

**OVERSIGHT OF THE NATIONAL TELECOMMUNI-
CATIONS AND INFORMATION ADMINISTRATION**

HEARING
BEFORE THE
SUBCOMMITTEE ON COMMUNICATIONS AND
TECHNOLOGY
OF THE
COMMITTEE ON ENERGY AND
COMMERCE
HOUSE OF REPRESENTATIVES
ONE HUNDRED FIFTEENTH CONGRESS

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OVERSIGHT OF THE NATIONAL TELE- COMMUNICATIONS AND INFORMATION AD- MINISTRATION

TUESDAY, MARCH 6, 2018

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:02 a.m., in room 2123, Rayburn House Office Building, Hon. Marsha Blackburn (chairman of the subcommittee) presiding.

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

Also present: Representative Tonko.

Staff present: Jon Adame, Policy Coordinator, Communications and Technology; Jennifer Barblan, Chief Counsel, Oversight and Investigations; Mike Bloomquist, Staff Director; Karen Christian, General Counsel; Robin Colwell, Chief Counsel, Communications and Technology; Sean Farrell, Professional Staff Member, Communications and Technology; Adam Fromm, Director of Outreach and Coalitions; Elena Hernandez, Press Secretary; Bijan Koochmaraie, Counsel, Digital Commerce and Consumer Protection; Tim Kurth, Deputy Chief Counsel, Communications and Technology; Lauren McCarty, Counsel, Communications and Technology; Drew McDowell, Executive Assistant; Austin Stonebraker, Press Assistant; Evan Viau, Legislative Clerk, Communications and Technology; Hamlin Wade, Special Advisor, External Affairs; Everett Winnick, Director of Information Technology; Jeff Carroll, Minority Staff Director; David Goldman, Minority Chief Counsel, Communications and Technology; Jerry Leverich, Minority Counsel; Dan Miller, Minority Policy Analyst; and Tim Robinson, Minority Chief Counsel.

Mrs. BLACKBURN. Good morning. Come on, guys. Good morning. All right. There we go. There we go.

I want to welcome everyone to the subcommittee hearing this morning. And at this time I recognize myself for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. MARSHA BLACKBURN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

And we want to begin by saying welcome to Mr. Redl. We are delighted to see you here, and we are excited to provide some oversight of NTIA since you've left us for the Administration, and as you well know, several of this committee's top priorities are carried out by the NTIA, not the least of which is efficiently coordinating Federal usage of spectrum.

We are focused on making certain that you all are on task, as are we, and because of this, I want to mention at the outset that we are terribly disappointed with the snafu that occurred on the testimony submission and on the one sheet that we received that is an overview of testimony.

You know our process. You know that we respect that process on both sides of the dais, and going forward, we would like to ask for an accommodation of that process as provided by the rules and also the expectations of the committee members.

Around the world, countries are racing to be the first to 5G. To be competitive the United States will need to continually make available spectrum needed to build out these networks.

It seems NTIA is hard at work identifying bands that could be freed up for the commercial use, especially with the recent announcement of 100 megahertz that you've identified as a candidate band.

We fully recognize the challenge of balancing the need for more spectrum with the significant national security and public safety issues associated with clearing these bands.

We are looking forward to hearing from you this morning on your plans of how you will help the United States maintain our status as a global leader in the wireless space.

Of course, spectrum isn't the only priority NTIA has, although we know that it is your favorite. The NTIA is also at the forefront of coordinating Next Generation 9-1-1.

Just a few weeks ago, we celebrated the 50th anniversary of the first 9-1-1 call that was made in Haleyville, Alabama. Yet, we are still struggling to bring 9-1-1 into the 21st century.

It's unfortunate to hear that deployment of Next Gen 9-1-1 services are being stymied by States that divert much-needed funding for non-9-1-1 purposes.

As NTIA and NHTSA Administrator State grants are taking place, we need to ensure that there is adequate funding and it's used efficiently.

And while we are on the topic of funding, let's not lose sight of why we are here. As your oversight authority, it is our duty in Congress to make sure that you have the tools you need to succeed.

It is no doubt that we have loaded up your plate with important priorities. But as we look to the fiscal year 2019 budget, we seek to get a better sense of what you need to get the job done.

I am pleased to see that you have indeed hit the ground running. I look forward to hearing more about your priorities in spectrum management identification as you embark on these issues.

[The prepared statement of Mrs. Blackburn follows:]

PREPARED STATEMENT OF HON. MARSHA BLACKBURN

Good morning and welcome back to the hearing room, Mr. Redl! We sure are excited to provide some oversight of NTIA since you've left us to the Administration. As you well know, several of this committee's top priorities are carried out by NTIA, not the least of which is efficiently coordinating Federal usage of spectrum.

Around the world, countries are racing to be the first to 5G. To be competitive, the United States will need to continually make available the spectrum needed to build out these networks. It seems NTIA is hard at work identifying bands that could be freed up for the commercial use, especially with the recent announcement of 100MHz that you've identified as a candidate band. We fully recognize the challenge of balancing the need for more spectrum with the significant national security and public safety issues associated with clearing bands. I look forward to hearing your plans on how we maintain our status as a global leader in the wireless space.

Of course, spectrum isn't the only priority NTIA has (although we know it's your favorite). NTIA is also at the forefront of coordinating Next Generation 9-1-1. Just a few weeks ago, we celebrated the 50th anniversary of the first 9-1-1 call made in Haleyville, Alabama. Yet we are still struggling to bring 9-1-1 into the 21st century. It's unfortunate to hear that deployment of Next Generation 9-1-1 services are being stymied by States that divert much-needed funding for non-9-1-1 purposes. As NTIA and NHTSA administer State grants, we need to ensure that any funding for Next Generation 9-1-1 is used efficiently.

And while we're on the topic of funding, let's not lose sight of why we're here. As your oversight authority, it is our duty here in Congress to make sure you have the tools you need to succeed. It is no doubt that we have loaded up your plate with important priorities -but as we look to the fiscal year 2019 budget, we seek to get a better sense of what you need to get the job done.

I'm pleased to see you've hit the ground running, and I look forward to hearing more about your priorities as you embark on these important issues. With that, I will yield 1 minute to the gentleman from New Jersey, Mr. Lance.

Mrs. BLACKBURN. And with that, I yield the remainder of my time to Mr. Lance.

Mr. LANCE. Thank you very much, Chairman Blackburn, and thank you to Assistant Secretary Redl for appearing before us today.

The agency charged with managing Federal spectrum, the National Telecommunications and Information Administration, plays a key role as the United States competes in a global race to 5G.

As the demand for more mobile data and high speeds continues to grow, it is critical that we make sure the Federal Government is using its spectrum efficiently and free up unused spectrum for commercial use, all while ensuring that agencies are able to fulfill critical missions.

There are tough needs to balance, and I applaud Mr. Redl for moving quickly and identifying 100 megahertz of midband spectrum for potential commercial use.

I've recently introduced legislation with Ranking Member Doyle, the Airwaves Act, which, among other things, also aims to free up more Federal spectrum for commercial use.

I look forward to working with Mr. Doyle and with you, Mr. Redl, on these efforts moving forward.

In addition to spectrum management, you also oversee critical public safety matters related to the Next Generation 9-1-1 and FirstNet.

I thank our distinguished witness for appearing before us today. I look forward to discussing these important issues with you, and I yield back 6 seconds, Madam Chairman.

Mrs. BLACKBURN. Gentleman yields back.

Mr. Doyle, you're recognized for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. MICHAEL F. DOYLE, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA

Mr. DOYLE. Thank you, Madam Chair, for holding this important hearing, and I'd like to also thank our witness, Administrator David Redl, for being with us here today.

As it's been noted, Mr. Redl is no stranger to this committee, having served as counsel and chief counsel for Chairman Walden on this subcommittee.

During his time here, Mr. Redl spearheaded the majority's effort on spectrum policy in internet governance and oversaw and directed policy for the full breadth of this subcommittee's jurisdiction.

And now, after what appeared to be a rather drawn-out confirmation process, you've finally taken on the leadership of the National Telecommunications and Information Administration, the agency tasked with serving as the principal advisor to President Trump on telecommunications and information policy issues.

David, I want to wish you the best of luck with this critical and quite challenging task. That being said, I also understand that you went to Penn State, which is my alma mater, and that you married a girl from Pittsburgh.

So this shows good judgment on your part, too.

[Laughter.]

But again, welcome back to the committee. Our world grows more connected and interconnected by the day. The number of connected devices will exceed the number of people on the planet this year, and research suggests that the number of connected devices will be more than twice the population of the planet by 2020.

This incredible growth has been fueled by innovation, investment, and access to wireless spectrum. The U.S. Government remains the largest spectrum holder in the United States, and NTIA is charged with managing Federal spectrum and, as you recently announced, figuring out how to transition additional spectrum to commercial use.

It is critical that as your agency moves forward that you balance the needs of licensed and unlicensed industries. Our leadership in wireless broadband, our success in 4G, and our ability to successfully deploy 5G networks will depend entirely on our ability to make available sufficient spectrum to meet both communities' needs.

NTIA's recent announcement identifying 100 megahertz of Federal spectrum to study for wireless broadband use is good news, and it's a good example of the valuable role NTIA can play in coordinating Federal spectrum use.

It's also a reminder of how important our Federal R&D efforts are in this area. NTIA's research and engineering arm, the Institute for Telecommunication Sciences located in Boulder, is a critical part of this work.

Having objective researchers and engineers who can work with Federal stakeholders to identify ways to free up or share spectrum is critical for meeting our Nation's wireless needs because navi-

gating the tricky waters of interagency cooperation and coordination is difficult, at best.

I'd like to also mention that the lab is led by a Carnegie Mellon grad, Keith Gremban—more good judgment on their part.

Beyond spectrum, NTIA plays a key role as an interagency and multistakeholder convener within the Government and with commercial interest in civil society organizations.

NTIA has done good work on cybersecurity, privacy, the Internet of Things, and unmanned aircraft. I believe that it is critical that this work continues. We need thoughtful, fact-based interagency leadership helping agencies navigate these complicated topics.

More work needs to be done in these areas as they go from being nascent innovations to globally deployed technologies and challenges.

ICANN security is a particular concern to many. Our Nation's digital infrastructure is under constant attack by adversaries ranging from superpowers to script kiddies. And as we move towards 5G and future network technologies, we need to consider better how to bake security into these networks, how to harden them against attacks and tampering.

It's my hope that NTIA can play a role in working with industry and Government stakeholders as these networks are being designed and deployed.

Among your additional responsibilities in the United States' role in internet governance through ICANN, and while our Nation's role is changing, I expect NTIA to continue representing the United States' interest before the global internet community of ICANN.

While ICANN's multistakeholder process can be cumbersome, I hope that NTIA can continue to work through the governmental advisory committee to protect our interest and work to maintain a globally unified and connected internet.

I am also interested to see NTIA continue its work on BroadbandUSA, digital literacy, and public safety.

I want to thank you. I look forward to your testimony and, Madam Chair, I will yield back the remaining 13 seconds.

[The prepared statement of Mr. Doyle follows:]

PREPARED STATEMENT OF HON. MICHAEL F. DOYLE

I'd like to thank Chairman Blackburn for holding this important hearing, and I'd like to thank the witness, Administrator David Redl, for being with us here today. As it has been noted Mr. Redl is no stranger to this committee, having served as counsel and chief counsel for Chairman Walden on this subcommittee. During his time here, Mr. Redl spearheaded the majority's efforts on spectrum policy and internet governance, and oversaw and directed policy for the full breadth of this subcommittee's jurisdiction.

And now, after what appeared to be a rather drawn-out confirmation process you have finally taken on the leadership of the National Telecommunications and Information Administration, the agency tasked with serving as principal adviser to President Trump on telecommunications and information policy issues. I wish you the best of luck with this critical and quite challenging task.

That being said, I also understand that you went to Penn State, my alma mater, and while not from Pittsburgh you are married to a Pittsburgher? Is that correct?

Well we can't all be perfect, but it's a step in the right direction.

Again, welcome back.

Our world grows more connected and interconnected by the day. The number of connected devices will exceed the number of people on the planet this year, and research suggests that the number of connected devices will be more than twice the

population of the planet by 2020. This incredible growth has been fueled by innovation, investment, and access to wireless spectrum.

The U.S. Government remains the largest spectrum holder in the United States, and NTIA is charged with managing Federal spectrum and, as you recently announced, figuring out how to transition additional spectrum to commercial use.

It is critical that as your agency moves forward you balance the needs of the licensed and unlicensed industries. Our leadership in wireless broadband, our success in 4G, and our ability to successfully deploy 5G networks will depend entirely on our ability to make available sufficient spectrum to meet both communities' needs.

NTIA's recent announcement identifying 100 mega-hertz of Federal spectrum to study for wireless broadband use is great news, and it's a good example of the valuable role NTIA can play in coordinating Federal spectrum use. It is also a reminder of how important our Federal R&D efforts are in this area.

NTIA's research and engineering arm, the Institute for Telecommunications Sciences located in Boulder, is a critical part of this work.

Having objective researchers and engineers who can work with Federal stakeholders to identify ways to free up or share spectrum is critical for meeting our Nation's wireless needs, because navigating the tricky waters of interagency cooperation and coordination is difficult at best. I'd also mention that the lab is led by a Carnegie Mellon grad, Keith Gremban.

Beyond spectrum, NTIA plays a key role as an interagency and multistakeholder convener within the Government and with commercial interests and civil society organizations. NTIA has done good work on cyber security, privacy, IT, and unmanned aircraft. I believe that it is critical that this work continue. We need thoughtful, fact-based interagency leadership helping agencies navigate these complicated topics. More work needs to be done in these areas as they go from being nascent innovations to globally deployed technologies and challenges.

Cybersecurity is of particular concern to many. Our Nation's digital infrastructure is under constant attack, by adversaries ranging from superpowers to script kiddies.

As we move toward 5G and future network technologies, we need to consider better how to bake security into these networks—and how to harden them against attacks and tampering. It is my hope that NTIA can play a role in working with industry and Government stakeholders as these networks are being designed and deployed.

Among your additional responsibilities is the United States' role in Internet governance through ICANN. While our Nation's role is changing, I expect NTIA to continue representing the United States' interests before the global internet community at ICANN. While, ICANN's multistakeholder process can be cumbersome, I hope that NTIA can continue to work through the Governmental Advisory Committee to protect our interests and work to maintain a globally unified and connected internet.

I'm also interested to see NTIA continue its work on BroadbandUSA, digital literacy, and public safety.

Thank you, and I look forward to your testimony.

Mrs. BLACKBURN. We are on a roll this morning.
Mr. Walden.

OPENING STATEMENT OF HON. GREG WALDEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Mr. WALDEN. Good morning, Madam Chair, and before we get started, I want to wish your counsel there, Tim Kurth, a happy birthday, I understand. There you go.

[Applause.]

We won't sing to you. That'll be your present from me: no singing.

And Mr. Redl, good morning. Welcome back, Mr. Assistant Secretary. We have been looking forward to this moment for, oh, a very long time.

[Laughter.]

Energy and Commerce have been leading the way to close the digital divide, and for over a year now we have held hearings on broadband deployment and sought ways to incentivize buildout and

our Telecom Subcommittee, which you're intimately familiar with, has held legislative hearings on numerous infrastructure proposals this year and, last, they provide plenty of opportunity for the committee and NTIA to work together toward achieving this end and closing the digital divide in the country.

As the Energy and Commerce Committee continues to identify ways to accelerate broadband deployment, we first need to know which areas are truly unserved. Those areas need to be prioritized first.

Mapping efforts have been in the past undertaken by NTIA, but responsibility shifted to the FCC in 2014 when funding lapsed.

And, while we appreciate the Federal Communications Commission's efforts in this recall to improve the Form 477 data, we need a better-funded NTIA to be able to aggregate that information with the data from multiple outlets across the States with other innovative ideas that are popping up to harness deployment coverage that may not get submitted in the carriers' compliance with the FCC process.

In other words, you have the opportunity, if you're funded, to give us the data we need and that consumers want.

As you all recall, this committee held a hearing on broadband mapping just last June to discuss how we can better define and map granular broadband coverage, and one of the proposals that flowed from that is Congressman Johnson's H.R. 4810, with the support of Congressman Guthrie.

