal workshops hosted by Tribal entities and attended numerous conferences and meetings with Tribal governments.

3. **Chairman Pai, in previous auctions, the FCC has offered Tribal Lands Bidding Credits (TLBC) to incentivize auction winners to deploy broadband service to tribal communities. However, I understand TLBC have produced mixed results towards deployment throughout Indian Country.**
 - a. **How exactly will the specific proposals for Tribal Governments and Tribal Lands in the new Rural Digital Opportunity Fund operate to achieve different results from those in the Connect America Fund? How will they differ from past proposals and aim to create a market for new provider entry?**

Response: The proposed Rural Digital Opportunity Fund Order that the Commission will consider at its Open Meeting on January 30th would incorporate a Tribal Broadband Factor on Tribal lands, reflecting the unique challenges and costs of deploying broadband on Tribal lands. Similar to what the Commission previously adopted in its recent offer of model-based support to rate-of-return carriers serving Tribal lands, we seek to incentivize providers to bid on Tribal lands, and to ensure that Tribal Nations and their members obtain access to advanced communications services. Specifically, the draft Report and Order would reduce the eligibility threshold for homes and businesses on Tribal lands by 25%, which would have the effect of making more locations on Tribal lands eligible for support in the auction and would make more support available to the winning bidder to deploy broadband to those locations.

The Honorable Greg Walden (R-OR)

1. **According to news reports, the FCC provided a written response to House Democrats with a letter detailing an update from the Commission regarding its probe of allegations certain carriers were selling wireless location information. A copy of this letter was not provided to the Minority. Please provide a copy of this letter to the Minority committee staff.**

Response: The response letter is public and can be found at:
<https://docs.fcc.gov/public/attachments/DOC-361280A4.pdf>.

2. **At a hearing earlier this year, I talked about attempts by foreign adversaries to disseminate false or misleading information about the health effects of 5G to slow U.S. deployment of 5G networks and other wireless technologies.**
 - a. **To what extent is the FCC's coordinating with the FDA? How are you working together to determine the health effects, if any, of radiofrequencies from 5G?**
 - b. **Is there a role the FCC could play in educating states, localities, and others to ensure wireless infrastructure decisions are not delayed or postponed unless they pose a true risk to human life or property?**

Response: On December 4, 2019, the Commission released an item that was approved by a unanimous vote and reiterated that existing RF standards fully protect the public’s health. The item terminated an outstanding Notice of Inquiry, which sought information regarding the current RF exposure standards. It comprehensively outlined and reviewed the scientific and engineering data related to RF radiation exposure and provided the basis for our conclusion that no changes to the existing rules was warranted at this time. The item is accessible in its entirety at <https://www.fcc.gov/document/fcc-maintains-current-rf-exposure-safety-standards>.

Also, as the item noted, the FCC relied on the FDA’s biological and scientific data to analyze our RF exposure limits. In particular, the FDA stated, “[b]ased on our ongoing evaluation of this issue, the totality of the available scientific evidence continues to not support adverse health effects in humans caused by exposures at or under the current radiofrequency energy exposure limits. We believe the existing safety limits for cell phones remain acceptable for protecting the public health.” FCC and FDA staff meet regularly to discuss various topics, including RF health effects and 5G.

Moreover, the FCC has a robust and informative webpage devoted to these issues, and routinely provides information to consumers through individual inquiries. The FCC’s Consumer and Intergovernmental Affairs Bureau regularly works with state and local governments to provide information as it is requested. For the past several years, the Wireless Telecommunications Bureau held annual workshops to assist interested parties in understanding antenna issues, including issues related to RF exposure.

We also note that the Commission has publicly available materials through its equipment authorization knowledge database system relating to these issues which provide historical guidance to local governments and consumers. In the recently adopted item, the Commission committed to evaluating those materials and to update them as appropriate.

