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OVERSIGHT OF THE NATIONAL TELECOMMUNICATIONS

AND INFORMATION ADMINISTRATION

TUESDAY, MARCH 6, 2018

House of Representatives

Subcommittee on Communications and

Technology

Committee on Energy and Commerce

Washington, D.C.

The subcommittee met, pursuant to call, at 10:00 a.m.,  
in Room 2123 Rayburn House Office Building, Hon. Marsha  
Blackburn 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.

26 Staff present: Jon Adame, Policy Coordinator,  
27 Communications & Technology; Jennifer Barblan, Chief Counsel,  
28 Oversight & Investigations; Mike Bloomquist, Deputy Staff  
29 Director; Karen Christian, General Counsel; Robin Colwell,  
30 Chief Counsel, Communications & Technology; Sean Farrell,  
31 Professional Staff Member, Communications & Technology; Adam  
32 Fromm, Director of Outreach and Coalitions; Elena Hernandez,  
33 Press Secretary; Bijan Koohmaraie, Counsel, Digital Commerce  
34 and Consumer Protection; Tim Kurth, Deputy Chief Counsel,  
35 Communications & Technology; Lauren McCarty, Counsel,  
36 Communications & Technology; Drew McDowell, Executive  
37 Assistant; Austin Stonebraker, Press Assistant; Evan Viau,  
38 Legislative Clerk, Communications & Technology; Hamlin Wade,  
39 Special Advisor, External Affairs; Everett Winnick, Director  
40 of Information Technology; Jeff Carroll, Minority Staff  
41 Director; David Goldman, Minority Chief Counsel,  
42 Communications and Technology; Jerry Leverich, Minority  
43 Counsel; Dan Miller, Minority Policy Analyst; and Tim  
44 Robinson, Minority Chief Counsel.

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45 Mrs. Blackburn. Good morning. Come on, guys. Good  
46 morning. All right. There we go. There we go.

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

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

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

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

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

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70 networks.

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

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

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

81 Of course, spectrum isn't the only priority NTIA has,  
82 although we know that it is your favorite. The NTIA is also  
83 at the forefront of coordinating Next Generation 911.

84 Just a few weeks ago, we celebrated the 50th anniversary  
85 of the first 911 call that was made in Haleyville, Alabama.  
86 Yet, we are still struggling to bring 911 into the 21st  
87 century.

88 It's unfortunate to hear that deployment of Next Gen 911  
89 services are being stymied by states that divert much-needed  
90 funding for non-911 purposes.

91 As NTIA and NHTSA administrator state grants are taking  
92 place, we need to ensure that there is adequate funding and  
93 it's used efficiently.

94 And while we are on the topic of funding, let's not lose

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95 sight of why we are here. As your oversight authority, it is  
96 our duty in Congress to make sure that you have the tools you  
97 need to succeed.

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

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

106 And with that, I yield the remainder of my time to Mr.  
107 Lance.

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

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

115 As the demand for more mobile data and high speeds  
116 continues to grow, it is critical that we make sure the  
117 federal government is using its spectrum efficiently and free  
118 up unused spectrum for commercial use, all while ensuring  
119 that agencies are able to fulfil critical missions.

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

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

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

128           In addition to spectrum management, you also oversee  
129 critical public safety matters related to the Next Generation  
130 911 and FirstNet.

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

135           Mrs. Blackburn. Gentleman yields back.

136           Mr. Doyle, you're recognized for five minutes for an  
137 opening statement.

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

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

144           During his time here, Mr. Redl spearheaded the

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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.]

Mr. Doyle. 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,

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170 and as you recently announced, figuring out how to transition  
171 additional spectrum to commercial use.

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

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

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

186 Having objective researchers and engineers who can work  
187 with federal stakeholders to identify ways to free up or  
188 share spectrum is critical for meeting our nation's wireless  
189 needs because navigating the tricky waters of interagency  
190 cooperation and coordination is difficult, at best.

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

194 Beyond spectrum, NTIA plays a key role as an interagency

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195 and multi stakeholder convener within the government and with  
196 commercial interest in civil society organizations.

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

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

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

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

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

219 While ICANN's multi stakeholder process can be

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220 cumbersome, I hope that NTIA can continue to work through the  
221 governmental advisory committee to protect our interest and  
222 work to maintain a globally unified and connected internet.

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

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

227 Mrs. Blackburn. We are on a roll this morning.

228 Mr. Walden.

229 The Chairman. Good morning, Madam Chair, and before we  
230 get started I want to wish your counsel there, Tim Kurth, a  
231 happy birthday, I understand. There you go.

232 [Applause.]

233 The Chairman. We won't sing to you. That'll be your  
234 present from me -- no singing.

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

238 [Laughter.]