That gets things moving again at NTIA. So I am pleased that those efforts have already yielded some progress as the Trump administration is asking our friends at the Appropriations Committee for \$50 million for NTIA to get back into this very important work.

The last time policymakers moved ahead without adequate mapping, they spent billions of dollars and didn't even have a sense of what we got for it. They spent the money before we had the maps.

This time around, we want to make sure we get the maps first and take care of the people most in need of this assistance to close the digital divide.

And as we move ahead on ways to accelerate broadband buildout, we are beginning to see the buildout of another important network, and that's FirstNet, which obviously we were very involved in back in the time when we put that legislation together.

With all the States and the territories having now opted in, FirstNet should be full steam ahead, building out the Nation's public safety broadband network to make sure our public safety professionals have interoperable mission-critical access to broadband.

As we saw with 9/11 and have since seen with active shooter scenarios and natural disasters, such as wildfires in Oregon and California and elsewhere, interoperability is critical for first responders and the people they serve.

As NTIA continues its oversight of FirstNet, I look forward to seeing the implementation of the FirstNet plan.

Finally, this agency plays an important role in assessing policy challenges across a gamut of issues. From spectrum allocation to public safety, NTIA has a full plate, and we are glad you're there.

As we continue our oversight of the agency, we should consider how its role should evolve given its prominence in communications and information policy.

Given the role NTIA plays in driving the American economy forward, it's vital that the agency has the tools it needs to establish an environment that fosters competition and innovation, and I know you want to lead the agency in that positive direction going forward. We want to be your partner in that effort.

We thank you for being here today, and unless anybody else wants the remaining minute of my time, I am more than happy to yield it back and begin our process.

[The prepared statement of Mr. Walden follows:]

PREPARED STATEMENT OF HON. GREG WALDEN

Good morning and welcome back, Assistant Secretary Red! We have been looking forward to this moment for quite some time.

Energy and Commerce has long been leading the charge to close the digital divide. For over a year now, we have held hearings on broadband deployment and sought ways to incentivize buildout. Our telecom subcommittee recently held a legislative hearing on numerous infrastructure proposals that provide plenty of opportunity for the committee and NTIA to work together toward this end.

As the Energy and Commerce Committee continues to identify ways to accelerate broadband deployment, we first need to know which areas are truly unserved, so those areas are prioritized first. Mapping efforts have in the past been undertaken by NTIA, but responsibility shifted to the FCC in 2014 when the funding lapsed.

While we appreciate the FCC's efforts to improve the Form-477 data, we need a better-funded NTIA to be able to aggregate that information with the data from multiple outlets across the States and with other innovative ideas that are popping up to harness deployment coverage that may not get submitted in a carrier's compliance with the FCC process.

As you all will recall, this committee held a hearing on broadband mapping last June to discuss how we can better define and map granular broadband coverage. One of the proposals that flowed from that is Congressman Johnson's H.R. 4810, with support from Congressman Guthrie, that gets things moving again at NTIA. I'm pleased that those efforts have already yielded some progress as the administration is asking our friends at the Appropriations Committee for \$50 million for NTIA to get back in this space.

The last time policymakers moved ahead without adequate mapping, we spent billions of dollars and didn't ever have a sense of what we got for it. This time around, we are going to get the mapping right. It is critical.

And as we move ahead on ways to accelerate broadband buildout, we're beginning to see the buildout of another important network: FirstNet. With all States and territories having now opted in, FirstNet should be full steam ahead building out the Nationwide Public Safety Broadband Network to make sure our public safety professionals have interoperable, mission-critical access to broadband. As we saw with 9/11 and have since seen with active shooter scenarios and natural disasters, such as the wildfires in Oregon, interoperability is critical for first responders. As NTIA continues its oversight of FirstNet, I look forward to seeing the implementation of the FirstNet plan.

Finally, this agency plays an important role in assessing policy challenges across a gamut of issues. From spectrum allocation to public safety, NTIA has a full plate. As we continue our oversight of the agency, we should consider how its role should evolve given its prominence in communications and information policy. Given the role NTIA plays in driving the American economy, it is vital that the agency has the tools it needs to establish an environment that fosters competition and innovation.

Mr. WALDEN. With that, I'll yield back.

Mrs. BLACKBURN. Gentleman yields back.

Mr. Pallone, you're recognized for 5 minutes.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you, Madam Chairman.

The National Telecommunications and Information Administration, or NTIA, has not always received the same attention as the FCC. But that doesn't mean it's any less important.

The agency has quietly driven many of our Nation's communications policies from behind the scenes, and that's a good thing in the Trump administration, where most agencies have a hard time staying out of the headlines.

Case in point: The FCC has thrust itself into the national spotlight by dramatically walking away from its statutory obligations to serve the American people.

It's more than just their assault on net neutrality. It's privacy, cybersecurity, public safety—the list goes on and on, and the Trump FCC is simply refusing to do its job.

And so I look forward to hearing from the new leadership at NTIA about what they can do to fill the tremendous void left by the FCC.

I know that Administrator Redl has a deep understanding of these issues, and I hope he also understands that his agency must now step up to improve and secure our communications networks for the future.

And I am particular interested in hearing how NTIA will handle cybersecurity as we move to more robust next-generation wireless networks and the Internet of Things.

The administration itself has pointed out how vulnerable our wireless networks will be if the Government does not do more to protect them, and NTIA has an important role in figuring out how to make sure that they are secure.

But NTIA needs to do more than just defend our networks from attacks. The agency must also find better ways to protect our privacy.

During previous administrations, NTIA worked actively to protect our private information through a multistakeholder approach, and, now that congressional Republicans ripped away our online privacy, we need to know whether Administrator Redl plans to increase the NTIA's efforts to oversee our private information online.

But NTIA's responsibilities do not end with privacy and security. The agency must also take an active role in encouraging broadband deployment and improving our Nation's broadband maps.

Democratic members of this committee have introduced the LIFT America Act, which directs NTIA to distribute \$40 billion to extend our broadband networks to Americans in every corner in the country.

Ensuring that NTIA is the agency that's distributing these funds is critical. The FCC already manages the Universal Service Fund, which operates independently for many appropriations, and changing that now by comingling USF with appropriated funds would be a mistake and would risk its long-term sustainability.

That's why the LIFT America Act would direct NTIA to handle broadband infrastructure funding, and I would like to hear how Administrator Redl would handle this responsibility.

And finally, I am interested to learn how Administrator Redl plans to deal with internet governance and our international commitments.

Senator Cruz has been pushing for the U.S. to walk away from our agreements regarding ICANN, and I strongly believe that Senator Cruz is playing right into Russia's hands in their efforts to shake global confidence in our Government.

Ultimately, these efforts could undermine the integrity of the internet. I was even more disappointed to see that Senator Cruz tried to use the confirmation process to force Administrator Redl to commit to undermining our country's good will overseas.

These commitments are counterproductive, and I would therefore like to hear from the Administrator whether he has promised a predetermined outcome to his proceedings relating to America's oversight of ICANN.

[The prepared statement of Mr. Pallone follows:]

PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

The National Telecommunications and Information Administration (NTIA) has not always received the same attention as the FCC, but that doesn't mean it's any less important. The agency has quietly driven many of our Nation's communications policies from behind the scenes. That's a good thing in the Trump administration, where most agencies have a hard time staying out of the headlines.

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So I look forward to hearing from the new leadership at NTIA about what they can do to fill the tremendous void left by the FCC. I know that Administrator Redl has a deep understanding of these issues. And I hope he also understands that his agency must now step up to improve and secure our communications networks for the future.

I am particularly interested in hearing how NTIA will handle cybersecurity as we move to more robust next-generation wireless networks and the Internet of Things. The administration itself has pointed out how vulnerable our wireless networks will be if the Government does not do more to protect them. NTIA has an important role in figuring out how to make sure they are secure.

But NTIA needs to do more than just defend our networks from attacks. The agency must also find better ways to protect our privacy. During previous administrations, NTIA actively worked to protect our private information through a multi-stakeholder approach. Now that Congressional Republicans ripped away our online privacy, we need to know whether Administrator Redl plans to increase NTIA's efforts to oversee our private information online.

But NTIA's responsibilities do not end with privacy and security—the agency must also take an active role in encouraging broadband deployment and improving our Nation's broadband maps. Democratic members of this committee have introduced the LIFT America Act, which directs NTIA to distribute \$40 billion to extend our broadband networks to Americans in every corner of the country.

Ensuring that NTIA is the agency that distributes these funds is critical. The FCC already manages the Universal Service Fund, which operates independently from any appropriations. Changing that now by comingling USF with appropriated funds would be a mistake and would risk its long-term sustainability. That's why the LIFT America Act would direct NTIA to handle broadband infrastructure funding. I would like to hear how Administrator Redl would handle this responsibility.

Finally, I'm interested to learn how Administrator Redl plans to deal with internet governance and our international commitments. Senator Cruz has been pushing for the U.S. to walk away from our agreements regarding ICANN. I believe strongly that Senator Cruz is playing right in to Russia's hands in their efforts to shake global confidence in our Government. Ultimately these efforts could undermine the integrity of the internet.

I was even more disappointed to see Senator Cruz try to use the confirmation process to force Administrator Redl to commit to undermining our country's good will overseas. These commitments are counterproductive. I would therefore like to

hear from the Administrator whether he has promised a predetermined outcome to his proceedings relating to America's oversight of ICANN.

With that, I yield the rest of my time.

Mr. PALLONE. So I don't know if anyone on my side wants the time that remains. If not, Madam Chair, I would yield the rest of my time.

Mrs. BLACKBURN. The gentleman yields back.

Assistant Secretary Redl, we are delighted that you are here this morning.

We appreciate your taking the time to come and we appreciate your testimony, and at this time I recognize you for 5 minutes for an opening statement.

STATEMENT OF DAVID J. REDL, ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. REDL. Thank you.

Chairman Blackburn, Ranking Member Doyle, members of the subcommittee, it's a pleasure to be back before the Energy and Commerce Committee.

At the outset, I wanted to take this opportunity to congratulate the committee on advancing RAY BAUM'S Act. As many of you know, I spent 7 years working here on the majority staff alongside Ray Baum, and it's more than a little bittersweet to be back in 2123 without him here.

But I am pleased to be here on the day that RAY BAUM'S Act will get its moment on the floor. Ray spent his life working in public service, and the RAY BAUM Act is a beautiful tribute to a wonderful person, and it's all the more fitting that it's being done by this committee through consensus.

Consensus is similarly at the heart of what we do at NTIA. For example, given our dual mandate from Congress to protect Government incumbent operations and to make more spectrum available for commercial use, getting to yes requires quite a bit of consensus building.

Thanks to the hard work of our Interdepartmental Radio Advisory Committee, NTIA was recently pleased to announce the selection of 3450 megahertz to 3550 megahertz as a candidate for reallocation to commercial services.

While we still have a lot of work to do to determine how to protect Government incumbents that are in this band, the spectrum is immediately adjacent to the FCC's Citizens Broadband Radio Service spectrum and could help fuel our Nation's leadership in 5G.

Just next door is the 3.5 gigahertz spectrum, and NTIA's Institute for Telecommunications Sciences, which is located in Boulder, Colorado, is working to bring CBRS to life.

The heart of this innovative spectrum band are two systems—Spectrum Access System and the Environmental Sensing Capability—that will allow commercial uses to coexist with Navy radar systems.

ITS is working with all interested stakeholders to certify these systems that are necessary to bring the band to market.

Combined with the FCC's recent announcement on C-band spectrum, our efforts could make as much as 750 megahertz of contiguous midband spectrum available to meet our Nation's 5G needs.

In addition to our spectrum work at NTIA, we work extensively to represent U.S. interests before consensus-based organizations like ICANN and the International Telecommunication Union.

The ITU's Plenipotentiary Conference is coming up at the end of this year, and we are working with our colleagues at the Department of State to finalize U.S. positions and develop strategies to advance U.S. interests.

Additionally, we are actively working to promote the U.S. candidate to lead the ITU's development sector, Doreen Bogdan-Martin. Doreen's a former NTIA employee who spent many years working at the ITU Secretariat in Geneva to advance telecommunications policy around the globe. She's incredibly qualified, and I am proud to support her candidacy.

Importantly, if she's elected, Doreen would be the first woman to hold any of the ITU's five leadership elected positions in the union's 153-year history.

Finally, I'd like to highlight the good work the Department of Commerce had been doing to improve our Nation's cybersecurity.

President Trump has made it clear that securing our communications networks is a national security priority, and the Department of Commerce plays a critical role in this national effort.

Whether it's NIST's work on the cybersecurity framework or NTIA's work on multistakeholder processes, under Secretary Wilbur Ross' leadership, the Department is the commercial internet's voice within the executive branch.

In January, the Departments of Commerce and Homeland Security issued a draft report on actions that can be taken to address the threat of botnets.

The report outlines a positive vision for the future with goals and tasks that would improve the resiliency of the internet ecosystem.

We know that these automated distributed threats are a global problem and that no single sector can fix the problem in isolation. But we also know there are effective tools that can help mitigate these threats but are not consistently used.

The challenge of distributed threats is exacerbated by the volume of devices as we move to the Internet of Things, and I believe the greatest challenge for realizing the full potential of IoT will be cybersecurity.

Many do not think of their thermostats, light bulbs, cars, or appliances as digital devices that may carry cybersecurity risks. But in the age of IoT, they can.

If we want to promote innovation and growth, we must ensure that America can trust the IoT devices in their lives.

Late last year, one of NTIA's open multistakeholder processes produced agreement on documents focused on IoT security and patching, and we continue to engage with the IoT and security communities to promote the security of the devices on which we are increasingly reliant.

Throughout all of this work, NTIA has consistently looked to create as many avenues for engagement with the private sector as possible. That will continue under my watch.

The communications and information sectors are the backbone of the economy, and they are too important not to get right. The United States must continue to lead as new technologies, including 5G, emerge, and we must continue to harness this growth for American businesses and American workers.

It will take hard work and a lot of listening to maintain America's leadership in the communications world. That will be my focus as NTIA's Administrator.

Thank you again for inviting me. I am really happy to be here testifying, and I look forward to your questions.

[The prepared statement of Mr. Redl follows:]

TESTIMONY OF DAVID J. REDL
ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
(NTIA)
U.S. DEPARTMENT OF COMMERCE
ON
REAUTHORIZATION OF NTIA
BEFORE THE SUBCOMMITTEE ON
COMMUNICATIONS AND TECHNOLOGY
COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES
MARCH 6, 2018

EXECUTIVE SUMMARY

NTIA is the Executive Branch agency responsible for advising the President on telecommunications and information policy. NTIA's programs and policymaking focus on a broad range of issues that include spectrum management and availability, broadband connectivity, and the growth and stability of the Internet and the Internet-enabled economy.

The tremendous growth in demand for wireless communications by consumers, businesses, and government agencies requires innovative approaches to increase spectrum access to both commercial and Federal users. NTIA evaluates and promotes efficient use of spectrum by Government users, recommends reallocation for commercial use where possible, and encourages sharing between commercial and government users. These actions support the commercial sector's development of next generation wireless services while also satisfying the congressionally mandated missions of all Federal agencies.

Communications research also plays a critical role identifying innovative approaches to increase spectrum access and sharing opportunities. NTIA's Institute for Telecommunication Sciences (ITS) provides critical scientific research on spectrum capability, spectrum management approaches (*e.g.*, spectrum sharing) and spectrum-enabled technology development and testing for both Federal agencies and private industry partners. NTIA has a statutory directive to further scientific knowledge related to telecommunications, particularly with respect to radio spectrum, and is expanding collaborative research and development in advanced communications technologies to support commercial and government applications. NTIA's work will advance research, development, testing, and evaluation to enhance wireless efficiencies.

High data rate, or broadband, communications have become integral in fueling a dynamic economy, driving commerce, enriching education, enhancing health care, and improving public safety. NTIA continues to address demand by state, local, and tribal governments for technical assistance and hands-on guidance in bringing broadband to American communities across the nation. NTIA continues to respond to the demand for technical services and broadband leadership efforts by partnering with unserved and underserved communities, so that they can attract new business investments and spur economic growth. NTIA's strategy capitalizes on strong relationships with broadband providers, state and local organizations, innovation economy firms, non-profit organizations, foundations, and other Federal stakeholders.