- 3. I have expressed interest numerous times about ensuring the proper use of Mobility Fund-II funds. Indeed, the public nature of the inaccuracies in the maps initially used to consider funding awards for Mobility Fund-II were one of the driving forces for undertaking broadband mapping legislation that recently passed the House floor unanimously.**

On December 4, 2019, the Commission released a staff report (“Staff Report”) finding that the 4G LTE coverage data submitted by providers was not sufficiently reliable for the purpose of moving forward with the Mobility Fund Phase II (MF-II).¹

- a. What action will you take to ensure coverage maps used to inform the distribution of MF-II, or related, funds are accurate and verified?**
- b. Will you commit to delaying any distribution of new funding without first consulting new, accurate broadband availability data?**

¹ See, “Mobility Fund Phase II Coverage Maps Investigation Staff Report,” (GN Docket No. 19-367), rel. December 4, 2019. Available at: <https://docs.fcc.gov/public/attachments/DOC-361165A1.pdf>

Response: Accurate broadband data is essential to bridging the digital divide. That’s why in August of last year, the Commission adopted the Digital Opportunity Data Collection, the first significant reform to the Commission’s current broadband mapping regime since 2013. It will collect granular, precise broadband service availability data for both fixed and wireless services. And for the first time, the FCC will incorporate crowdsourcing directly from consumers, allow state, local, and Tribal government and other entities to directly contribute to the map, and require validation of submitted coverage maps. The Digital Opportunity Data Collection was specifically designed to facilitate efficient use of finite universal service resources and ensure that all Americans have access to broadband no matter where they live.

At the same time, in those areas where Commission data indisputably show that there is no service, it is imperative that we move forward with efforts to connect Americans living in those areas. For example, Phase I of the Rural Digital Opportunity Fund that the Commission will consider at its January meeting would provide up to \$16 billion to connect up to an estimated six million rural homes and businesses that we already know lack broadband access. The draft report and order would allocate an additional \$4.4 billion to connect those Americans currently living in partially served areas once the new broadband availability maps under the Digital Opportunity Data Collection become available.

Finally, now that wireless providers are deploying 5G in urban America, I believe it is time to ensure that rural America gets the same opportunity. That’s why I’ve announced my proposal for the 5G Fund, and I look forward to working with you and your staff to address your concerns about mapping in the coming months.

4. To better understand the Commission’s efforts with regard to the redirection of Mobility Fund-II dollars, and any new Universal Service Funding the Commission may be considering, please respond to the following questions.

The MF-II Report and Order adopted a budget of \$4.53 billion to carry out the MF-II over ten years.² The press release stated the Commission would, “make up to \$9 billion in Universal Service Fund support available to carriers to deploy advanced 5G mobile wireless services in rural America,” and, “would replace the planned Mobility Fund Phase II, which would have provided Federal support for 4G LTE service in in unserved areas.”³

- a. Where does the Commission intend to make up the remaining \$4.47 billion? Specifically, does the Commission intend on assessing new contributions? Will any funding come from other existing high-cost programs, Lifeline, or the Schools and Libraries fund?**

² See, “In the Matter of Universal Service Reform – Mobility Fund,” Report and Order and Further Notice of Proposed Rulemaking, (WT Docket No. 10-208), Rel. March 7, 2017. At para. 23. Available at: <https://docs.fcc.gov/public/attachments/FCC-17-11A1.pdf>

³ See, Press Release, “Chairman Pai Announces Plan to Launch \$9 Billion 5G Fund for Rural America,” December 4, 2019. Available at: <https://docs.fcc.gov/public/attachments/DOC-361168A1.pdf>

- b. **Where does the Commission intend to target this funding?**
- c. **If you do intend on assessing new contributions, did the Office of Economic Analysis conduct a cost-benefit analysis before making a recommendation that led to your determination to require new contributions to fund this new 5G fund?**
- d. **Who will be eligible to receive funding from the 5G Fund?**

Response: As you noted, I announced just last month my intention to propose a new 5G Fund to the full Commission that would allocate up to \$9 billion in high cost universal service support over the next decade to spur deployment of mobile 5G broadband to rural areas that are unlikely to receive those services without federal support. In order to move forward with the 5G Fund, the Commission will need to resolve many issues, including the ones you raise, through the notice and comment rulemaking process, giving the full Commission the opportunity to consider stakeholders' views on these important questions.

Thanks to the Commission's prudent management of the Universal Service Fund in recent years and the anticipated use of a reverse auction mechanism that could reduce the amount of support actually awarded well below the full budget allocated for the program, I expect the effect of the 5G Fund on consumers would be minimal, and other than the \$4.53 billion allocated to the Mobility Fund II, there would be no need to repurpose funding from existing universal service programs.