239 The Chairman. Energy and Commerce have been leading the  
240 way to close the digital divide and for over a year now we  
241 have held hearings on broadband deployment and sought ways to  
242 incentivize build out and our Telecom Subcommittee, which  
243 you're intimately familiar with, has held legislative  
244 hearings on numerous infrastructure proposals this year and,

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245 last, they provide plenty of opportunity for the committee  
246 and NTIA to work together toward achieving this end and  
247 closing the digital divide in the country.

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

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

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

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

264 As you all recall, this committee held a hearing on  
265 broadband mapping just last June to discuss how we can better  
266 define a map granular broadband coverage and one of the  
267 proposals that flowed from that is Congressman Johnson's H.R.  
268 4810 with the support of Congressman Guthrie.

269 That gets things moving again at NTIA. So I am pleased

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270 that those efforts have already yielded some progress as the  
271 Trump administration is asking our friends at the  
272 Appropriations Committee for \$50 million for NTIA to get back  
273 into this very important work.

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

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

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

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

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

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

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

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

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

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

313 With that, I'll yield back.

314 Mrs. Blackburn. Gentleman yields back.

315 Mr. Pallone, you're recognized for five minutes.

316 Mr. Pallone. Thank you, Madam Chairman.

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

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320 important.

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

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

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

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

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

339 And I am particular interested in hearing how NTIA will  
340 handle cybersecurity as we move to more robust Next  
341 Generation wireless networks and the Internet of Things.

342 The administration itself has pointed out how vulnerable  
343 our wireless networks will be if the government does not do  
344 more to protect them and NTIA has an important role in

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345 figuring out how to make sure that they are secure.

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

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

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

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

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

369 That's why the LIFT America Act would direct NTIA to

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370 handle broadband infrastructure funding and I would like to  
371 hear how Administrator Redl would handle this responsibility.

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

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

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

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

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

391 Mrs. Blackburn. The gentleman yields back.

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

394 We appreciate your taking the time to come and we

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395 appreciate your testimony, and at this time I yield you five  
396 minutes for -- I recognize you for five minutes for an  
397 opening statement.

398 STATEMENT OF THE HONORABLE DAVID REDL, ASSISTANT SECRETARY  
399 FOR COMMUNICATIONS AND INFORMATION, NATIONAL  
400 TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, U.S.  
401 DEPARTMENT OF COMMERCE

402

403 Mr. Redl. Thank you.

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

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

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

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

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

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

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

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

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

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

446 In addition to our spectrum work at NTIA, we work  
447 extensively to represent U.S. interests before consensus-

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448 based organizations like ICANN and the International  
449 Telecommunication Union.

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

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

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

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

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

470 Whether it's NIST's work on the cybersecurity framework  
471 or NTIA's work on multi stakeholder processes, under  
472 Secretary Wilbur Ross' leadership, the department is the

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473 commercial internet's voice within the executive branch.

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

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

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

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

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

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

494 Late last year, one of NTIA's open multi stakeholder  
495 processes produced agreement on documents focused on IOT  
496 security and patching and we continue to engage with the IOT  
497 and security communities to promote the security of the

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498 devices on which we are increasingly reliant.

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

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

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

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

514           [The prepared statement of Mr. Redl follows:]

515

516 \*\*\*\*\*INSERT 1\*\*\*\*\*

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

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

523 As we are continuing this transition to Next Gen 911 and  
524 looking at the PSAPs across the country that are responsible  
525 for their service areas with oversight from their state, I  
526 want you to talk a little bit more about how NTIA is going to  
527 help facilitate a successful nationwide transition to the  
528 Next Gen 911 and then also, as looking at the money, how you  
529 are going to make certain that these federal dollars are  
530 pointed and explicitly used, and then I am going to come to  
531 you for a second question on IANA.

532 So short responses welcome.

533 Mr. Redl. Thank you, Chairman.

534 On Next Generation 911, as you're aware, this is a  
535 shared responsibility that NTIA has through our coordination  
536 that we work together with our colleagues at the National  
537 Highway Traffic Safety Administration.

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

541 We are in the final stages of coordinating that process

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542 through the executive branch and are optimistic that we will  
543 be able to have those grants out to companies and groups that  
544 are working on 911 policy by the end of this calendar year.

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

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

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

561 Mr. Redl. Sure.

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

566 I know a lot has been made about what commitments were

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567 made and what my personal opinions are on the IANA  
568 transition. So I appreciate the opportunity to sort of clear  
569 the air.

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

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

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

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

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

591 Mr. Redl. I am sorry. What spectrum?

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592 Mrs. Blackburn. Spectrum.