In collaboration with other Commerce bureaus and Executive branch agencies, NTIA develops and advocates domestic and international policies that preserve the open Internet while advancing key U.S. interests. NTIA advances U.S. interests in Internet policy against the backdrop of an ever-changing landscape of services, technologies, and increasingly global actors seeking to influence its future. To that end, NTIA consults with a diverse array of stakeholders to inform America's voice on Internet-related issues, including within government, to the American public, and to the world. NTIA coordinates Executive Branch communications policy and represents the Administration's policy to independent agencies such as the Federal Communications Commission (FCC) and the Federal Trade Commission (FTC).

The Internet is the greatest engine of communications and commerce the world has ever known. This is an exciting time to lead NTIA, which plays a vital role in many important areas of telecommunications. Whether it is broadband deployment, the digital economy, or managing our government spectrum resources, NTIA is at the forefront of preserving and advancing our information economy.

Mrs. BLACKBURN. We thank the gentleman for the testimony. Thank you so much, and keeping on time today. This is a good thing. Off to a good start.

I want to yield myself 5 minutes for questions and use this time—I've just got two questions I want you to go a little bit further on in your explanation.

As we are continuing this transition to Next Gen 9-1-1 and looking at the PSAPs across the country that are responsible for their service areas with oversight from their State, I want you to talk a little bit more about how NTIA is going to help facilitate a successful nationwide transition to the Next Gen 9-1-1 and then also, as looking at the money, how you are going to make certain that these Federal dollars are pointed and explicitly used, and then I am going to come to you for a second question on IANA.

So, short responses welcome.

Mr. REDL. Thank you, Chairman.

On Next Generation 9-1-1, as you're aware, this is a shared responsibility that NTIA has through our coordination that we work together with our colleagues at the National Highway Traffic Safety Administration.

NHTSA and NTIA have been working over the last year to put together a grant program that was envisioned by the Middle Class Tax Relief and Job Creation Act of 2012.

We are in the final stages of coordinating that process through the executive branch and are optimistic that we will be able to have those grants out to companies and groups that are working on 9-1-1 policy by the end of this calendar year.

So we are real excited about moving forward on this. There is—I believe it's \$115 million that was allocated for this purpose in middle-class tax relief, and we are getting ready to do the grant program that Congress asked us to do.

Mrs. BLACKBURN. Excellent. We appreciate that, and I will tell you we have heard from several of our local governments wanting—as they are looking at revamps or where they may have voids in their system and especially as you look at public safety, school safety, things of that nature, they are curious as to what that process and that time line is going to be. So good communication on that is going to be helpful.

You touched on the IANA transition. So if you will elaborate a little bit more about that transition and how you see it going and what you think next steps are going to be.

Mr. REDL. Sure.

The IANA transition is complete. It was completed, and at this point the U.S. Government's role in IANA is limited to our function as the U.S. representative on ICANN's Government Advisory Committee.

I know a lot has been made about what commitments were made and what my personal opinions are on the IANA transition. So I appreciate the opportunity to sort of clear the air.

I made my personal opinion known in my confirmation hearing, which I think it would be very difficult to put the genie back in the bottle on ICANN.

ICANN is out there engaging in doing the IANA functions as envisioned through the transition. But my personal opinion certainly shouldn't carry the day as the opinion of an entire Federal agency.

So in the confirmation process, in my conversations with Senator Cruz and Senator Lee, I committed to a process to looking at these things as agencies are supposed to, to ask questions and seek expert input and formulate an opinion of the Administration based on feedback from experts in their fields.

I continue to be working with Secretary Ross' office in trying to find a way to get more feedback on this. But in the meantime, we are, at NTIA, continuing to serve in the role that we are supposed to as our representative to ICANN.

Mrs. BLACKBURN. And as you look at recouping spectrum, the 100 megahertz, you want to say just a little bit about what you think the potential is there?

Mr. REDL. I am sorry. What spectrum?

Mrs. BLACKBURN. Spectrum.

Mr. REDL. Just spectrum in general?

Mrs. BLACKBURN. Yes.

Mr. REDL. We are spending—you know, a good half of the people at NTIA spend all day working on spectrum issues, and, as this subcommittee is painfully aware, it's an issue I care a lot about. I spent a lot of time here as a staffer working on those issues.

We were incredibly pleased to be able to make the announcement about 3450 to 3550 as a candidate for additional study, and we also continue to make progress on the recommendations and the requirements that are required under the Spectrum Pipeline Act.

It's by no means the only band we are looking at, and certainly we are continuing to look across the entire electromagnetic spectrum at ways to make sure we are both meeting the mandate to make commercial services spectrum available but protecting Government incumbent operations and their critical missions.

Mrs. BLACKBURN. The gentleman yields back.

And Mr. Doyle, you're recognized for 5 minutes.

Mr. DOYLE. Thank you, Madam Chair.

I am concerned about the FCC. It seems they have so drastically walked away from their role of protecting American public's communication networks from cyberattack. I think the FCC's failure in this area is part of the reason we saw that bizarre 5G nationalization memo come out of the National Security Council.

Administrator, putting aside the prescription put forth by that memo, can you agree with the diagnosis that the Government must be doing more to secure our networks and the supply chain for 5G technology, particularly in light of the recent revelations about vulnerabilities to currently deployed LTE networks?

Mr. REDL. Ranking Member Doyle, I thank you for the question.

Yes, I can agree with that, and I think the President has made clear that he also would agree that we need to do more.

The President's national security strategy listed 5G security as a national security threat and so, across the Federal Government, we are all trying to coordinate defined ways to push security to the forefront to continue to make security of our communications networks a priority.

Mr. DOYLE. I know during your confirmation that you made a commitment to Senator Cruz to start a process of reevaluating the ICANN transition, as you stated early. I just want to be certain you did not agree to any specific outcome of the process, just that you would start a process?

Mr. REDL. That's correct.

Mr. DOYLE. And can you also just commit to the bipartisan leadership of this committee that you'll just keep us apprised of any process NTIA might be running on revising ICANN transition?

Mr. REDL. Of course we will be responsive to the committee.

Mr. DOYLE. Thank you.

At the beginning of this Congress, every Democratic member of this committee introduced the LIFT America Act to help promote secure and resilient infrastructure for the American people.

Title I of the LIFT America Act would allocate \$40 billion to NTIA to build out broadband to 98 percent of the country. One thing that is not explicitly included in the LIFT America Act is grantmaking authority for the NTIA.

In your view, should we include grantmaking authority for the NTIA and the broadband deployment program in the LIFT America Act?

Mr. REDL. At NTIA, we have been looking, as part of the administration's process of coming up with a plan for infrastructure, at all the ways that we can help to bring broadband infrastructure to every corner of this country.

You know, certainly, I would never say that we should not have every tool available in the toolkit, and grantmaking authority is one of those tools.

If Congress were to give us that authority, then certainly we would make the best use of it.

Mr. DOYLE. So NTIA's Institute for Telecommunication Sciences is instrumental to your mission of coordinating Federal spectrum use and working with Federal stakeholders on clearing bands and sharing them.

Do you believe that ITS has sufficient funding for that mission considering the drive for more sharing in Federal bands, as the case is with CBRS band?

Mr. REDL. You know, Mr. Doyle, I am particularly proud of the work that ITS does. I think they are a really unsung part of the Federal Government.

The hard work they do on basic R&D, on spectrum interference, and on the electromagnetic interference is a critical part of what we do.

They work tirelessly and are a critical part of making sure that as we look to repurpose more spectrum that we have accurate and actionable data on how Federal and non-Federal systems will work together.

I certainly would welcome support for what they do. It's a critical part of our hard work, and thank you for your recognition of that.

Mr. DOYLE. Thanks.

As I mentioned in my statement, I think NTIA has done good work in bringing stakeholders together from inside and outside of Government to address these complex and emerging topics.

Do you plan to continue that work and, if so, what are the topics that you plan to address?

Mr. REDL. So we are in the process of figuring out how best to engage on all of these topics with the private sector. But, as I mentioned in my opening statement, we think that engagement with the private sector is what NTIA really brings to the table as a value add.

We have had a lot of success in bringing stakeholders together and finding ways to get to yes. Under my tenure, I plan to continue finding as many ways as possible to get the private sector on board with Government priorities and have them be done in a way that drives consensus.

Mr. DOYLE. Thank you. I wish you well.

Mr. REDL. Thank you, sir.

Mr. DOYLE. Madam Chair, I yield back.

Mrs. BLACKBURN. Gentleman yields back.

Mr. Walden, you're recognized for 5 minutes.

Mr. WALDEN. Thank you very much, Madam Chair.

In its fiscal year 2019 budget request, NTIA asked for congressional authorization to negotiate leases with private entities to expand their access to Federal spectrum. It's a novel idea.

Can you elaborate on how NTIA leases would differ from traditional licenses, and should a leaseholder have an expectation of automatic renewal of a lease?

Mr. REDL. Thank you, Mr. Chairman.

The leasing option is a particularly interesting tool that we are trying to bring to bear on this challenge. We all know, in this subcommittee, that clearing is still the gold standard, and the law is clear that NTIA needs to focus on clearing as its first option.

But there are some bands that Federal users are in where clearing just won't be an option, where those systems are either specific to that frequency band or the costs to relocate and improve those systems would exceed any potential revenue, which would fail this test under the Commercial Spectrum Enhancement Act.

But our mission is to try and find ways to use the spectrum as efficiently as possible, and so the request for leasing authority is a way to add an additional tool to our toolkit.

In those areas where we can't clear, there are other efficiencies that could be gained through leasing. I certainly don't want to prejudge what those leases or what the terms could look like.

That would have to be part of our consultation not only with folks in the industry but also with the Congress as part of the process.

But we are really excited about the prospect of having more tools to bring to make spectrum available for commercial use.

Mr. WALDEN. And I want to commend you again on your work to identify Government spectrum that can be potentially cleared and made available for auction. It's an ongoing quest we share, a goal to achieve. And so I want to commend you on that.

There has been debate in Congress for several years about Spectrum Relocation Fund, specifically proposals to allow the Office of Management and Budget to borrow money from the Treasury for relocation purposes prior to auction proceeds being deposited into the fund from an auction.

How important is this ability to borrow funds for relocation purposes?

Mr. REDL. The SRF, the Spectrum Relocation Fund, has been probably the most critical tool that we have had to provide incentives to agencies to find ways to be more efficient.

The changes that were originated in this committee in 2012 and again in 2015 have made real improvements to our ability to make that money available to agencies so that the individual agencies don't bear the risk up front of the potential for relocation.

We are continuing to look at ways to improve the SRF. The SRF is why we were able to make the announcement on 3450 to 3550 and so many of the other projects we are working on to bring spectrum to market. So anything Congress can do to bolster the SRF is certainly welcome.

Mr. WALDEN. And speaking of auctions, as you know, in the RAY BAUM'S Act, we fix the issue regarding deposit of proceeds. How important is that fix to allowing auctions to go forward?

Mr. REDL. Well, that's an issue for the FCC Chairman. I mean, that is—Section 309(j) of the Communications Act is their venue and not mine.

That being said, anything that would stand in the way of bringing more spectrum to market I think is a challenge that is worthy of tackling.

Mr. WALDEN. OK.

Given the costs CBO believes comes with the—back to SRF now—policy, does it make sense to amend the SRF and grant greater flexibility in the same bill in which we authorize an additional spectrum auction? Do you need more flexibility there?

Mr. REDL. I mean, no Federal employee has every said, "No, I would like less flexibility in how I do my job," and I am certainly not going to be the first.

So more flexibility is always welcomed. You know, as to which bill you would put that in, sir, I think that's a question for you all to answer, not for me.

Mr. WALDEN. I appreciate your candor on both points.

[Laughter.]

Mr. WALDEN. And we look forward to working with you going forward. With that, Madam Chairman, I'll yield back.

Mrs. BLACKBURN. Gentleman yields. Mr.—

Mr. WALDEN. Before I do that, could we recognize the Assistant Secretary's wife, who is here—Amy Redl, right there in the front row. Delighted.

Mr. REDL. She'll be very embarrassed. Thank you, sir.

[Laughter.]

Mr. WALDEN. Yes, I'm in trouble now.

[Applause.]

Mrs. BLACKBURN. We are glad that she is here to witness this, because we know that she will critique him.

[Laughter.]

Mr. WALDEN. As she should.

Mr. DOYLE. I think she's good for him.

Mrs. BLACKBURN. Yes, and she's from Pittsburgh.

Mr. DOYLE. And those Pittsburgh girls are tough.

Mrs. BLACKBURN. That's right. Making Mr. Doyle's day. OK.

Mr. Pallone is not here, so let's go on down. Ms. Clarke, you're recognized.

Ms. CLARKE. Thank you very much, Madam Chair, and I thank our ranking member as well, and let me add my voice to those who said you made a very smooth transition into this position, and I commend you for the work that you're doing.

Assistant Secretary Redl, as you're aware, I introduced the Spectrum Pipeline Act in 2015, which later was incorporated into the bipartisan budget bill of 2015.

And because my bill became law, the Federal Government and the NTIA gained access to new research and development funding to help free up Federal spectrum used by the American people.

NTIA recently announced that it will study how to make 100 megahertz of spectrum available for use in 5G networks. Can you explain how the availability of research and development funding stemming from my Spectrum Pipeline Act is helping to aid this effort?

Mr. REDL. Absolutely. And Ms. Clarke, I'd like to start off by also saying it was a pleasure to work with you and your staff on that Spectrum Pipeline Act in 2015.

The availability of that funding is what's making it possible for us to continue driving forward. Making the research money available to figure out whether or not agencies will be able to make spectrum available has been a criterion to getting to yes, and Congress rightly heard the concerns from the agencies that that funding being provided after the work had been done was a real impediment to their budgeting processes.

So it is part of the reason that we were able to make 3450 to 3550 announcement as a candidate band, and thank you for that help.

Ms. CLARKE. Very well.

This month, Congressman Issa and I plan to launch the Congressional Caucus on Smart Cities to bring American communities into the 21st century through innovation and technological change.

We believe that embracing smart technology will make our communities more sustainable, resilient, efficient, livable, and competitive in a world in which technology is constantly advancing.

For its part, I applaud the work that NTIA's BroadbandUSA office to promote smart cities. This work spans both Democratic and Republican administrations and includes initiatives like providing toolkits to help communities use partnerships to build smart cities and hosting webcasts to help communities better understand why broadband is necessary for making this Government smarter—their Government smarter.

Assistant Secretary Redl, in your view, why is it important that cities use technological advances in serving their constituencies?

Mr. REDL. I mean, I have spent my entire career trying to advance communications and technology. So it's a bit self-serving, but I feel like this is an area where we have been able to produce a lot of gains for folks, whether they are in smart cities or rural areas, whether they are low income or wealthy, and I continue to believe that that's the case.

I thank you for recognizing the hard work that the Department of Commerce is doing on these issues. I think it's important to note

that, in addition to the hard work that the BroadbandUSA team is doing, our sister agency NIST is also doing a lot of work on smart city and really developing some of the standards and some of the frameworks that are going to be critical to this work going forward.

Ms. CLARKE. And can you commit that promoting the growth of secure and resilient smart cities across our Nation will be a priority of yours during your time leading the NTIA?

Mr. REDL. We are working on it now, and we plan to continue working on it.

Ms. CLARKE. Awesome. And would the BroadbandUSA office be able to do more projects like those I described if Congress budgeted additional resources for the program?

Mr. REDL. You know, certainly if there are more resources available, BroadbandUSA would continue doing more work in their field.

You know, we are doing as much as we can within our budget, and we will continue to make the most we can to do more with less in that budget.

Ms. CLARKE. Very well. And as a co-sponsor of the AIRWAVES Act, I am so pleased to see bipartisan support for progress on spectrum. I am curious if there are changes you would make to that bill, and are we missing any bands that you would like to include?

Mr. REDL. So the Trump administration doesn't have an official position on the AIRWAVES Act, but it's sort of a threshold matter, I would say.