The final amount of the 5G Fund budget, as well as questions of where funding will be targeted and which providers will be eligible to receive support, will be part of an upcoming Notice of Proposed Rulemaking. The Commission's focus in the high cost program has been on providing support to primarily rural areas that would otherwise not receive the most advanced services absent universal service support. The Commission will propose and seek comment on rules that encourage robust participation in the 5G Fund auction by entities that have access to the wireless spectrum necessary to meet 5G service performance obligations in the areas on which they bid.

- 5. **The Precision Agriculture Connectivity Act of 2018 (P.L. No. 115-334) requires the Precision Agriculture Connectivity Task Force ("Task Force") to "develop policy recommendations to promote the rapid, expanded deployment of broadband Internet access service on unserved agricultural land, with a goal of achieving reliable capabilities on 95% of agricultural land in the United States by 2025."⁴ In the announced 5G Fund plan, you propose \$1 billion dollars for precision agriculture. Do you intend on making these funds available prior to receiving the recommendations as described in the bill?**

- a. **Will entities eligible for support under the proposed 5G Fund be eligible for funds made available for precision agriculture?**

⁴ 7 U.S.C. 12511(c)(B)

Response: We're at a revolutionary moment for American farmers and ranchers who feed the world, and the important work of the Task Force will help shape that connected future. The Task Force will play a critical role in assessing connectivity needs and demand, accelerating deployment on unserved agricultural lands, and promoting adoption of these broadband-based technologies.

As part of the 5G Fund Notice of Proposed Rulemaking, I expect the Commission will seek comment on a timeline for the announced 5G Fund, including on the ways that the 5G Fund can realize the greatest benefit of the Task Force in facilitating and promoting adoption of precision agriculture technologies. The notice-and-comment process will also give the Commission the opportunity to address other questions like which entities will be eligible to participate in either, or both, phases of the 5G Fund.

- 6. On March 23, 2018, the FCC released a Sixth Further Notice of Proposed Rulemaking relating to Public Safety use of the 4.9 GHz band ("NPRM").⁵ The NPRM noted, "with no more than 3.5% of potential licensees using the band, we remain concerned that, as the Commission stated in 2012, the band has 'fallen short of its potential.'"⁶**
 - a. Given a robust record demonstrating the underutilization of this band due to the current licensing regime, what actions is the Commission taking to ensure the 4.9 GHz spectrum is being utilized effectively by public safety?**
 - b. When will the Commission take action on the 4.9GHz band? Will you commit to take action before the end of 2020?**
 - c. As I stated at the hearing, ending diversion of 9-1-1 fees is a priority for me. According to recent reports submitted to Congress pursuant to the New and Emergency Technologies 9-1-1 Improvement Act of 2008,⁷ states and taxing jurisdictions are still diverting 9-1-1 fees for purposes other than 9-1-1. What statutory tools would be useful for the Commission to stop States from diverting 9-1-1 fees? What legislative recommendations, if any, do you have to end this practice?**

Response: The Commission is committed to ensuring that the 4.9 GHz band is used effectively and efficiently. You are right that this band, due to a lack of compatible equipment, is currently underused, and expanding commercial access to the band could both improve the use by public safety entities and create further opportunities for 5G expansion. That's one reason why I hope to move forward in this proceeding later this year.

⁵ See, "In the Matter of Amendment of Part 90 of the Commission's rules, Sixth Further Notice of Proposed Rulemaking, (WP Docket No. 07-100) FCC 18-33. Rel. March 23, 2018.

⁶ *Id.*, at para. 1.

⁷ 47 U.S.C. 615a-1, *et seq.*

I also agree with you that ending 911 fee diversion should be a national priority. At the Commission, Commissioner O’Rielly has consistently and effectively used the bully pulpit to reduce such diversion, and I support his efforts. Congress has a variety of potential options for encouraging the end of these practices—from conditioning funding on the end of such practices to the prohibition on voice service providers collecting and remitting 911 fees in diverting states—each with its own costs and benefits. I am happy to arrange a further briefing with our staff on this issue if you would like.