593 Mr. Redl. Just spectrum in general?

594 Mrs. Blackburn. Yes.

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

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

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

611 Mrs. Blackburn. The gentleman yields back.

612 And Mr. Doyle, you're recognized for five minutes.

613 Mr. Doyle. Thank you, Madam Chair.

614 I am concerned about the FCC. It seems they have so  
615 drastically walked away from their role of protecting  
616 American public's communication networks from cyberattack. I

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617 think the FCC's failure in this area is part of the reason we  
618 saw that bizarre 5G nationalization memo come out of the  
619 National Security Council.

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

626 Mr. Redl. Ranking Member Doyle, I thank you for the  
627 question.

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

630 The president's national security strategy listed 5G  
631 security as a national security threat and so across the  
632 federal government we are all trying to coordinate defined  
633 ways to push security to the forefront to continue to make  
634 security of our communications networks a priority.

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

640 Mr. Redl. That's correct.

641 Mr. Doyle. And can you also just commit to the

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642 bipartisan leadership of this committee that you'll just keep  
643 us apprised of any process NTIA might be running on revising  
644 ICANN transition?

645 Mr. Redl. Of course we will be responsive to the  
646 committee.

647 Mr. Doyle. Thank you.

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

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

656 In your view, should we include grant making authority  
657 for the NTIA and the broadband deployment program in the LIFT  
658 America Act.

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

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

666 If Congress were to give us that authority then

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667 certainly we would make the best use of it.

668 Mr. Doyle. So NTIA's Institute for Telecommunication  
669 Sciences is instrumental to your mission of coordinating  
670 federal spectrum use and working with federal stakeholders on  
671 clearing bands and sharing them.

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

675 Mr. Redl. You know, Mr. Doyle, I am particularly proud  
676 of the work that ITS does. I think they are a really unsung  
677 part of the federal government.

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

681 They work tirelessly and are a critical part of making  
682 sure that as we look to repurpose more spectrum that we have  
683 accurate and actionable data on how federal and nonfederal  
684 systems will work together.

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

688 Mr. Doyle. Thanks.

689 As I mentioned in my statement, I think NTIA has done  
690 good work in bringing stakeholders together from inside and  
691 outside of government to address these complex and emerging

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692 topics.

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

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

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

705 Mr. Doyle. Thank you. I wish you well.

706 Mr. Redl. Thank you, sir.

707 Mr. Doyle. Madam Chair, I yield back.

708 Mrs. Blackburn. Gentleman yields back.

709 Mr. Walden, you're recognized for five minutes.

710 The Chairman. Thank you very much, Madam Chair.

711 It its fiscal year 2019 budget request, NTIA asked the  
712 congressional or for congressional authorization to negotiate  
713 leases with private entities to expand their access to  
714 federal spectrum. It's a novel idea.

715 Can you elaborate on how NTIA leases would differ from  
716 traditional licenses and should a leaseholder have an

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717 expectation of automatic renewal of a lease?

718 Mr. Redl. Thank you, Mr. Chairman.

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

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

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

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

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

741 But we are really excited about the prospect of having

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742 more tools to bring to make spectrum available for commercial  
743 use.

744 The Chairman. And I want to commend you again on your  
745 work to identify government spectrum that can be potentially  
746 cleared and made available for auction. It's a ongoing quest  
747 we share -- a goal to achieve. And so I want to commend you  
748 on that.

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

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

756 Mr. Redl. The SRF -- the Spectrum Relocation Fund --  
757 has been probably the most critical tool that we have had to  
758 provide incentives to agencies to find ways to be more  
759 efficient.

760 The changes that were originated in this committee in  
761 2012 and again in 2015 have made real improvements to our  
762 ability to make that money available to agencies so that the  
763 individual agencies don't bear the risk up front of the  
764 potential for relocation.

765 We are continuing to look at ways to improve the SRF.  
766 The SRF is why we were able to make the announcement on 3450

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767 to 3550 and so many of the other projects we are working on  
768 to bring spectrum to market. So anything Congress can do to  
769 bolster the SRF is certainly welcome.

770 The Chairman. And speaking of auctions, as you know, in  
771 the RAY BAUM'S Act, we fix the issue regarding deposit of  
772 proceeds. How important is that fix to allowing auctions to  
773 go forward?

774 Mr. Redl. Well, that's an issue for the FCC chairman.  
775 I mean, that is -- Section 309(j) of the Communications Act  
776 is their venue and not mine.

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

780 The Chairman. Okay.

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

786 Mr. Redl. More -- I mean, no federal employee has every  
787 said, no, I would like less flexibility in how I do my job,  
788 and I am certainly not going to be the first.

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

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792 The Chairman. I appreciate your candor on both points.

793 [Laughter.]

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

796 Mrs. Blackburn. Gentleman yields. Mr. --

797 The Chairman. Before I do that, could we recognize the  
798 assistant secretary's wife who is here -- Amy Redl, right  
799 there in the front row. Delighted.