I think we are looking at NTIA across all of the Federal assets—all of the Federal spectrum holdings—to see where there are opportunities to move forward, where there are opportunities to be more efficient, to consolidate operations, and we would love to continue working with your office and with other Members as you look at different bands that are going forward.

Ms. CLARKE. Very well. And does NTIA have any plans to initiate new multistakeholder processes to address some of the issues surrounding internet policy today? If so, what are the topics to be examined?

Mr. REDL. So we are continuing to flesh out how we are going to approach these issues, and as we work our way through the interagency process, because most internet issues, while NTIA has a very strong role in them, involve coordination across the Federal Government, we will certainly keep the committee apprised as we drive forward on them.

Ms. CLARKE. Very well. Much continued success to you.

Mr. REDL. Thank you, ma'am.

Ms. CLARKE. Thank you, and I yield back, Madam Chair.

Mrs. BLACKBURN. Gentlelady yields back.

Mr. Lance, you're recognized for 5 minutes.

Mr. LANCE. Thank you, Chairman.

I am pleased that we were able to include Mobile Now in the FCC reauthorization we are considering on the floor later today.

As we look to the next chapter in spectrum legislation, I certainly believe that the bipartisan, bicameral AIRWAVES Act that I recently introduced with Ranking Member Doyle is a fitting candidate.

It has received wide support from both licensed and unlicensed industries, public interest groups, and several Commissioners at the FCC.

I know that, in the executive branch, you do not take official positions on these pieces of legislation. But Mr. Redl, what are your impressions of the bill, and do you think that it's possible at the appropriate time that the administration will be able to support it, at least in concept?

Mr. REDL. Well, Mr. Lance, thank you for giving me the recognition, but I can't take a position on it. The administration doesn't have a formal position on the bill. That being said, I really applaud all the work that's being done in Congress and the attention that's being paid to spectrum at this point.

Spectrum has always been one of those topics that have been incredibly important to our communications ecosystem and, frankly, most Americans don't pay much attention to it because it just works.

We are very happy to be working with your office and with other offices on this committee to make sure that, as we go forward, we are looking across the entire electromagnetic spectrum at opportunities.

If you look just a few years ago, we weren't considering looking at high-band spectrum. It was considered spectrum was no good for these kinds of purposes. And yet, now here we are on the cusp of 5G.

You have companies like Starry that are out there using special temporary authority to provide fixed broadband over those frequencies at gigabit speeds. It's really an exciting time to be in spectrum policy, and we look forward to working with you on your bill.

Mr. LANCE. Thank you. I want to continue to work with you on this issue, and I hope that we are able to bring this matter to fruition.

I certainly applaud your action in identifying 100 megahertz of mid-band spectrum for potential commercial use in the 3 gigahertz band.

As you are aware, AIRWAVES has provisions dealing with related bands: the CBRS band and the C-band. At the same time, the FCC is reviewing the CBRS rules and the FCC is considering a notice of inquiry partly related to the C-band.

It is my understanding that these are all important bands for 5G deployment. What are the opportunities in considering these adjacent bands for commercial use, and what are some of the challenges?

Mr. REDL. Well, I am really excited that Chairman Pai and his colleagues at the FCC are considering looking at 3-7 to 4-2 of the C-band spectrum you've talked about.

Certainly, NTIA will be taking a look at what Federal equities we have there and making sure that our Federal users that have, you know, positions on that band will be heard at the FCC. But it's a real opportunity for us because mid-band spectrum is so good for both coverage and capacity.

And so the idea that we could make a broad swath of spectrum contiguously available for our Nation's 5G needs is a real opportunity to continue our global leadership on these fronts.

The challenges are what they always are. These bands have incumbent users, and the FCC has a tough challenge ahead of it trying to find ways to balance the rights of those incumbent users with the opportunities moving forward.

Mr. LANCE. Thank you, and congratulations again to you and your entire family, and we will continue to work with you as we have in the past.

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

Mrs. BLACKBURN. The gentleman yields back.

Ms. Matsui, you're recognized for 5 minutes.

Ms. MATSUI. Thank you very much, Madam Chairman, and welcome. It's good to see you back here in another role.

I also want to talk about the spectrum. As you know, Representative Guthrie and I have been focused on initiatives for Federal entities to share or relocate their spectrum-dependent systems allowed for commercial use.

Increasing the probability of sharing or relocating Federal spectrum is often a multiphase, multifaceted strategy, from research and development to planning to accommodate sharing our new spectrum assignments.

I commend your work with DOD at identifying 100 megahertz of spectrum for potential repurposing for wireless. Do you have any thoughts on what incentives might be most beneficial for Federal entities, whether a uniform approach across all Federal entities is possible?

Mr. REDL. Well, thank you, Ms. Matsui.

Thank you for the commendation on the work. I would be remiss if I didn't note that getting to yes on that 100 megahertz required the hard work of a ton of folks across the Federal agencies.

And that's what's interesting about doing Federal spectrum work, is that it is rare that there is a band where we don't have multiple uses across multiple geographies and multiple places within the time domain.

And so every band is a unique challenge. To that end, providing incentives is not a one-size-fits-all approach. So, to the extent that Congress can continue to provide us with tools to address each one of these users individually and address their concerns with making sure their systems are not impacted by any potential move, we would welcome that conversation.

Ms. MATSUI. OK. So there is not one approach at all, so there might be targeted solutions over every individual agency?

Mr. REDL. Yes.

Ms. MATSUI. OK. Great.

Making more spectrum available for commercial use and new technologies will be critical to ensuring we remain the global leader in 5G deployment.

As you work to identify new bands that support new-generation broadband networks, it is also important that we consider opportunities to use commercial bands more efficiently.

I am mindful of the ongoing work towards technical solutions to terrestrial services in the L-band. What are your thoughts on how we could push forward on spectrum proceedings such as the L-band

that protects incumbents from interference and accommodate new spectrum use cases?

Mr. REDL. So that's at the heart of what we do, and the L-band, perhaps the most well-known example of trying to do L-band sharing is trying to find ways for the proposal before the FCC for Ligado to use spectrum without adversely impacting the global positioning system.

NTIA spends a lot of time working across the Federal agencies to try to find ways to get to yes. But getting to yes is going to mean finding ways to protect GPS without having to make drastic changes.

We are waist deep in that, to put it bluntly, and we are going to continue driving forward on it. We think there is a lot of work that's been done to figure out the technical characteristics, and there is a lot of work yet to be done to get everybody at the table to yes. But it's something that we are committed to.

Ms. MATSUI. OK. Thank you.

I applaud the FAA's interagency Spectrum Efficient National Surveillance Radar, better known as SENSUR, feasibility study. The research and development for this initiative provided under the Spectrum Pipeline Act is focused on consolidating existing surveillance radar used to track aircraft and weather.

As you know, this initiative would make a minimum of 30 megahertz of spectrum in the 1300 to 1350 megahertz band available. How could we be helpful in evaluating possible solutions that will make the spectrum available?

Mr. REDL. Well, we are currently in the process of going through that. We are acutely aware of the deadlines in the Spectrum Pipeline Act and are working actively across the Federal Government on the SENSUR system to try and find ways to get to yes.

What can Congress do? Continue to support us in this work. You know, we have a lot of work to do. Those are systems that are critically important to national security. And so your continued support in trying to help keep everybody at the table and driving towards consensus is much appreciated.

Ms. MATSUI. So it's continued effort, particularly encouraging other Federal entities to look at their spectrum systems to evaluate where they could be consolidated, modernized, or otherwise allowed for sharing.

So it's just continued work to try to find that special little nugget that will move us forward, then?

Mr. REDL. Yes. Figuring out the puzzle pieces of making spectrum work is what, you know, like I said, a good half of NTIA's employees do every day, working to figure out how to make all those authorizations work collectively together in a way that gets our national mission done but also makes spectrum available for commercial services.

We appreciate the support. We appreciate the ongoing dialogue with this committee that has been so engaged on spectrum. So thank you so much.

Ms. MATSUI. Well, thank you very much for your dialogue, and I do appreciate working with you. Thank you.

I yield back.

Mrs. BLACKBURN. Gentlelady yields back.

Mr. Latta, you're recognized for 5 minutes.

Mr. LATTI. Thank you, Madam Chair, and Mr. Assistant Secretary—David—welcome back. Good to see you.

In my role as the chair of the Digital Commerce and Consumer Protection Subcommittee, we have done great work on clearing the regulatory path to self-driving vehicles.

We also made a clearer path for increased access to spectrum. It's going to be the new wireless 5G tech networks that drives some technology solutions supporting self-driving cars.

Would you tell me how much more spectrum 5G networks we will need, and do you have any time frame within which we need to make available a certain amount of spectrum to ensure the advancement of self-driving cars becomes a reality?

Mr. REDL. Mr. Latta, I wish it was a question that lent itself to a simple answer, but it doesn't. We are constantly reevaluating how much spectrum is needed both for Government operations and for commercial operations, and that's the heart of our spectrum mandate.

Self-driving cars are a unique mission, but they are another mission, and so as we look at all the things that we are asked to accommodate, we are working across the Federal Government with our colleagues at the Department of Transportation and certainly with our FCC colleagues to try and figure out ways to make this a reality.

Most of the self-driving car systems that have been considered to date are a hodgepodge of different systems. We don't anticipate that changing.

The spectrum at 5.9 that has been allocated to the National Highway Traffic Safety Administration is part of that puzzle, and we certainly look forward to continuing to engage with them to try and help self-driving cars become a reality.

Mr. LATTI. OK. Well, thank you.

Also, with tax season upon us and fraudulent filings on the rise, I've been concerned with an issue faced by a lot of the certified public accountants out there in how the Internet Committee for Assigned Names and Numbers manages the award of generic top-level domains.

I've highlighted one particular example that is one of my concerns, which involves how CPA organizations were not awarded the dot CPA domain.

Would you share any thoughts or insights about how ICANN manages the domain name process, and if you are able to rise your general or specific concerns or observations with them directly?

Mr. REDL. Sure, and thank you, Mr. Latta. I am very familiar with the dot CPA issue, both from my time here and now my time at NTIA.

Certified public accountants had applied through ICANN's process for the generic top-level domain dot CPA, and that has been an ongoing process for quite some time.

My staff is engaging actively with the CPAs to try and find a resolution. In our role on the ICANN Governmental Advisory Committee, we will stand up for U.S. interests, and, in this case, this is one of those interests.

ICANN is holding one of its meetings next week in Puerto Rico. I plan to be in attendance, and I have a scheduled meeting with the CPAs to try to see if we can figure out a way to get this resolved through the ICANN process as expeditiously as possible.

Mr. LATTI. That would be great. Thank you.

In terms of the next steps in broadband mapping, what do you propose can be done about identifying locations unserved by broadband service?

You know there has been a lot of work done by this subcommittee and also with the working group concerned about broadband out there, especially in our rural areas.

Have you identified other Government agencies' processes or public utilities that can help you geolocate in those target-specific unserved addresses or locations to better understand the demand in those more remote parts of our country?

Mr. REDL. Sure. So the President's request for additional funding for NTIA for mapping is not just to produce a map but also to produce an assessment of broadband capabilities and provide a tool for policymakers both here on the Hill and across the executive branch to better target the funds that are allocated to broadband.

Our approach, should we have the additional funding, would be to not only look at the existing data sets but go to try and find additional data sets. By overlaying that data across different commercial products, you're able to take a look and see where there are discrepancies, and typically that is the way you figure out where you need to do validation.

We have had a lot of experience doing validation of data and we have an extensive set of relationships through our State Broadband Leaders Network with folks at the State and local level who have continued the mapping work at the State level throughout the last couple of years.

Minnesota is a great example of that. They've continued doing this mapping work, and incorporating that data—that boots-on-the-ground validated data—would be part of what we would like to do if we are, again, put into the job of doing mapping.

Mr. LATTI. Well, thank you. And, again, it's really important as you go forward to always remember that, looking at the unserved versus the underserved, because there is a lot of our areas in our districts that are totally unserved right now. So I appreciate that.

Madam Chair, my time has expired and I yield back.

Mrs. BLACKBURN. Gentleman yields back.

Ms. Eshoo, you're recognized for 5 minutes.

Ms. ESHOO. Thank you, Madam Chairwoman.

Welcome, Mr. Administrator. It was David. Now it's Mr. Administrator.

[Laughter.]

Ms. ESHOO. It's great to see you here. Congratulations to you, and it's wonderful that your wife is here as well. I can see the pride in her smile.

You know that the years that you've been with us on the committee that I have pressed and pressed and pressed on unlicensed spectrum because that really is the platform for innovation.

So, in my view, it's important to have unlicensed spectrum in low, mid, and high bands the same way we do for licensed in low,

mid, and high bands because they have different use cases, and this is the case with Wi-Fi operations.

Is NTIA studying any bands below 6 gigahertz that are promising for unlicensed, giving more valuable bands below 6 gigahertz away for commercial use?

I mean, I think that we need to know what your thinking is on that. And are you willing to commit to that some of this sub-6 gigahertz bands will be designated for unlicensed?

Mr. REDL. So, I mean, I'd love to be able to make that assurance, but NTIA doesn't make those calls. So I think it's important to note that—

Ms. ESHOO. Who does? Who does?

Mr. REDL [continuing]. That the decision of whether licensed or unlicensed allocations are made is an FCC determination. What we are doing at NTIA is looking at all of the Federal frequencies and trying to find ones for which we can make commercial use available and to non-Federal use available. We are agnostic about this.

Ms. ESHOO. Is there any consultative role that you play with the FCC on this?

Mr. REDL. Of course, and as the—

Ms. ESHOO. And so what would your conversation sound like?

Mr. REDL. So we haven't taken a firm position. But I think you know personally that I have said before that we believe in a balance of license and unlicensed, and that's the way that NTIA has looked at things in the past.

Going forward, the upside to the fact that we are now looking at a broader swath of spectrum than we were in the past is that one of the biggest challenges we had—do we make it licensed, or do we make it unlicensed?—was scarcity.

As we look at high-band spectrum, we have so much more available that it becomes easier to find ways to make some available for both uses, and I certainly think there is a role for both as we go forward, and we will continue to consult with the FCC and make sure that we are pushing that forward.

Ms. ESHOO. Well, it sounds somewhat promising. Somewhat.

[Laughter.]

Ms. ESHOO. I have made it a point in my district to meet with the PSAPs throughout, you know, each community, and I did that I think a week or 10 days ago in a smaller community in my congressional district, but nonetheless the importance of that—of that center, it was very interesting to me when I asked them if they have had any communication from the Federal Government on anything. And you know what? They haven't. They simply—they said there isn't any outreach. There isn't anything.

And I think that we need to be in communication with them. I know it's been 6 years since the Middle Class Tax Relief Job Creation Act was signed into law. There hasn't been a single grant that has been put out there.

But they need these resources. They need these resources. They need a partner. They need a Federal partner.

Now, I know that someone else asked about it, and that you went through when you anticipate the grants being granted?

Mr. REDL. Yes, ma'am. So I've been on this job for a little over three months and I know how much work you personally put into

those provisions in the Middle Class Tax Relief and Job Creation Act, and we have made it a priority to get that moving.

Ms. ESHOO. Now, OMB has to—it's over at OMB now?

Mr. REDL. So, yes, it is in the clearance process. So it's not exclusively within our purview, as you know. It's a shared responsibility between the Department of Commerce and the Department of Transportation.

So Commerce and Transportation have been working to clear both of their respective processes, and then the document has to be cleared by OMB.

We are in the process of making that happen, and we are hopeful we will get it out the door very soon.

Ms. ESHOO. So what's the next step after very soon?

Mr. REDL. The next step after that is that will establish rules for a grant program, and we will be then taking applications for grants from interested parties to improve Next Generation 9-1-1 services.

Ms. ESHOO. Are you going to go out there and kind of wave the flag and say, "We have \$115 million"—which is not a lot of money when you divide it by 50 States and all the PSAPs. We have, what, 6,000, approximately, PSAPs—

Mr. REDL. Yes.

Ms. ESHOO [continuing]. In the country? I think we need to really be aggressive about this. But you know what? If they don't hear from us, they need to be prepared to put in for whatever they are thinking they need to put in for, and I think that you need to take a lead on that.

I didn't—I left this PSAP encouraged because of all the things that they are doing. They are working so hard and working very smart. But that they don't know that anything exists 3,000 miles away is not very good.