- 7. On August 2, 2019, the Commission announced it was proposing a \$20.4 Billion Rural Digital Opportunities Fund (RDOF).⁸ While I appreciate the goal of supporting high-speed broadband networks in rural America, I have questions as to how the Commission intends on moving forward. The RDOF represents the first time the Commission will be explicitly replacing ILECs in their territory without their voluntary agreement. How does the Commission intend on dealing with the legacy obligations ILECs have?**
 - a. What steps does the Commission intend to take to ensure bidders are sufficiently vetted for performance capabilities to deliver on their obligations?**
 - b. I understand some providers, big and small, have said that it would take several million dollars to obtain a Letter of Credit, and may limit their ability to participate in the auction. Do you find that the current Letter of Credit proposal strikes the right balance? If so, why?**

Response: As you know, the Commission will consider final rules to launch the new \$20.4 billion Rural Digital Opportunity Fund at its January 30 Open Meeting. It would use competitive bidding to target up to \$20.4 billion over ten years to support up to gigabit speed broadband networks in areas that lack access to 25/3 Mbps broadband service and connect the most Americans in a cost-effective manner. Under the draft Report and Order, legacy price cap carriers would be required to continue offering voice service until they receive discontinuance authority under section 214(a) of the Act and will remain subject to eligible telecommunications carrier (ETC) obligations unless or until they relinquish such designations in those areas pursuant to section 214(e)(4).

Before being qualified to receive support in the Rural Digital Opportunity Fund Phase I auction, an applicant would be required to establish its eligibility by demonstrating its financial and technical ability to provide voice service and broadband at its proposed speed and latency. This process would be similar to the approach the Commission used in 2017 for the successful Connect America Phase II auction.

The proposed letter of credit requirements provide important protections for the taxpayers that fund universal service program support, with reduced burdens on participants. In the Connect

⁸ See, “In the Matter of Rural Digital Opportunity Fund,” Notice of Proposed Rulemaking, Re. August 2, 2019. (WC Docket No. 19-126). Available at: <https://www.fcc.gov/document/fcc-proposes-204-billion-rural-digital-opportunity-fund-0>

America Fund Phase II auction, the Commission found that requiring bidders to obtain an irrevocable standby letter of credit covering the amount of support disbursed to a recipient was an effective means to safeguard the universal service funds. It also found that the requirement did not deter broad participation in the auction, which awarded \$1.488 billion in support to 103 winning bidders—and, as of December 2019, nearly 90% of carriers have already secured valid letters of credit and been authorized to receive support. Nevertheless, I have heard your concerns, and we are looking into additional steps that would further reduce the burdens on recipients while still retaining substantial public benefits, such as allowing a support recipient to further reduce the amount of its letter of credit as it deploys its network, while still allowing the Commission to quickly and efficiently recover support in instances where the recipient does not fulfill its obligation to deploy broadband.

The Honorable Robert E. Latta (R-OH)

- 1. Closing the digital divide is a top priority of mine, and that means using all technologies at our disposal to achieve this task. Could you explain how you plan to make spectrum sharing available for rural broadband deployment?**

Response: I share your commitment to closing the digital divide. Indeed, my top priority since becoming Chairman of the FCC has been to bridge the digital divide—particularly in rural areas where broadband is insufficiently deployed. This FCC has taken an “all of the above” approach to meet this objective by creating a regulatory environment that provides current and potential technologies opportunities to flourish.

Wireless technology offers significant promise for closing the digital divide, as it is often the most cost-efficient means of deploying broadband service to rural and hard-to-reach areas. Under my 5G FAST Plan, the FCC is taking action to make additional low-, mid-, and high-band spectrum available for flexible-use services, including broadband.

With regard to spectrum sharing, the Commission has established a framework for the 3550-3700 MHz band (the 3.5 GHz band) that will provide spectrum-sharing opportunities in rural and remote communities across the country. The Citizens Broadband Radio Service, as the 3.5 GHz band is sometimes referred to, is a novel, three-tiered access and authorization framework designed to accommodate shared federal and non-federal use of the band. Federal incumbent users represent the highest priority tier. Next are Priority Access Licenses (PALs); these are 10-year, county-based licenses of 10-megahertz channel blocks that receive protection from General Authorized Access (GAA) users, the third tier. The GAA tier is licensed-by-rule to permit access to the full 3.5 GHz band, with at least 80 megahertz in any given license area available to potential GAA users and not available to PAL users. Automated frequency coordinators, known as Spectrum Access Systems, will coordinate operations among GAA and PAL users, as well as incumbents.

The FCC approved full commercial deployment in this band earlier this week, allowing users to access this spectrum through GAA use. The Commission recently sought comment on bidding procedures for an auction of PALs in the 3550-3650 MHz segment of the band that will

commence on June 25, 2020. The 3.5 GHz band's opportunistic access regime and smaller geographic license areas provide low-cost entry points to mid-band spectrum and another key opportunity for deployment of advanced wireless services to rural and remote areas, including Tribal lands.

The Commission is continuing to explore ways to make more spectrum available for rural broadband.

- 2. We often talk about illegal robocalls and how we are acting to stop them, but we also need to discuss legitimate uses of robocalls. This includes calls that consumers actually want and need, like prescription reminders, fraud alerts, and school closings. Do you believe legitimate businesses face barriers today to place calls that benefit consumers, and what is the FCC doing to ensure these important notifications don't get blocked?**

Response: We understand the concerns raised by those who make legitimate calls and addressed the issue in our June 2019 Declaratory Ruling. In particular, we made it clear that any reasonable call-blocking program offered by default must include a mechanism for allowing legitimate callers to register a complaint and for having that complaint resolved. And we encouraged providers to develop a mechanism for notifying callers that their calls have been blocked. Additionally, callers who believe their calls have been unfairly blocked also have the option to file a petition for declaratory ruling at the Commission. Ultimately, it is our belief that our actions will increase call completion rates for legitimate calls because consumers will be more willing to answer their phones once there is a reduction in the number of illegal and unwanted robocalls through blocking facilitated by the SHAKEN/STIR call authentication framework.

- 3. The Federal Communications Commission has found on three separate occasions that an absolute ban on newspaper/broadcast cross-ownership is not necessary to serve the public interest and that, to the contrary, cross-ownership fosters local journalism without harming diversity or competition, a finding which was affirmed by the Third Circuit Court of Appeals in 2003. Now, the same court has blocked the FCC from repealing this cross-ownership ban by vacating and remanding the Commission's recent Reconsideration Order modernizing a number of media ownership regulations.**

The Court has now blocked the repeal of the 1975 cross-ownership ban three times over the last 15 years. Because this outright ban has been reinstated, it has been reported that the new owners of the Dayton Daily News will be forced to reduce the number of days the printed newspaper is circulated in Dayton from 7 to 3 days in order to comply with definitional parameters of the regulation. This concerns me as citizens in my state will receive less news and information about what is going on in their community. Our democracy depends upon an informed citizenry.

Will you continue to push for the repeal of this outdated rule that has been in place now for more than four decades?

Response: Yes. We will continue to work to bring all of the media ownership rules into the 21st century. In particular, the newspaper-broadcast cross ownership ban is a perverse rule that has no credible justification anymore. As you note, the consequence of the Third Circuit's decision is apparent with the likelihood that entities will reduce local news coverage in order to comply. This outcome is particularly unfortunate given that a purported intent of challenging the Commission's 2017 decision was to protect and promote consumer access to quality local news and information. However, the Media Bureau recently granted an extension request filed by Terrier Media to allow it to operate the Dayton newspapers with daily circulation for an additional 60 days as it completes a process to sell the newspapers to an unaffiliated buyer.

- 4. As the author of the Precision Agriculture Connectivity Act that was included in last year's Farm Bill, I am interested in the economic benefit of GPS to the agriculture sector. Talking to farmers in my district, I know GPS can improve farm planning, field mapping, soil sampling, tractor guidance, crop scouting, variable rate applications, and yield mapping. All this innovation relies on connectivity, including that provided by GPS. How will the Commission continue to protect GPS services from harmful interference?**

Response: The Commission appreciates the many important benefits derived from GPS which includes the kinds of agricultural sector benefits that you point out. In carrying out our spectrum management responsibilities, the Commission consistently weighs the potential impact of new spectrum uses against the potential for harmful interference to incumbent systems such as GPS. As we continue to evaluate and approve new spectrum uses through our open and transparent rulemaking and licensing processes, the Commission is committed to resolving concerns of harmful interference to GPS.