So I think that you have—there is some work to be done on that. And I think that today—if I might say this—that this afternoon we are going to be taking up the RAY BAUM'S Act—you know, how life goes on. He's passed on. He would be very proud that you're here today in your new role, and I'll just end on that note.

Thank you.

Mrs. BLACKBURN. Gentlelady yields back.

Mr. Guthrie, you're recognized.

Mr. GUTHRIE. Thank you, Madam Chairman, and that is a great tribute to Ray in the RAY BAUM'S Act, and then an acronym to come up with the RAY BAUM'S Act that is just—it's important, and I know he would be so proud, as just to finish what my friend from California was saying.

Speaking of another friend from California, Ms. Matsui, so Doris and I—Ms. Matsui and I have worked on the Federal Spectrum Incentives Act to provide financial incentive to Government agencies to relocate or share their spectrum licenses, which you're very familiar with, and given that one of the incentives included in the bill which would allow agencies to use funds to offset sequestration, and now that we have a 2-year budget agreement, are there ways to consider updating the bill and whether in terms of how auctions proceeds could be used or otherwise—for proceeds to be used.

And what about allowing agencies to use funds to purchase equipment or other things? How would you just touch on updating that act?

Mr. REDL. Mr. Guthrie, you know, I think—as I said earlier, having as many tools as possible and reducing the friction as much as possible for Federal agencies that are being asked to relocate their systems while maintaining their existing mission profile is something that we should always be considering.

The challenge with relocating these systems is, it's not like you can simply shut them off and stop doing the job. These agencies have to maintain mission readiness throughout the entire process. It's a long process, and it's a long and costly process.

So anything we can do to make sure that we are not burdening our agencies unduly is welcomed.

Mr. GUTHRIE. All right. Thank you.

And one other issue that we have discussed today is the National Broadband Map. I know you talked some of that with Mr. Latta.

First, I am glad to see a budget request that includes mapping, as I believe NTIA is the best place to house it. In my district, census blocks are too big to perform 477 data to be useful because in the rural areas, even a few miles of my city of Bowling Green, which is the home of Connected Nation, who's represented here as well, which is a growing southern—like one of the new South growth cities—but if you could just—fastest growing city in the State—if you just get right outside of our city limits, there is access to broadband.

Some development and being able to move forward is kind of limited to broadband. That's a big county issue with our County Fiscal Quarter Counting Commission, as most people call it. And so it's a big concern not just in rural rural Kentucky but just outside of growth Kentucky.

So there is a lot of information we need. Census maps—census tracks just aren't enough. I know you talked with Mr. Latta, but have you talked about getting granular service availability data from providers?

Mr. REDL. So, in addition to what we would like to do if we were given the new appropriation with additional data sets, NTIA recently filed comments at the FCC expressing the administration's position on how to improve the FCC's 477 data, and these are the issues we looked at.

And, essentially, our comments broke down to say there are two things you need to improve. You need to improve accuracy and you need to improve granularity. But also, we need to balance the need for increased accuracy and granularity with the burden that we are placing on filers. And I don't envy the FCC in striking that balance, but we need more accurate and more granular data.

Mr. GUTHRIE. All right. Thank you.

And finally, regarding high-band spectrum, are NTIA and the administration generally on board with Chairman Pai's recent announcement that the commission will move forward with auctions in the 24 to 28 gigahertz bands?

Mr. REDL. We are excited about more spectrum being made available to bring to bear on our broadband challenges. I mean, the President has made it very clear that getting broadband out to

rural America is a priority, and we think that the high-band spectrum is one way for us to do that. The potential for fixed wireless in those bands could be a real game changer in rural America.

Mr. GUTHRIE. All right. Thank you, and I'll yield back my time.

Mrs. BLACKBURN. Gentleman yields back.

Mr. Kinzinger, you're recognized for 5 minutes.

Mr. KINZINGER. Well, thank you, Madam Chair, for yielding.

I want to congratulate you on your job. It's great. It's good to have you here. I enjoyed meeting with you in your new capacity back in February, and I appreciate that you've been making the rounds with members of this committee to discuss priorities.

I am also going to try to get through a number of questions with my time. So if you can keep your answers as brief as possible, that would be great.

I'd like to discuss the February 26th announcement that NTIA and the Pentagon have identified a 100 megahertz band of spectrum. It's a 3450 to 3550 band that could be potentially repurposed to spur commercial wireless innovation, including advanced wireless services.

I am all for opening up spectrum for commercial use. But as a military guy myself, I tend to look at things through a national security lens. So I would want assurances from the Pentagon that introducing commercial operations to this band of spectrum would have no negative effects on defense.

First, will you reaffirm your commitment to ensure that the military communications operating in this band must be a priority?

Mr. REDL. Absolutely.

Mr. KINZINGER. And now, in the event that the engineering study shows that this is feasible and there will be no degradation of military operations, I'd like you to briefly describe what sorts of commercial ventures we might see in this band.

You know, might we, for instance, see spectrum-sharing technologies that essentially allow for dual use while prioritizing Government ops?

Mr. REDL. So that's the phase we are in now: figuring out what the options will be once we figure out through the engineering studies what the profile of existing DOD systems will look like in a post-transition.

We would be working with the FCC to figure out how this fits into the larger spectrum picture. You know, this spectrum is immediately adjacent to the 3.5 gigahertz band, which we are in the process at NTIA of certifying the systems to make the sharing in that band possible.

We will work with the FCC going forward to figure out what the right play is to make that available in the best way possible.

Mr. KINZINGER. The extensive Federal and non-Federal use of this band makes it an ideal candidate for spectrum sharing. Will NTIA and the DOD focus on dynamic spectrum sharing as a way to maximize its use? You basically kind of answered that.

As you know, this 100 megahertz band is immediately adjacent to the Citizens Broadband Radio Service, and the FCC's rules for CBRS are almost finalized now.

If the NTIA and DOD move forward to open this band, it would save time and money to simply extend the CBRS rules to the adja-

cent band rather than go through a potentially long rulemaking process.

In order to accelerate its commercial use, will NTIA and DOD consider applying the same rules under the FCC's Part 96 of the CBRS to this 100 megahertz band?

Mr. REDL. So, ultimately, the decision of how the non-Federal use would be done will be done through notice and comment at the FCC. But we will participate in that process.

Mr. KINZINGER. I know at least one company that's worked closely with the DOD on this band tier structure, and I think it's safe to say that, with the industry assistance, this process can be much less painful.

Do you agree that industry can help accelerate and ease the transition process for NTIA and the DOD to enable shared use of this band?

Mr. REDL. Absolutely. We have got two advisory committees at NTIA that are on both sides of this equation to help us out—the Commercial Spectrum Management Advisory Committee for looking at the commercial side of the equation, the Interdepartmental Radio Advisory Committee on the Government side—and those two advisory committees give us at NTIA a more complete picture of both what the Government users need and what spectrum users on the commercial side are looking for.

Mr. KINZINGER. OK. And I'd like to briefly discuss the future of spectrum both in terms of what we can do with the spectrum that's currently being utilized as well as ultra-high and super-high frequencies that are not yet widely utilized in commercial ventures.

In your opinion, what's the most efficient way to deploy the spectrum that's already more accessible today? Would it be sharing, clearing, or some other means?

Mr. REDL. So, when it comes to reallocating Federal assets to non-Federal, Congress has been very clear that we need to prioritize clearing over sharing.

But that doesn't mean that we don't look at all potential tools that we have in our toolkit, and sharing and the request we made for leasing authority are part of those potential tools that we could bring to bear.

Mr. KINZINGER. And how can we make the progress gap in developing and deploying 5G?

Mr. REDL. Yes. I think the work that Congress is doing to continue to press the issue and make more spectrum available is particularly helpful. But I think what we are really going to have to do as a country to see this move forward is continue pressing the private sector on standards.

Standards, at the end of the day, are where these fights are won and lost and we, as a country, have been a leader in 4G standards. We need to continue pressing forward to be a leader in 5G standards.

Mr. KINZINGER. And do you believe that we will still be fighting over the same spectrum bands in 20 years, or do you think the technology will allow us to either share better or unlock higher and lower frequencies to spread things around?

Mr. REDL. I think it's yes to both. I think we will still be fighting over these spectrum bands in 20 years, but I think we will also have new technologies to bring to bear.

I mean, just in the last couple of years we have moved up into the spectrum frontiers in Horizon's portion of the FCC's work, and, you know, five or 10 years ago that was unthinkable.

So at NTIA we continue to constantly reevaluate and figure out what technology has done to change our underlying assumptions.

Mr. KINZINGER. And very last question: Does the NTIA have the authorities necessary to operate in the current environment or in these future scenarios so that it can quickly deploy the use of spectrum?

Mr. REDL. The only thing is the request that we made in the President's fiscal 2019 budget with respect to leasing authority.

Mr. KINZINGER. All right. You did a great job. Thank you for getting through so many questions. I yield back.

[Laughter.]

Mrs. BLACKBURN. Mr. McNerney, you're recognized for 5 minutes.

Mr. MCNERNEY. Well, I thank the Chair, and I thank the witness. I am sorry I missed some of your testimony. I had to step out.

But I am concerned about the FCC's reluctance to embrace cybersecurity as an issue. I think we have serious problems with cybersecurity, and then, when a significant portion of Government experts are told to stand down, I think we are asking for trouble.

Can you commit that, in your role as head of NTIA, you will help protect our Nation's networks?

Mr. REDL. Absolutely, and we are continuing to do that now. The President, as you know, last year issued an executive order asking Commerce and Homeland Security to look at distributed threats like botnets, and we are actively working with our sister agency NIST and with Homeland to put together a report to the President on that issue.

Mr. MCNERNEY. You have the resources that you need?

Mr. REDL. I mean, everyone always would like more resources. But yes, we are doing very well with the resources we have, and certainly we are looking forward and hope that the President's fiscal '19 budget will give us the money that we need.

Mr. MCNERNEY. OK. Well, following the rise in the disruptive IoT cybersecurity attacks, I introduced the Securing IoT Act.

NTIA has been active on this issue, and I understand that in recent meetings of NTIA's multistakeholders working group on IoT security upgradeability and patching that was held back in November. Can you update us on the progress of this multistakeholder working group?

Mr. REDL. Sure. That working group produced documents that were consensus documents from the stakeholders to address some of the concerns related around patchability and conveying that information to consumers.

We are really proud of that work. We think it's a real good start in terms of bringing security to bear on IoT, and I know that IoT security is a priority for Secretary Ross across the entire Department.

Mr. MCNERNEY. Well, what meaningful advances in IoT security can we expect?

Mr. REDL. Stay tuned. We are in the process of working that out. You know, part of the interesting aspect of the multistakeholder process is you don't always know what will come next. The stakeholders have a way of asserting themselves.

Mr. MCNERNEY. Well, I know that NTIA has also published a draft report on how to protect against botnets. You mentioned that a little earlier. How do you expect that the findings and recommendations from this report will be used in practice by Government and industry?

Mr. REDL. We will have to see. We are in the process now of incorporating comments to the draft report. Our draft report was put out in January, and both NTIA and NIST have been seeking comment from stakeholders to improve the draft in anticipation of deliver to the President in May.

What happens to the document and the recommendations therein will be up to the President, and we are hoping to continue working on it.

Mr. MCNERNEY. It would be nice to have some mechanism to ensure that Federal agencies and Government contractors follow these recommendations.

Mr. REDL. Sure would.

Mr. MCNERNEY. I want to change direction a little bit. I want to make sure that my constituents have access to broadband and that that access is affordable. How can NTIA's BroadbandUSA program help?

Mr. REDL. So BroadbandUSA has been continuing to do outreach and maintain relationships with the States and with local governments through the State Broadband Leaders Network, and we have been trying to help produce best practices for communities to get investment from private-sector entities because the economics of broadband are typically the biggest challenge to deployment.

We continue to maintain that capability and work with our State colleagues, and the President's request for an additional \$50 million to provide an assessment and map of broadband availability I think would certainly aid policy makers both within the executive branch and certainly up here on Capitol Hill in trying to define what the unserved parts of our country really look like.

Mr. MCNERNEY. I am going to change directions again. Does the NTIA have jurisdiction over drones?

Mr. REDL. So NTIA has jurisdiction over some of the issues related to Federal counter UAS activities, and that has played out certainly on Capitol Hill over the last couple of years. But, with respect to drones, I think the majority of that work is done inter-agency with our colleagues at the FAA.

Mr. MCNERNEY. OK. Is there a broad outline of drone regulations at NTIA? Is there some sort of regulatory structure that can help guide where we are going to be going with this technology?

Mr. REDL. I don't have one prepared for you today, but I'd certainly be happy to work with your office going forward to figure out what the right steps are going forward for us on drone security.

Mr. MCNERNEY. I mean, you can see drone security is a huge potential issue for us. I mean, they could fly a drone over the Capitol

and blow us up any time they want. So we need to move forward aggressively on that, in my opinion.

Mr. REDL. Yes, sir.

Mr. MCNERNEY. Thank you. I yield back.

Mrs. BLACKBURN. Gentleman yields back.

Mr. Johnson, you're recognized for 5 minutes.

Mr. JOHNSON. Thank you, Madam Chair, and welcome, Mr. Assistant Secretary. That has a nice ring to it. Just kind of rolls off of there. So welcome.

Last week, the FCC released a map showing areas across the country eligible to receive support for 4G LTE service over the next 10 years as part of phase 2 of the Mobility Fund.

The map almost immediately came under attack for inaccurately portraying areas as covered, including parts of my district, that were not. This continues to raise questions as to whether the FCC should be in charge of broadband mapping, wireless or otherwise.

My bill, the MAPPING NOW Act, would move Federal broadband mapping away from the FCC back to NTIA. So, Mr. Assistant Secretary, what will the NTIA do to ensure broadband maps are accurate?

Mr. REDL. Mr. Johnson, as a threshold matter, I want to applaud the FCC for what it's been doing on mapping. Certainly, any effort to bring more accurate data to the way we deploy our resources as a Federal Government should be welcomed, and I also thank you for your leadership in making mapping a priority for discussion here in Congress.

At NTIA, we spent a lot of time working on ways to define the need for broadband, where those problem areas are, and we are happy that the President had asked for an additional \$50 million for us to move forward with that.

That \$50 million, if it is brought to bear on our mapping challenges, will be used not only to produce a map but to do an assessment of the data in that map. And bringing together multiple data sets and figuring out why they don't 100 percent line up should give us a better idea of the real need we have in rural America. Anyone who's spent any time in rural America knows we have a real need for broadband infrastructure in rural America.

Mr. JOHNSON. Sure, and I want to echo what you said. I certainly applaud the work that's been done up until this point, but we got to take it to a new level. I mean, we have got—the urban/rural divide is a very real phenomenon. We have got lots of intellectual capital that is not being recognized because young people can't get access to the internet for their school work, businesses can't come in to rural areas because they can't set up operations because they can't communicate with their customers, their suppliers, et cetera, so I applaud that work as well, and I agree with you. But it's time to take this to the next level.

So you had talked about some of the things you would do, but what strengths does NTIA bring to the mapping efforts over what's currently being done at the FCC?

Mr. REDL. I think a real strength we bring to the table is our existing relationships with the State and local governments.

The BroadbandUSA group at NTIA has spent the last few years continuing to cultivate our State Broadband Leaders Network, and

these are officials within State and local and county governments who spend their time thinking about how to improve the broadband situation, and it's yielded real results for us in terms of States that have been willing to take on the difficult challenge of maintaining these maps and getting good data.

As I mentioned earlier, Minnesota is a great example of a State that has continued to push forward and use State resources to produce good, actionable data. I think it's those relationships and our ongoing work with them—we had our State broadband leaders here in town just a few weeks ago to explore ways to continue working together between the different State and Federal entities that are engaged here. It's a real asset for us.

Mr. JOHNSON. Great. Great.

Shifting gears just a little bit, a lot of discussion has focused on high-band spectrum and how NTIA can help accelerate the U.S. in deploying 5G. But my constituents are still struggling to get 4G, or even to sustain a phone call driving down the highway. So, Mr. Assistant Secretary, is NTIA is looking at lower bands that could be freed up for commercial use?