The Honorable John Shimkus (R-IL)

- 1. I want to say thank you on a number of items including your work on improving the ability of first responders to determine a more accurate dispatchable location in multi-story buildings, and for helping to deploy broadband to my rural district, both directly through USF, and for working to coordinate with the Department of Agriculture's Rural Utility Service to help address the 'overbuilding' issue.**

On that front, though, On December 13, 2018, the Federal Communications Commission (FCC) adopted a *Report and Order* to revise the amount of support available for rural telephone companies that receive Alternative Connect America Model (A-CAM) support to deploy broadband in high cost areas. I have a rural provider in my district, Hamilton Communications, that has had significant challenges accessing these critical broadband supports, so I was curious about your rationale for the revision?

Response: I appreciate the kind words for the work our staff has done to promote public safety and rural broadband, as well as your leadership over many years on these issues.

In 2016, the Commission adopted a voluntary path to model-based support, which would provide high-cost universal service support in unserved census blocks for rural telephone carriers called the Alternative Connect America Cost Model (A-CAM). Pursuant to a challenge process, Hamilton Communications disputed the claims by a competitor that it served certain areas (which caused 2,444 locations in Hamilton's service territory to be ineligible for A-CAM). The Wireline Competition Bureau reviewed the record and ultimately denied Hamilton's challenge. Hamilton did not seek further review of the Bureau's decisions, elected to accept the offered support, and was authorized to begin receiving model-based support in 2017 for the eligible areas.

Subsequently, the Commission made additional model-based support available within eligible areas in return for additional commitments from carriers for broadband deployment at higher speeds, each of which Hamilton accepted. Hamilton sought reconsideration of the additional funding made available in March 2018. In December 2018, the Commission denied several petitions for reconsideration, including Hamilton's. Hamilton had not requested review of the Bureau's 2016 decision within the time allowed by the Commission's rules, and the Commission separately concluded that Hamilton had not provided new evidence the Commission could consider.

The Honorable Adam Kinzinger (R-IL)

- 1. The Chairman announced just before the Thanksgiving break that the Commission will proceed with a public auction to repurpose 280 MHz of the C-Band. While there was a lot of debate about how the FCC was going to proceed on this band, there was one principle that seemed to be universal—these proceedings need to occur as quickly and efficiently as possible. I personally was open to either mechanism as long as we held to this principle of doing things quickly, plus one other principle—that substantial revenues be raised for the Treasury, hopefully for rural broadband deployment and similar programs.**

During the hearing, I asked Chairman Pai the following questions:

Given that most stakeholders estimate a public auction will take longer than a private sale, what can Congress do to help speed up this public auction?

Does the FCC need new authorities, or new appropriations to hire temporary staff or speed up the auction software procurement process?

While the Chairman provided thoughtful answers in response, I ask that the Commission follow up with the Committee to offer any supplemental information or ideas in terms of new authorities or appropriations that would

assist in expediting the C-Band Auction, including the process of preparing for the auction and perhaps the auction itself. Please be as detailed as reasonably possible.

Response: We appreciate the authority that Congress has granted us to repurpose this spectrum for 5G use and believe that authority is sufficient for the Commission to achieve its goals in this proceeding. The Commission will work with the Congress and the Committee if and when any resource issue arises but do not believe that any resource issues will prevent us from launching the C-Band auction by the end of 2020.

- 2. I appreciate the work the Commission has done on the 24 GHz band in the months leading up to the World Radio Conference (WRC). You may recall I asked you all about 24 GHz band back in the hearing earlier this year. And when Mr. Knapp was here in July, I also expressed my concerns that the government was not speaking with one voice on making the 24 GHz band available for 5G services. Mr. Knapp told me he was confident that 5G and weather services can coexist given the 250 MHz guard band. The work you and your team did, and continues to do, is important and critical as we move closer to a 5G world.**

Now that there is an agreement on the protection values—and these values, which were agreed to at the WRC but are different from that contained in the FCC rules—will the FCC open a proceeding to adopt these new protection parameters? If not, then what will the FCC be doing to protect these critical passive weather sensors from harmful 5G interference?

Response: After the conclusion of every WRC, the Commission's standard practice has been to open a rulemaking proceeding to amend our rules as appropriate in response to the decisions reached at the conference. As the Commission is legally obligated to base our rulemaking decisions on the record developed, I cannot predict what commenters might file in response to the proposed rule changes or what resulting decision the Commission may ultimately make. However, I am confident that the Commission's decision will be based on the law and sound science and engineering and will adequately protect the passive weather sensors.

- 3. Each time the FCC announces plans to repurpose spectrum bands, stakeholders come to Members of this Committee and the Commission alike to express concerns about the potential for interference—or “harmful interference”, the legal standard to which the FCC is bound to prevent. I think in most cases, these concerns come from a good and well-intentioned place. After all, we have to ensure that consumers, who are our constituents, are not subject to outages or major service disruptions. And in other cases—such as spectrum bands that are used for critical infrastructure, public safety, or national security, including spectrum adjacent to those bands—the concerns are greater because any harmful interference would have grave consequences. The FCC has had to tackle numerous challenges in which repurposing spectrum requires incredibly difficult engineering choices.**

Can you offer an overview of the Commission's track record on this front, at least in recent decades?

Do you have any knowledge of the FCC's engineers making miscalculations that, after the Commission took action to reorganize spectrum, resulted in harmful interference?

- a. If so, can you describe what impacts this interference had on equipment or service operating in the band, and what actions the Commission took to remedy the harmful interference?**
- b. If not, would you posit that stakeholders should look to this track record to ease concerns about the Commission's future plans for spectrum reorganization?**

Response: The Commission has a strong track record of successfully repurposing multiple spectrum bands resulting in new and more efficient operations that successfully co-exist with other spectrum users. Just a few examples include re-farming the private land mobile radio bands, enabling new mobile services by taking advantage of the digital dividend created by the transition from analog to digital television, repurposing spectrum to enable advance wireless services which currently support 4G and soon 5G networks, and more recently the further repurposing of spectrum from television to mobile broadband through our incentive auction and the opening of millimeter wave bands for new 5G services.

There have not been, to my knowledge, any instances of engineering miscalculations that resulted in widespread harmful interference. In any spectrum reallocation or repurposing effort, there is always a possibility that some instances of harmful interference could arise. However, the Commission takes great care to ensure that such instances are rare and if they do occur, that a remedy can be effectively implemented. The Commission takes any report of harmful interference seriously, and we note that throughout the reallocation and repurposing efforts listed above, reports of harmful interference have been extremely limited, small in scope, and quickly addressed. When evaluating any proposal to repurpose spectrum, the Commission considers the frequency characteristics, the existing and anticipated uses of the band, and the technical data submitted during the open rulemaking process. We recognize that predicting whether harmful interference will occur is a complex undertaking and the nature of radio propagation makes it impossible to guarantee that interference will never occur - even in frequency bands with long-established uses and well-known transmission characteristics. Accordingly, the Commission is always mindful for the potential for unanticipated harmful interference and ensures that its relocation decisions and procedures are carefully tailored to account for the nature of the particular band under consideration. Our long and successful experience with spectrum repurposing should give stakeholders confidence that the Commission's process and spectrum decisions provide the proper balance between protecting existing uses and enabling new uses.

4. During the hearing, I asked Chairman Pai the following questions:

Are there cybersecurity or physical security concerns if information and communications technology companies allow non-cleared or un-vetted personnel access to software development kits or application programming interfaces for 5G networks?

Is there a common standard to use vetted personnel, AI, or machine learning to analyze source code that will be distributed or used in patches for software updates of 5G equipment?

While the Chairman provided thoughtful answers in response, I ask that the Commission follow up with the Committee to offer any supplemental information or ideas regarding the ways in which the Commission, using existing authorities, or Congress, by enacting new legislation, can bolster the physical security and cybersecurity of our 5G networks. Please be as detailed as reasonably possible, and if the Commission feels that these responses are best conveyed to the Committee in a confidential manner in order to protect our national security, please indicate as much to the Committee and we will work with you all to make appropriate arrangements.

Response: Thank you for understanding that responding to your questions is somewhat difficult in a public setting. I have asked our Public Safety and Homeland Security Bureau to reach out to your staff to arrange a confidential briefing.