Mr. REDL. So the announcement of 3450 to 3550 I think is a prime candidate for the kind of thing you're talking about. It's mid-band spectrum that provides a good mix of coverage versus capacity availability, and hopefully we will be able to drive forward and get those studies completed so that we can bring that to market as soon as possible.

But that's the kind of work we are doing to bring spectrum to market to meet actual, real-world demands.

Mr. JOHNSON. OK. And one final questions in the last 30 seconds. A multiagency group that includes NTIA is exploring the possibility of making changes to the FAA's long-range radars operating in that band and relocating them to another band. What's the status of that effort to free up the 1300 to 1350 megahertz band? Is that process moving in a reasonable time frame?

Mr. REDL. The process is moving in a reasonable time frame. Our Interdepartmental Radio Advisory Committee, which is the group that works across the U.S. Government to make sure that Federal equities are respected and that our missions are maintained, are spending a lot of time trying to figure out how to make that system work in a smaller footprint or in a different band.

I am pleased with the progress. We are going to continue to push forward. It's a real priority for us.

Mr. JOHNSON. Great.

Madam Chairman, I yield back.

Mrs. BLACKBURN. Yields back.

Mr. Long, you're recognized for 5 minutes.

Mr. LONG. Thank you, Madam Chair.

Last week, the FCC announced that it plans to vote on an item streamlining the process of small cell deployment at its March meeting.

Is the administration supportive of this effort, and what is NTIA doing to work with Federal agencies to streamline the process for facilities, deployment on buildings, and land administered by and managed by the Federal Government?

Mr. REDL. Mr. Long, I appreciate your asking. It's an area we have started working really hard on in the last couple of weeks.

The President has tasked the broadband interagency working group, which NTIA co-chairs with our colleagues at the Rural Utility Service, with looking at three specific work streams that could bring Federal assets to bear on the challenge, that could streamline permitting for broadband projects, and ways to look across the entire Federal Government at different funding programs and ensure that they are working together and complementing each other as we try to bring broadband to every corner of the country.

Mr. LONG. What are some of the lessons learned from previous efforts to clear Federal users from the spectrum band?

Mr. REDL. So the interesting thing is that this is an area that I think is a great case study in how we have taken lessons learned and Congress had incorporated them into legislation.

The information we learned in AWS-1 in 2007 was then incorporated into changes to the Spectrum Relocation Fund in 2012. After 2012, we learned that there were some challenges with making funding available to agencies, and Congress made another change in 2015 to make that funding available in a more streamlined process.

It's an iterative process, and it gets better every time. So we thank you for all of the support in trying to make this as easy as possible.

Mr. LONG. Well, you're talking about Congress making changes. What should we, this committee—as a committee, what should we be doing to assist in this effort?

Mr. REDL. I mean, I think you're doing it, which is raising the profile of the issue and—

Mr. LONG. Could you repeat that?

Mr. REDL. Yes.

[Laughter.]

Mr. REDL. And continue to engage with us in ways that make sure that we can meet the dual mandate. That's our daily challenge, is we know that Congress wants us to make more spectrum available for commercial users. But we also know, because we spend so much time with our Federal Government users, that we have to protect the critical mission that they are doing as well.

So anything that Congress does to support us in making sure our Federal users have what they need, whether it be what they have now or what they will have tomorrow, while also supporting us and making sure we have the resources to bring commercial spectrum to market is always helpful.

Mr. LONG. OK.

As you're aware, many on this committee have consistently supported commonsense policy of auctioning 1675, 1680 megahertz for shared Government-commercial use for the past several years, and we are very pleased that the administration-proposed budgets for both of them reflect a priority in seeing this policy through.

Does the FCC have everything it needs from your team at NTIA to move this policy forward with a notice of proposed rulemaking and, if so, do you support the FCC's issuing notice of proposed rulemaking in the coming weeks to keep the process moving forward?

Mr. REDL. It will surprise you not at all, sir, that we spend a lot of time working with the FCC on every spectrum band that could be reallocated from Federal use. And so it's an ongoing process, and we continue to make sure that, whatever the FCC needs, that we can provide.

Mr. LONG. OK. So you do keep the process moving forward?

Mr. REDL. Yes. I mean, I think the question of whether or not the FCC has what it needs is probably a question for the FCC, but we stand ready to provide them with whatever they need.

Mr. LONG. OK. Thank you. And I think this is a world record, but I yield back a minute 30.

Mrs. BLACKBURN. I cannot believe Billy Long is giving back time. That is a first.

Mr. Costello, you're recognized for 5 minutes.

Mr. COSTELLO. Thank you very much. I also want to thank—congratulate Mr. Redl, but also thank him for the time that he spent with me in my office just yesterday.

I wanted to focus on FirstNet. As you're beginning your buildout, what are you doing to make sure that we get the National Public Safety Broadband Network up and running as quickly as possible? And the other piece of this, just in terms of getting it up and running, is do you foresee any roadblocks, particularly regarding interoperability?

Mr. REDL. So, in terms of getting things rolling, I know that FirstNet is currently working hard to get Task Order 4 out to AT&T, and Task Order 4 is what will start the process whereby AT&T begins to build out the State plans that were provided to each Governor as part of the opt-in and opt-out process.

We were pleased to see that AT&T, as part of this, immediately made their network available to public safety users on a priority and preemptive basis, and as we get forward with buildout we are going to continue pushing them to make sure they meet the milestones in the contract and that they are building out in a way that comports with all the State plans they handed out.

Mr. COSTELLO. The State and Local Implementation Grant Program 2.0, which allocates, I think, a little under \$44 million to help FirstNet buildout—in Pennsylvania, the State police have a \$425,000 grant—and I want to ask you how NTIA is working with State and local officials on the grant program and how your efforts might differ State to State depending on relative risk to different types of disasters or public safety threats.

Mr. REDL. Sure. You know, SLIGP, as it is lovingly known—SLIGP 2.0 grants are in process now and all of the States have reached out to try to find ways to use that funding to further integration of State assets into FirstNet, since all 56 States and territories have opted into FirstNet's RAN build.

We are working with our colleagues at FirstNet to make sure that we engage with the States on a day-to-day basis. You know, FirstNet spent a lot of time throughout this process doing outreach to State points of contact on these issues and engaging with the public safety community, and we are lucky that both NTIA and FirstNet have a great relationship with State governments and with public safety users.

So we are going to continue working collectively to make sure that those folks in each State who know the needs of their communities are heard.

Mr. COSTELLO. I appreciate your testimony and your answers to my questions.

I yield back the balance of my time.

Mrs. BLACKBURN. Gentleman yields back.

Mr. SHIMKUS, you're recognized for 5 minutes.

Mr. SHIMKUS. Thank you very much, Madam Chairman.

How do we pronounce your name? Is it Reedle? Ridell?

[Laughter.]

Mr. SHIMKUS. It's great to have you here. Thank you for being here.

As you know, I am the founder, the co-chair of the Next Generation 9-1-1 Caucus. In this role, I've seen firsthand how outdated many of our 9-1-1 centers are, and how Next Generation 9-1-1—where it's deployed has been a force multiplier for public safety.

It is more reliable and resilient and faster than legacy systems and improves emergency responses and protection of the public and first responders.

As 9-1-1 enters its 50th year—and I haven't been here for all those years—the urgency of the deployment of next generation is greater than ever.

I know that—and you know—in 2012 Congressman Eshoo and I, along with your help, introduced Next Generation 9-1-1 Advancement Act, enacted as part of the Middle Class Tax Relief—you mentioned that in your opening statement—and Job Creation Act of 2012. It provides for a \$115 million match grant program to fund some of the implementation of Next Generation 9-1-1 services. And I know the chairwoman mentioned that about updating in her question.

What I wanted to follow up on was additionally effective development of critical 9-1-1 infrastructure dictates that scarce funding resources must be dedicated to their stated purpose of enhancing first responder capabilities.

However, despite States—and this is where we have the challenges—quote, unquote, “self-identifying” as nondiversers, the FCC Public Safety and Homeland Security Bureau continues to identify State funds collected for 9-1-1 being diverted for non-9-1-1-related purposes.

Given the new program, what steps is NTIA taking to combat 9-1-1 fund diversion, and what can we do to help?

Mr. REDL. Well, you know, I want to thank you and Congresswoman Eshoo for your leadership on these issues.

You know, it's interesting to watch. We have consumers who are dialing 9-1-1, have smartphones with advanced capability. Now that FirstNet is being stood up and in addition the other providers who are providing, first responders with capabilities have advanced smartphone-style capabilities on their devices, but the 9-1-1 call centers in the middle that are connecting the two in their most dire times haven't been able to keep pace.

And so looking at ways to bring that forward is something that we are painfully aware of and are trying to get that grant program out the door as quickly as possible to bear on the problem.

As far as diverters go, I think you're aware the FCC produces a report every year that looks at which States have been diverting funds—I believe it was under the Net 9-1-1 Act—that will identify States that have been diverting funds away from their 9-1-1 programs for other purposes.

This will help inform our grantmaking, as we go forward, as is consistent with the law.

Mr. SHIMKUS. And you know the concern is that the States could fully fund—they could put money in and then once the time for reporting occurs, then they take the money back out, and it's something we have argued about.

So in your process, as you're reviewing this, if there is a better way for us to be more specific and, you know, you can ask us to help refine this, because it's just—again, as I've said, criminal neglect to charge someone for a purpose and then not use that money for the purpose it was intended to go to.

Mr. REDL. If we find that there are States that are gaming the system that aren't being identified because of foibles of the law, we'd be happy to work with you to try and—

Mr. SHIMKUS. And if we can point some out to you, you would be happy to receive that information?

Mr. REDL. Of course. Always.

Mr. SHIMKUS. Great. Thanks.

The next thing I want to briefly talk about is the 5G cell siting, and, as you know, last week FCC announced that it plans to vote on an item streamlining process for small cell deployment at its March meeting. This approach is similar to the bill I introduced called the SPEED Act, which reduces the regulatory overhang for the siting of small cells. These efforts are incredibly important in winning the international race to 5G. Of course, you mentioned that also in your opening statement.

Is the administration supportive of these efforts to modernize the siting process for small cells, and what is NTIA doing to work with Federal agencies to streamline the process for facilities deployment on buildings and land administered and managed by the Federal Government?

Mr. REDL. Mr. Shimkus, the President has made it clear that getting broadband out to the parts of rural America that don't have it now is a priority for this administration, and certainly the work that we are doing in our Broadband Internet Working Group will help to bear upon that.

The Broadband Internet Working Group has been established. It's co-chaired by NTIA and the Rural Utility Service, and this is one of the issues we are currently looking at.

How do we streamline Federal permitting processes in order to make it easier to build out? How do we bring Federal assets to bear on this challenge? How do we make sure that different funding programs across the U.S. Government are coordinated in a way that gets us the best outcome?

We are dedicated to this challenge, and we are really excited about getting to yes on some of these issues.

Mr. SHIMKUS. Thank you very much.

Madam, my time has expired.

Mrs. BLACKBURN. Gentleman yields back.

Mr. Bilirakis, you're recognized for 5 minutes.

Mr. BILIRAKIS. Thank you, Madam Chair, and thank you, Mr. Secretary, for your testimony. I appreciate it so very much.

On the opening day of this subcommittee's infrastructure push, I introduced House Resolution 687 to coordinate regulations and permitting processes between the Federal, State, and local governments.

We regularly acknowledged the need to remain a leader in technology innovation. However, the unintended complexity of our broadband infrastructure rules is causing us to fall behind and lose investment. Our competitors, such as China, Japan, and Europe, are already racing to deploy 5G for commercial use.

What can we do today to ensure that the U.S. stays in the lead of this innovation and speed our new spectrum bands to market as quickly as our competition?

Mr. REDL. Well, sir, at the Department of Commerce, Secretary Ross has made it clear that 5G leadership should be a priority, and we are driving full steam ahead to engage on every front with Congress, across the administration, and, perhaps most importantly, with our private-sector colleagues to make sure that we are able to drive standards, that we are able to make as much spectrum available as possible, and that we are able to replicate in 5G the kind of success the United States had in 4G.

Mr. BILIRAKIS. Very good.

Representing the great State of Florida—although I do have Pittsburgh blood, by the way, you know that my dad's from Pittsburgh and I root for the Pirates and the Steelers and the Rays, of course, and the Bucs—but in any case, representing the great State of Florida in the Tampa Bay area, Florida is a payer State, as you know, into the Universal Service Fund.

There have long been questions about the accuracy of the broadband data collection and the use of resources. While I truly believe that everyone should have access to internet services, I want to ensure that constituent money is going to the locations that need it most, of course.

The FCC has made a number of data improvements in the last year. The NTIA recently provided suggestions to the FCC on updating its data collection practices, specifically regarding the Form 477 data program, as you know.

Expanding on Mr. Guthrie's questioning, can you discuss the importance of Form 477 to NTIA decisionmaking and how the recommendations NTIA provided to the FCC will improve broadband data accuracy to help payer States such as this great State of Florida?

Mr. REDL. Sure, Mr. Bilirakis.

You know, the Form 477 data is a critical tool that we all have as part of looking at where broadband is available.

The FCC has long maintained this data, and while, you know, we can all quibble over whether it's accurate enough or granular enough—and I think NTIA has been very clear we think it needs to be more accurate and more granular—it still represents a critical data set.

And as we look at what the President asks us to do if we get the additional appropriations to do an assessment and a map, 477 data

would form the basis of one of those data sets. Having as many data sets as possible and as many of them validated as possible will lead us to the best possible outcomes.

And, you know, I think we want to get good data in your hands. We want to get good data in the rest of the executive branch's hands. Doing so will require us to look not just at Form 477 but at a lot more information than that.

Mr. BILIRAKIS. Very good. Thank you.

I yield back, Madam Chair. Appreciate it.

Mrs. BLACKBURN. Gentleman yields back.

Mrs. Brooks, you're recognized for 5 minutes.

Mrs. BROOKS. Thank you, Madam Chairwoman, and congratulations. It's good to have you here.

I have been focused for quite some time on FirstNet and want to ask whether or not—how is FirstNet doing, in your opinion, with respect to their commitment to specify the 15 percent geographic requirement to partner with rural telecoms? How is that going?

Mr. REDL. So, Mrs. Brooks, we are at the threshold of seeing FirstNet start to deploy its own network through AT&T. As I mentioned earlier, FirstNet is working with AT&T now on Task Order 4. Task Order 4 will be the order that has AT&T go out and begin building the State-based plans for the Radio Access Network.

We are aware that it is our job at NTIA and at FirstNet to make sure that AT&T is living up to the terms of the contract it signed with the U.S. Government. We are joined at the hip for the next 25 years on making sure that AT&T lives up to that contract and that public safety first responders get the tools that Congress intended in the law. And so we are going to continue pushing forward to make sure that's the case.

Mrs. BROOKS. Thank you.

I am also curious, following on to Representative Shimkus' question, about the diversion of fees, the 9-1-1 fees of States.

How does your agency follow up when States have to certify they've not diverted the 9-1-1 fees? What does certifying mean, and what is your agency's role in ensuring that the States—rather than us maybe providing you information we might hear about, do you know what kind of mechanism is in place to ensure that 9-1-1 fees aren't—when a State certifies they haven't diverted fees?

Mr. REDL. So that report is produced and the methodology behind it is done by the FCC. That would be a question for the FCC, but I am certainly happy to follow up with them and with your office if you would like.

Mrs. BROOKS. OK. I think people are probably most curious—the spectrum—in the last auction, the auctions have produced significant revenue for the Federal Government, far more than everyone expected and, of course, when it comes to our Federal budgeting process, we need as much revenue as possible.

Do you have any opinion as to which bands might raise the most money for the Treasury as we continue to contemplate the spectrum auctions?

Mr. REDL. So I think, you know, the traditional wisdom has been that low-band spectrum would produce the best revenue outcome.

But it's much more complicated than that when we are looking at which bands are going to be the most lucrative. There are a

number of different factors that go into that. Relative scarcity is one of them. International harmonization is another. The availability of equipment in a timely manner is one. How fast it can be brought to market and cleared of incumbents is another.

So it's a complicated equation to figure out what those revenues might look like, and it does seem to be evolving quite rapidly. You know, high-band spectrum, as I mentioned earlier, was not considered particularly valuable just a few years ago, and yet now here we stand looking at high band as having the potential to really drive 5G leadership.