The Honorable Bill Johnson (R-OH)

- 1. As you know, access to reliable broadband internet is no longer a luxury, it is essential in today's society. The digital divide has left millions of Americans living in rural communities deprived of the same economic, educational, health, and agricultural opportunities available in better connected areas. To tackle this challenge and ensure every American benefits from the many incredible advancements and opportunities made possible by technology in our digital age, we must follow an all-of-the-above approach to expanding broadband connectivity. I applaud the Commission for its dedication to bridging the digital divide and the initial steps taken to support TV white space technology. However, additional steps must be taken to unleash innovation and expand broadband deployments in rural areas, including leveraging TV white spaces spectrum to enable connected school buses, ambulances, and IoT, such as precision agriculture. One way the Commission can assist is by issuing a Further Notice of Proposed Rulemaking (FNPRM) to update rules that impact TV white space deployment in rural areas and clear regulatory barriers to bridge the digital divide.**

Please share the status and timing of the TV white space petition which proposes additional rules. When do you anticipate adopting the Further Notice?

Response: The Commission has worked and continues to work toward ensuring that White Space devices are positioned to offer providers flexibility in designing networks to reach end users especially in rural and underserved areas. In our continuing efforts along these lines, we are evaluating a petition that seeks several rule changes to facilitate broader deployment of white space devices in rural areas and for the Internet of Things applications. Commission's staff has reviewed the comments and reply comments on the petition and is working on a Further Notice of Proposed Rulemaking that would explore the requested changes. I am aiming to circulate an item in near future.

The Honorable Tim Walberg (R-MI)

- 1. I represent the seventh district of Michigan, the energy district of Michigan. You are considering making the 6GHz band, which utilities rely on for devices on the grid, available for unlicensed use. You've spoken about the need for the band to meet growing demand for next generation technologies in 5G**
 - a. I know that you are working with all stakeholders to understand what interference within the 6GHz band could exist in the indoor low power frequency space and that those discussions have been positive. Given the technical record so far at the Commission are you optimistic that the Commission can enable unlicensed use while protecting incumbents like electricity from harmful interference?**
 - b. As we saw with the repack that was envisioned under the 2012 Spectrum Act, the time estimates for 39 months has been questioned given the complexity of moving over 950 earth stations. With thousands of those stations, and others, how confident are you that we can complete a C-Band auction in 2-3 years?**
 - c. On December 4, 2019, you announced \$9 billion for a new 5G fund for Rural American. Can you talk about how this initiative will be funded? While there is great opportunity for 5G technologies to benefit my constituents, I want to make sure we are mindful of costs on their bills.**

Response: I am pleased at the high level of engagement we have seen by both proponents of unlicensed use of the 6 GHz band and incumbents in the band. These stakeholders have created an extensive technical record that our engineering staff is currently analyzing. As I have stated in the past, to the extent that the 6 GHz band is opened for unlicensed use, the Commission is committed to protecting incumbents in the 6 GHz band from harmful interference.

The Commission has sought to chart a path forward on repurposing the C-Band that achieves my four guiding principles: 1) make available a significant amount of spectrum for 5G; 2) make this spectrum available for 5G quickly; 3) generate revenue for the federal government; and 4) ensure that the services currently using the C-Band will continue to be delivered to the American people. The Commission's auctions team has a long history—25 years—of designing and

implementing spectrum auctions to promote the development and deployment of new technologies, including numerous instances where doing so requires innovative approaches to solve complex transition issues. Our goal is to start the auction before the end of 2020. We recognize the intensive interest from providers in the C-Band and will do everything we can to streamline the process of preparing for bidding to ensure it happens as soon as possible.

As you noted, just last month I announced just my intention to propose a new 5G Fund to the full Commission that would allocate up to \$9 billion in high cost universal service support to spur deployment of mobile 5G broadband to rural areas are unlikely to receive those services without federal support. I agree that these services will provide much-needed benefits to rural Americans by connecting them to digital opportunity through the networks of tomorrow.

The Commission previously allocated \$4.5 billion for the Mobility Fund II program, which I will propose to repurpose from supporting 4G LTE services to support the 5G Fund. And thanks to the Commission's prudent management of the Universal Service Fund in recent years and the anticipated use of a reverse auction mechanism that could reduce the amount of support actually awarded well below the full budget allocated for the program, I anticipate the modest spending increase will have minimal impact on for consumers.

In order to move forward with the 5G Fund, the Commission will need to resolve many issues, including the ones you raise, through the notice-and-comment rulemaking process, giving the full Commission the opportunity to consider stakeholders' views on these important questions.