So I don't envy those that have to do the estimates of what spectrum will bring in in terms of revenue. But it is a moving target on its best day.

Mrs. BROOKS. Thank you.

And Congresswoman Debbie Dingell and I formed the 5G Caucus, and in talking about that you mentioned—and I am curious what your agency's role is—in response to Representative Kinzinger's questions, you mentioned pressing the private sector on standards. And talk to me about what your role is, what's the timing, because I hear that quite a bit from the private sector.

Talk to us a little bit more about that statement that you made, and how do we accomplish that and what's your role in accomplishing that?

Mr. REDL. Sure. So, you know, NTIA plays a role in its engagement with the private sector as the President's principal advisor on telecommunications, and certainly as the agency to which the Secretary's communications and information functions were delegated.

It would be worth noting that this is a shared obligation when it comes to standards, as our colleagues at NIST are also very engaged in working in these standards bodies. You know, the scientists at NIST are fantastic, and we certainly work hand in glove with our sister agency to make sure that we are producing good outcomes for the United States.

For our part, we are going to continue pressing the industry. Industry participation is the backbone of getting private-sector-led standards adopted.

So, from our pulpit, we will continue to push them to make sure that they are engaged at every phase.

Mrs. BROOKS. Thank you.

I certainly believe, because I understand at the Mobile World Congress recently 5G was all anybody talked about. So we better get this right, and everybody better speed it up.

Thank you, and I yield back.

Mrs. BLACKBURN. Gentlelady yields back, and by unanimous consent Mr. Tonko has joined us, and you are recognized for 5 minutes.

Mr. TONKO. Thank you, Madam Chair.

Assistant Secretary Redl, welcome, and thank you for being here today.

Broadband internet access is often the difference between success and failure for many Americans, whether they are students doing homework, job seekers training for a new career, doctors reading a medical scan, or entrepreneurs starting a small business.

To date, our Government has done a poor job, I believe, of tracking broadband deployment, especially with public investments that are made with too little accountability and oversight on behalf of the taxpayer.

I hope this is an issue that we can address together. As you know, I have been working with my colleague and friend, Representative Lance, on a bill called Access Broadband that would begin to address this issue. Our bill would establish a coordinating office for Federal broadband resources at NTIA. It would track Federal broadband dollars, streamline management of Federal broadband resources across multiple agencies, and most notably it would simplify the process for small business and local economic developers to access them.

It would also help notify communities that these resources exist to help them expand their own local broadband access. The bill already has strong bipartisan support.

My thanks to the 10 members of this committee who have co-sponsored it to date. I would ask everyone here to help us advance this effort.

So, Secretary, to your knowledge, does NTIA or any Federal agency currently track the construction and use of broadband infrastructure resources across all Federal agencies that provide broadband funding and support?

Mr. REDL. Well, Mr. Tonko, this is an issue that NTIA is currently in the process of evaluating.

The President tasked the Broadband Interagency Working Group, which NTIA co-chairs with the Rural Utility Service, with looking at this issue, specifically how to look across all the programs in the Federal Government that are providing funding for broadband and make sure that they are coordinated with each other and are complementary to each other.

Mr. TONKO. Does NTIA or any Federal agency coordinate broadband funding so it can be distributed in an efficient manner, in a financially sustainable manner, and with the goal of serving the largest number of persons in the United States while promoting the most job and economic growth for all residents in our country?

Mr. REDL. Well, I am sure that every one of the programs looks at that individually. The across-Government aspect of that is what we are currently looking into right now.

Mr. TONKO. OK. And just the coordinating activity amongst agencies, because I know in our research before we drafted the bill there was this plethora of agencies that are involved and perhaps not communicating well enough with each other.

Mr. REDL. Absolutely, and this subcommittee certainly has a rich history of looking into those issues and trying to ensure that we don't have duplicative funding from multiple agencies.

Mr. TONKO. And have you encountered any barriers to working across offices or agencies?

Mr. REDL. You know, the Broadband Internet Working Group that we have been tasked with chairing has been around for a couple of years, and I think it's proven to be a real dynamic way for the agencies to get together that all have equities in internet work

and find ways to work despite the fact that we are all from different agencies and that we have different missions.

It's been an eye-opening experience to see how well these agencies are capable of working when they are given a direct task and asked to go do it across boundaries.

Mr. TONKO. Thank you. And could tracking this funding better ensure that the money is not duplicative or wasteful?

Mr. REDL. I certainly hope so. I mean, the last thing we want to do as a Federal Government is to spend more money than we have to to achieve our goals.

That's what we are looking at doing if we were to get additional funding for mapping. It's what we are looking at in the Broadband Interagency Working Group. We'd like to find ways to reach that last part of America that does not have broadband in a way that's as fiscally responsible as possible.

Mr. TONKO. And is NTIA in the best position to track broadband funding across Federal agencies?

Mr. REDL. Well, we are working in a group right now that is NTIA and Rural Utility Service from Ag, along with others. But at the moment, it's a team effort across the entire Federal Government, and we are happy to be working with our colleagues.

Mr. TONKO. Would there be another agency that were perhaps better suited to track this funding?

Mr. REDL. Not that I am aware of. I mean, we are certainly trying to figure that out right now. Part of the challenge is that broadband is one of those issues that crosses so many jurisdictional boundaries. It provides service in so many different verticals and other aspects of Government service that we are trying to bring all those stakeholders together in a way that addresses everybody's needs.

We are at the early stages. You know, I don't want to sort of overpromise here. But we are at the early stages, and we are really looking forward to getting down and getting our hands dirty and getting this work done.

Mr. TONKO. And NTIA engages in outreach to communities that need greater access. So what community outreach have you conducted in the past year, and have you seen indications that these outreach efforts and workshops are valuable to our communities?

Mr. REDL. We absolutely have. You know, our State Broadband Leaders Network has extensive relationships with folks at the State, county, and local level, and we continue to bring them together on a fairly routine basis to exchange best practice, to share success stories, frankly to share failure stories, as well, for failure to, you know, get the economic investment that they were looking for.

We are excited to be doing a workshop in Nashville, Tennessee, in the coming months. And so this is an ongoing process for us to continue to reach out to State and local leaders and say, "What have you learned, and how can we disseminate that information across the entire country?"

Mr. TONKO. Thank you very much.

And with that, Madam Chair, I yield back.

Mrs. BLACKBURN. The gentleman yields back, and there are no further Members wanting to ask questions.

Mr. DOYLE. Madam Chair.

Mrs. BLACKBURN. You're recognized, Mr. Doyle.

Mr. DOYLE. Thank you. I ask unanimous consent to submit for the record a letter to the subcommittee from the Electronic Privacy Information Center.

Mrs. BLACKBURN. Without objection, so ordered.

[The information appears at the conclusion of the hearing.]

Mr. DOYLE. Thank you.

Mrs. BLACKBURN. And I also have a UC request for a letter from the Utilities Technology Counsel. Without objection, so ordered.

[The information appears at the conclusion of the hearing.]

Well, you've gotten the first one under your belt, Mr. Redl, and I think you see that there is agreement from both sides up here that we have efficient use of the funds that are there for NG9-1-1. We are all concerned about mapping and broadband rollout, making certain that we utilize spectrum well.

So we thank you for the insight you've provided.

Pursuant to committee rules, I remind Members that they have 10 business days to submit additional questions for the record, and I ask that you will submit these written answers within 10 business days.

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

[Whereupon, at 11:53 a.m., the committee was adjourned.]

[Material submitted for inclusion in the record follows:]

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March 5, 2018

The Honorable Marsha Blackburn, Chair
 The Honorable Michael Doyle, Ranking Member
 U.S. House Committee on Energy and Commerce
 Subcommittee on Communications and Technology
 2125 Rayburn House Office Building
 Washington, D.C. 20515

RE: Oversight of the National Telecommunications and Information Administration

Dear Chairwoman Blackburn and Ranking Member Doyle:

We write to you regarding tomorrow's hearing on "Oversight of the National Telecommunications and Information Administration."¹ American consumers face unprecedented privacy and security threats. The unregulated collection of personal data has led to staggering increases in identity theft, security breaches, and financial fraud in the United States.² Congress should work with the NTIA to develop meaningful safeguards for the privacy and security of Americans' personal information.

The Electronic Privacy Information Center was established in 1994 to focus public attention on emerging privacy and civil liberties issues. EPIC is a leading advocate for consumer privacy and has appeared before this Committee on several occasions, and has actively participated in the proceedings of the Federal Trade Commission ("FTC") and the Federal Communications Commission ("FCC").³

¹ *Oversight of the National Telecommunications and Information Administration*, 115th Cong. (2018), H. Comm. on Energy & Commerce, Subcomm. on Communications and Technology, <https://energycommerce.house.gov/hearings/oversight-national-telecommunications-information-administration/> (Mar. 6, 2018).

² Federal Trade Comm'n, *Privacy & Data Security Update: 2017*, available at https://www.ftc.gov/system/files/documents/reports/privacy-data-security-update-2017-overview-commissions-enforcement-policy-initiatives-consumer/privacy_and_data_security_update_2017.pdf

³ See, e.g. Marc Rotenberg, EPIC Executive Director, Testimony before the U.S. House Energy & Commerce Subcommittee on Communications and Technology, *Examining the EU Safe Harbor Decision and Impacts for Transatlantic Data Flows* (November 13, 2015), <https://epic.org/privacy/intl/schrems/EPIC-EU-SH-Testimony-HCEC-11-3-final.pdf>; Marc Rotenberg, EPIC Executive Director, Testimony before the U.S. House Energy & Commerce Subcommittee on Communications and Technology, *Communications Networks and Consumer Privacy: Recent Developments* (April 23, 2009), https://epic.org/privacy/dpi/rotenberg_HouseCom_4-09.pdf; Letter from EPIC to the U.S. House Committee on Energy and Commerce on FCC Privacy Rules (June 13, 2016), <https://epic.org/privacy/consumer/EPIC-FCC-Privacy-Rules.pdf>; Letter from EPIC to the U.S. Senate Committee on Commerce, Science, and Transportation on FTC Oversight (Sept. 26, 2016), <https://epic.org/privacy/consumer/EPIC-Letter-Sen-Comm-CST-FTC-Oversight.pdf>.

EPIC Statement
 House E&C Committee

1

NTIA Oversight
 March 5, 2018

Privacy is a Fundamental Right.

The recent Equifax data breach that exposed the personal information of more than 145 million Americans is the latest in a growing number of high-profile hacks that threaten the privacy, security, and financial stability of American consumers. Far too many organizations collect, use, and disclose detailed personal information with too little regard for the consequences. Further, there are massive privacy and security implications of the growing “Internet of Things.” Many IoT devices feature “always on” tracking technology that surreptitiously records consumers’ private conversations in their homes.⁴ Companies say that the devices rely on key words, but to detect those words, the devices must always be listening. Congress and the NTIA must work together to enact concrete consumer protections that:

- Promote Privacy Enhancing Techniques (PETs) that minimize or eliminate the collection of personal information.⁵
- Ensure routine security updates for IoT devices; and
- Carefully assesses IoT deployment for critical functions, including transportation, home security, and medical devices.

The NTIA’s multi-stakeholder processes for addressing these challenges simply do not work – they result in weak, voluntary self-regulatory regimes. Industry self-regulatory programs do not provide meaningful privacy protections.⁶ The NTIA should support a strong legal framework that protects American Internet users and promotes public safety.

The implications of Internet of Things for consumer privacy and security are far-reaching. If the NTIA fails to develop appropriate safeguards, the country will face growing risk.

We ask that this letter be entered in the hearing record. EPIC looks forward to working with the Subcommittee on Communications and Technology on these issues.

Sincerely,

Marc Rotenberg
Marc Rotenberg
EPIC President

Caitriona Fitzgerald
Caitriona Fitzgerald
EPIC Policy Director

Christine Bannan
Christine Bannan
EPIC Administrative Law and Policy Fellow

⁴ EPIC Letter to DOJ Attorney General Loretta Lynch, FTC Chairwoman Edith Ramirez on “Always On” Devices (July 10, 2015), <https://epic.org/privacy/internet/ftc/EPIC-Letter-FTC-AG-Always-On.pdf>.

⁵ See Comments of EPIC, *On the Privacy and Security Implications of the Internet of Things*, FTC File No. _____ (June 1, 2013), <https://epic.org/privacy/ftc/EPIC-FTC-IoT-Cmts.pdf>.

⁶ Comments of EPIC, *Multistakeholder Process to Develop Consumer Data Privacy Codes of Conduct*, Docket No. 120214135-2135-01 (Apr. 2, 2012), <https://epic.org/privacy/consumer/EPIC-NTIA-Comments-FINAL.pdf>; Comments of EPIC, *Protecting the Privacy of Customers of Broadband and Other Telecommunications Services*, WC Docket NO. 16- 106 (July 6, 2016), <https://epic.org/apa/comments/EPIC-FCC-Privacy-NPRM-Reply-Comments-07.06.16.pdf>.



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March 6, 2018

The Honorable Marsha Blackburn
 Chairman, House Energy and
 Commerce Committee Subcommittee
 On Communications and Technology
 2266 Rayburn House Office Building
 Washington, D.C. 20515

The Honorable Michael Doyle
 Ranking Member, House Energy and
 Commerce Committee Subcommittee
 On Communications and Technology
 239 Cannon House Office Building
 Washington, D.C. 20515

The Honorable Greg Walden
 Chairman, House Energy and
 Commerce Committee
 2185 Rayburn House Office Building
 Washington, D.C. 20515

The Honorable Frank Pallone
 Ranking Member, House Energy and
 Commerce Committee
 237 Cannon House Office Building
 Washington, D.C. 20515

Re: March 6 Oversight Hearing of the National Telecommunications and Information Administration

Dear Subcommittee Chairman Blackburn, Subcommittee Ranking Member Doyle, Committee Chairman Walden, and Committee Ranking Member Pallone:

I am writing on behalf of the Utilities Technology Council (UTC) regarding the Subcommittee on Communications and Technology's March 6 Oversight Hearing of the National Telecommunications and Information Administration (NTIA). Established in 1948, UTC is the global association representing energy and water providers on their needs related to the deployment of reliable and resilient information and communications technology (ICT). Energy providers use ICT networks to support the safe, reliable, and secure delivery of their essential services.

UTC applauds the Subcommittee for holding this important oversight hearing. As Subcommittee Chairman Blackburn said in her announcement of this hearing, this discussion will provide an opportunity for the Subcommittee and industry stakeholders to hear from NTIA Administrator David Redl about his priorities for the agency, particularly as they relate to spectrum.

NTIA has a number of responsibilities, including administering grant programs for broadband deployment, performing research telecommunications and engineering research, and much more. For energy providers, our interaction with NTIA is focused on spectrum allocation, as NTIA oversees spectrum allocation for the federal government.

For decades, utilities have owned, maintained and operated wireless communications systems to support mission-critical operations related to day-to-day reliability, storm response and restoration, and physical and cybersecurity. Spectrum is the lifeblood for utility wireless systems, and the need for spectrum access will only increase going forward. As the Subcommittee oversees NTIA's spectrum policies, we urge NTIA to continue to support access to spectrum by utilities, as well as for 5G services, the latter which could not function without the former.





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Nearly every federal government agency—the Department of Homeland Security, the Department of Defense, the Department of Energy, to name a few—recognize electric and natural gas utilities as among the most critical of all critical infrastructure industries. Our members meet, and often exceed, strict reliability requirements to keep the power on safely and reliably while at the same time planning for natural disasters and other hazards such as physical and cybersecurity attacks that could result in operational challenges. Spectrum is an essential element to our highly reliable electric infrastructure. Given the essential nature of our industry—along with NTIA’s mission of efficient spectrum use by the federal government—finding a mechanism to allow for spectrum sharing with utilities is an important initiative.

In fact, the government’s own research has identified the 406-420 MHz band as being lightly used and potentially ripe for partnership (“Report to the President: Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth,” Executive Office of the President, President’s Council of Advisors on Science and Technology, July 2012). UTC has therefore initiated discussions with NTIA regarding a public-private partnership in this band, where utilities would build out the band with trusted equipment manufacturers, and work with the few existing government incumbents in the band to ensure continued robust availability for them. We look forward to agreement on concrete next steps in the coming weeks. UTC is also promoting the use of this band for utilities in the international spectrum arena, working with our affiliates in Brazil, Europe, and Canada.

As this Subcommittee knows, spectrum needs across the country are growing exponentially. Utilities are well aware of this and recognize the government’s responsibility for allocating spectrum in ways that support the public interest. UTC stands ready to assist in this effort. Our organization has resources and subject-matter experts willing to provide Subcommittee members with any information or resources they need.

Again, UTC thanks the Subcommittee for holding this hearing. We appreciate the opportunity to submit this letter and look forward to working with all of you going forward.

Sincerely,



Joy Ditto
President, CEO of the Utilities Technology Council



GREG WALDEN, OREGON
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED FIFTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115
Majority (202) 225-2927
Minority (202) 225-3841
March 22, 2018

The Honorable David Redl
Assistant Secretary for Communications and Information
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

Dear Assistant Secretary Redl:

Thank you for appearing before the Subcommittee on Communications and Technology on Tuesday, March 6, 2018, to testify at the hearing entitled "Oversight of the National Telecommunications and Information Administration."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Friday, April 6, 2018. Your responses should be mailed to Evan Viau, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed to Evan.Viau@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,



Marsha Blackburn
Chairman
Subcommittee on Communications and Technology

cc: The Honorable Michael F. Doyle, Ranking Member, Subcommittee on Communications and Technology

Attachment



UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Communications
and Information
Washington, D.C. 20230

MAY 1 2018

The Honorable Marsha Blackburn
Chairman
Subcommittee on Communications and Technology
Committee on Energy and Commerce
House of Representatives
Washington, DC 20515

Dear Chairman Blackburn:

Thank you for the opportunity to testify on March 6, 2018 before the Subcommittee on Communications and Technology at the hearing entitled "Oversight of the National Telecommunications and Information Administration." I appreciate your forwarding additional questions for the record to me on March 22, 2018.

My responses to the questions are enclosed. If you or your staff have any additional questions, please do not hesitate to contact me or James Wasilewski, NTIA's Director of Congressional Affairs, at (202) 482-1840.

Sincerely,


David J. Redl

cc: The Honorable Mike Doyle, Ranking Member, Subcommittee on Communications and Technology

Enclosure

NTIA Reauthorization Hearing Questions for the Record

The Honorable John Shimkus

1. **The NTIA has the important role of representing U.S. interests on Internet governance matters. The Internet is a tremendous resource for people and businesses large and small to communicate, innovate, and conduct commerce. As we are unfortunately witnessing, however, it has become a tool for harassment, criminality, and espionage. Now perhaps more than any other time, we need transparency in the way the Internet operates. Only then can we realize the positive vision we all have for the Internet, while establishing mechanisms to prevent or hold accountable those who would use it for ill. This will require cooperation from online platforms, which have a responsibility – like all legitimate business – to help keep their corners of the neighborhood clean.**
 - a. **What actions can you take in your capacity as the advisor to the White House on information and technology policy and as the head of the NTIA to promote online platform responsibility, transparency, and accountability – including by registries, registrars, and others?**

I appreciate the serious concerns that you have raised. NTIA is actively engaging with stakeholders, both domestic and around the world, on a range of critical policy issues, including cybersecurity, Internet governance and broadband measurement. Among the questions that we will be considering are those relating to platforms as a general matter, and we will keep you informed as our thinking on this issue develops. With respect to registries, registrars and others involved specifically in the Internet's domain name system, a top priority for NTIA at the Internet Corporation for Assigned Names and Numbers (ICANN) is the preservation of the WHOIS service. This information is often the starting point for law enforcement agencies when investigating malicious online activity, and for private-sector and government actors seeking to protect critical systems from dangerous cyberattacks, which are growing more frequent all the time. Those on the front lines of botnet mitigation rely on WHOIS information to do their work effectively. WHOIS information is also valuable for combatting infringement and misuse of intellectual property, and for savvy consumers looking to ensure that the website they are visiting is legitimate. This is a simple service, but it is a cornerstone of trust and accountability for the Internet. As the U.S. Government's representative to the Governmental Advisory Committee (GAC) at ICANN, we have successfully included in GAC advice to the ICANN Board the necessity of DNS providers maintaining an accessible and useful WHOIS for a variety of legitimate purposes including law enforcement, cybersecurity, IP rights protection, and others.

- b. **There is growing concern that ICANN is on the precipice of needlessly diminishing online responsibility, transparency, and accountability in a manner that will threaten internet security and safety. To comply with the EU's General Data Protection Regulation, which takes effect in May, ICANN is proposing to require registrars and registries to remove from public access not just truly sensitive personal information, but also basic information like**

the email addresses that registrants are required to provide to obtain a domain name. This will not only hinder the ability of consumers to obtain responsive customer service on the Internet, but also frustrate even preliminary examinations into illicit online activity, such as cyber-attacks, theft of intellectual property, fraud, unlawful sale of drugs, child sex trafficking, and other criminal behavior. While I would not suggest that ICANN should allow unlimited publication of individual domain name holders' personal data, the GDPR does not require ICANN to withdraw basic information from public view and does not even apply to American registries and registrars offering service in the United States. Nor does it apply to information about companies – as opposed to individuals – yet ICANN is proposing to restrict access to data governing and not just “natural persons,” but also legal entities.

In light of these concerns, I was glad to see you say in your Puerto Rico ICANN 61 speech that “one of the top policy priorities for the United States in ICANN is the preservation of the WHOIS service,” that “the United States would encourage revisions to the model to permit access to the most amount of registration data as possible,” that [p]lans need to be put in place to ensure that users behind the already defined legitimate purposes – such as law enforcement, intellectual property enforcement, and cybersecurity – are not stymied in their efforts to serve the public interest,” and that “[t]he United States will not accept a situation in which WHOIS information is not available or is so difficult to gain access to that it becomes useless for the legitimate purposes that are critical to the ongoing stability and security of the Internet.”

2. Do you agree that basic information – like registrant email addresses – should remain in a publicly available WHOIS directory?
 - a. What steps can you take to ensure that basic WHOIS database information is general remains as robust and publicly accessible as possible?

Yes, NTIA agrees that basic information should and must remain in a publicly available WHOIS directory. As the U.S. Government's representative to the Governmental Advisory Committee (GAC) at ICANN, we have successfully included in GAC advice to the ICANN Board the necessity of maintaining an accessible and useful WHOIS for a variety of legitimate purposes including law enforcement, cybersecurity, IP rights protection, and others. This message has also been communicated to ICANN as they sought feedback from the community on their proposed GDPR compliance plan. Further, NTIA has engaged directly with the European Commission in expressing its views and concerns pertaining to the potential impact of GDPR on WHOIS and asked for their assistance to address those concerns. We also continue to engage with ICANN directly so that a solution can be found that maintains the WHOIS service to the greatest extent possible in the face of data protection and privacy regulations such as the European General Data Protection Regulation.

The Honorable Pete Olson

While additional spectrum will be critical for 5G and beyond, so will advancements in technology and innovation. Carriers and broadband providers will no doubt need to find creative ways to free up bandwidth to meet consumer needs in a 5G and beyond economy to account for the Internet of Things economy, autonomous vehicles, AR (augmented reality), VR (virtual reality) and new innovations that we have yet to hear about. A realistic 5G and beyond strategy will need to be creative and will not be a 'one-size fits all' solution. A 5G strategy will include spectrum but we know that there is only so much spectrum available for commercial usage. We'll need things like advanced software solutions, chipsets and other innovative technologies.

In addition to freeing up more spectrum, do you think any comprehensive 5G strategy will include other technologies like software and virtualization and advanced chipsets, among others?

Making 5G services a reality, which we all believe is critical for the American people, will require advances in technology and infrastructure availability, in addition to adequate spectrum. 5G networks and the associated applications will continually advance and require increasing performance capabilities. While an overarching strategy may help to facilitate the development of such technologies, the government will likely play less of a direct role and rather work to remove obstacles so the private sector can innovate.

The Honorable Bill Johnson

Assistant Secretary: It has come to my attention that you may be able to help work with ICANN in your capacity in some manner to resolve the long running situation affecting the accounting community and its application for the gTLD “.cpa”.

What insight are you able to share regarding how Congress can help them work through ICANN's arcane rules and procedures that seem to not help the one-time kind of applicant, such as the accountants?

The rules associated with ICANN's third round to expand the number of the new gTLDs in the Internet's domain name system were developed over seven years through its bottom-up multistakeholder process. This public process was open to any and all interested parties. As the U.S. Government's representative to the Governmental Advisory Committee (GAC) at ICANN, NTIA's efforts were focused on ensuring appropriate safeguards were put in place to protect consumers and intellectual property owners and ensure the needs of law enforcement were addressed. The program also included a variety of processes to evaluate applications and adjudicate between competing applicants.

For “.cpa” there were six applications filed by five groups, three of which are U.S. based. These competing applications continue to move through ICANN’s dispute resolution processes. While NTIA has no role in the evaluation of new gTLD applications and no way to adjudicate between competing U.S. based applicants, we continue to make ourselves available to any applicant that needs help or advice understanding the ICANN process.

Was there any progress made on this issue at the recent ICANN meeting in Puerto Rico?

While the “.cpa” issue was not on the official agenda of the recent ICANN meeting, NTIA did raise the need to resolve the issue in meetings with ICANN staff and Board members and met with representatives of the American Institute of Certified Public Accountants.

The Honorable Billy Long

As we discussed at the hearing, many of us on this committee have consistently supported the common-sense policy of auctioning 1675-1680 MHz for shared government-commercial use. We are pleased that this Administration's two proposed budgets both reflect a priority in seeing this policy through. Concerning the status of this effort, would you please clarify where we are in the process to auction this spectrum, beyond just that the National Telecommunications and Information Administration (NTIA) and the Federal Communications Commission (FCC) are coordinating?

Specifically, it is my understanding that the next step in the process is for the FCC to issue a Notice of Proposed Rulemaking (NPRM). As we head further into the second year of this Administration, I would like to understand in detail what concrete steps are required before the FCC can issue an NPRM?

The FCC will need to issue an NPRM to reallocate the band to permit the addition of commercial services. As an independent agency, the FCC controls the timing for any such action, and determines the steps it must take before issuing an NPRM.

And in your view, has NTIA provided the FCC everything it needs to issue an NPRM?

Yes. NTIA has provided its input to the FCC consistent with its spectrum management responsibilities.

Has NTIA signed off on the FCC issuing an NPRM?

NTIA has provided its input on the NPRM to the FCC consistent with its spectrum management responsibilities.

i. If not, has NTIA - under your leadership - received a draft of the NPRM for comment from the current FCC?

N/A

The Honorable Chris Collins

Last week you announced that NTIA, in coordination with the Department of Defense, has identified the 3450-3550 MHz band for potential repurposing for commercial wireless use. This is great news and shows great leadership. The band is particularly valuable because it is adjacent to the 3550-3700 MHz band that the FCC has already designated for mobile wireless use and can potentially be added to the 3700-4200 MHz band, which is also under consideration for commercial wireless operations. Unfortunately, the adjacent 3550-3700 MHz band is saddled with rules - restrictive power levels, among other things - that make it less useful than other commercial bands.

What are the plans that the Commission is looking at for this band, either by itself or in conjunction with other bands?

The work to understand the potential ability to repurpose the 3450 – 3550 MHz band for shared federal and non-federal use has just begun. The results of these initial studies will help inform NTIA and ultimately the FCC in developing any future specific plans for repurposing this band.

NTIA's most critical function is its management of Federal spectrum and the assignment of spectrum to Federal users. With your experience on this Committee, and now at NTIA, are there additional tools that would allow you to better facilitate spectrum negotiations with DOD, FAA, and Homeland Security?

NTIA has several “tools” at its disposal to facilitate its spectrum management and planning responsibilities that include consultative activities with the federal agencies. These include the well-established processes associated with NTIA’s inter-agency advisory bodies—spectrum certification and frequency assignment work performed in conjunction with the Interdepartment Radio Advisory Committee (IRAC) and development of policy-related recommendations from the Policy and Plans Steering Group (PPSG). It also includes the Spectrum Relocation Fund (SRF) that is used to pay for transitions of federal systems in bands already being made available for non-federal use, as well as for forward-looking agency studies to potentially identify additional bands pursuant to the Spectrum Pipeline Act of 2015. NTIA would leverage any additional tools that could help with our federal agency negotiations, including, for example, additional funding for and expansion of permissible uses of the SRF and the ability to lease federal spectrum to non-federal entities.

Ensuring effective, reliable, and interoperable communications between and among first responders was the goal in establishing FirstNet. Public safety's transition to commercial technologies like LTE will certainly help to achieve these goals. However, it is also important that new applications be developed and implemented to meet public safety's unique needs. What is NTIA doing to promote the development of an open, non-proprietary platform for public safety applications that will ensure critical applications are available and interoperable for all first responders regardless of the network they use?

As you know, the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. No. 112-96, Title VI, 126 Stat. 256 (codified at 47 U.S.C. 1401 et seq.)) (Act) requires that FirstNet ensure the establishment of a nationwide, interoperable public safety broadband network (NPSBN) and authorizes it to take all

actions necessary to meet this obligation. FirstNet must create this network based on a single, national network architecture to advance interoperable communications.

I am following carefully FirstNet's efforts to advance interoperability and will continue to work closely with FirstNet and its contractor, AT&T, to ensure that the NPSBN fulfills its role. With regard to your thoughts about promoting competition and interoperability across FirstNet and other public safety wireless networks, NTIA embraces your goal of making certain that first responders have the communications tools they need to perform their vital jobs, wherever those jobs take them.

While all 56 states and territories, including New York, have adopted FirstNet's plans for deploying its radio access networks within their boundaries, no first responders are obligated to subscribe to FirstNet's services. Thus, AT&T must compete for and retain all of their public safety customers, who have other wireless broadband alternatives from which to choose. In addition, FirstNet's strategy for maximizing interoperability includes leveraging, consistent with its statutory mandate, open, standards-based network solutions. Accordingly, consistent with its enabling statute, FirstNet included terms and conditions in its contract with AT&T to promote competition in both the equipment, applications, software development markets requiring that they be built to open, non-proprietary, commercially available standards. We support and intend to monitor closely the implementation of these contractual requirements to advance an interoperable public safety applications ecosystem.

The Honorable Peter Welch

It has come to my attention that certified public accountants have been struggling to obtain the control of the “.cpa” gTLD. I am concerned about the potential for consumer fraud and deception if such a domain is awarded in a manner that will confuse consumers about finding actual certified public accountants when online.

As the Administrator of the National Telecommunications and Information Administration, can you share your thoughts on this ongoing situation with “.cpa” gTLD?

NTIA as the U.S. Government's representative to the Governmental Advisory Committee (GAC) of the Internet Corporation for Assigned Names and Numbers (ICANN) continues to be a strong advocate for U.S. interests. While the agreed ICANN processes have yet to yield a decision regarding which of the five competing applicants will be allowed to operate “.cpa”, the group ultimately selected will be contractually required to implement certain consumer safeguards. These safeguards championed by NTIA, via the GAC, added obligations to all new gTLD operators, including the ultimate operator of “.cpa”, requiring Registration Agreements include a provision prohibiting Registered Name Holders, from among other things, fraudulent or deceptive practices and providing consequences for such activities including suspension of the domain name.

In addition, given the highly regulated nature of the certified public accounting industry and to address the specific concerns you raise, NTIA insisted that additional safeguards be required for the “.cpa” gTLD. These included contractual provisions that registrants possess any necessary authorizations, charters, licenses and/or other related credentials, and must report any material changes to their validity. Registry

operators must also consult with relevant national supervisory authorities or their equivalents regarding the authenticity of such credentials.

While NTIA has no role in the evaluation of new gTLD applications and no way to adjudicate between competing U.S. based applicants, we continue to make ourselves available to any applicant that needs help or advice understanding the ICANN process. While the “.cpa” issue was not on the official agenda of the recent ICANN meeting, NTIA did raise the need to resolve the issue in meetings with ICANN staff and Board members and met with representatives of the American Institute of Certified Public Accountants.