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

801 [Laughter.]

802 The Chairman. Yes, I'm in trouble now.

803 [Applause.]

804 Mrs. Blackburn. We are glad that she is here to witness  
805 this because we know that she will critique him.

806 [Laughter.]

807 The Chairman. As she should.

808 Mr. Doyle. I think she's good for him.

809 Mrs. Blackburn. Yes, and she's from Pittsburgh.

810 Mr. Doyle. And those Pittsburgh girls are tough.

811 Mrs. Blackburn. That's right. Making Mr. Doyle's day.  
812 Okay.

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

815 Ms. Clarke. Thank you very much, Madam Chair, and I  
816 thank our ranking member as well, and let me add my voice to

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817 those who said you made a very smooth transition into this  
818 position and I commend you for the work that you're doing.

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

822 And because my bill became law, the federal government  
823 and the NTIA gained access to new research and development  
824 funding to help free up federal spectrum used by the American  
825 people.

826 NTIA recently announced that it will study how to make  
827 100 megahertz of spectrum available for use in 5G networks.  
828 Can you explain how the availability of research and  
829 development funding stemming from my Spectrum Pipeline Act is  
830 helping to aid this effort?

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

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

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842           So it is part of the reason that we were able to make  
843 3450 to 3550 announcement as a candidate band and thank you  
844 for that help.

845           Ms. Clarke. Very well.

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

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

854           For its part I applaud the work that NTIA's BroadbandUSA  
855 office to promote smart cities. This work spans both  
856 Democratic and Republican administrations and includes  
857 initiatives like providing toolkits to help communities use  
858 partnerships to build smart cities and hosting webcasts to  
859 help communities better understand why broadband is necessary  
860 for making this government smarter -- their government  
861 smarter.

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

865           Mr. Redl. I mean, I have spent my entire career trying  
866 to advance communications and technology. So it's a bit

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867 self-serving.

868 But I feel like this is an area where we have been able  
869 to produce a lot of gains for folks, whether they are in  
870 smart cities or rural areas, whether they are low income or  
871 wealthy, and I continue to believe that that's the case.

872 I thank you for recognizing the hard work that the  
873 Department of Commerce is doing on these issues. I think  
874 it's important to note that in addition to the hard work that  
875 the BroadbandUSA team is doing our sister agency NIST is also  
876 doing a lot of work on smart city and really developing some  
877 of the standards and some of the frameworks that are going to  
878 be critical to this work, going forward.

879 Ms. Clarke. And can you commit that promoting the  
880 growth of secure and resilient smart cities across our nation  
881 will be a priority of yours during your time leading the  
882 NTIA?

883 Mr. Redl. We are working on it now and we plan to  
884 continue working on it.

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

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

891 You know, we are -- we are doing as much as we can

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892 within our budget and we will continue to make the most we  
893 can to do more with less in that budget.

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

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

902 I think we are looking at NTIA across all of the federal  
903 assets -- all of the federal spectrum holdings -- to see  
904 where there are opportunities to move forward, where there  
905 are opportunities to be more efficient, to consolidate  
906 operations, and we would love to continue working with your  
907 office and with other members as you look at different bands  
908 that are going forward.

909 Ms. Clarke. Very well. And does NTIA have any plans to  
910 initiate new multi stakeholder processes to address some of  
911 the issues surrounding internet policy today? If so, what  
912 are the topics to be examined?

913 Mr. Redl. So we are continuing to flesh out how we are  
914 going to approach these issues and as we work our way through  
915 the interagency process because most internet issues, while  
916 NTIA has a very strong role in them, involve coordination

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917 across the federal government.

918 We will certainly keep the committee apprised as we  
919 drive forward on them.

920 Ms. Clarke. Very well. Much continued success to you.

921 Mr. Redl. Thank you, ma'am.

922 Ms. Clarke. Thank you, and I yield back, Madam Chair.

923 Mrs. Blackburn. Gentlelady yields back.

924 Mr. Lance, you're recognized for five minutes.

925 Mr. Lance. Thank you, Chairman.

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

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

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

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

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942 Mr. Redl. Well, Mr. Lance, thank you for giving me the  
943 recognition. But I can't take a position on it. The  
944 administration doesn't have a formal position on the bill.

945 That being said, I really applaud all the work that's  
946 being done in Congress and the attention that's being paid to  
947 spectrum at this point.

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

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

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

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

965 Mr. Lance. Thank you. I want to continue to work with  
966 you on this issue and I hope that we are able to bring this

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967 matter to fruition.

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

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

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

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

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

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

991 The challenges are what they always are. These bands

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992 have incumbent users and the FCC has a tough challenge ahead  
993 of it trying to find ways to balance the rights of those  
994 incumbent users with the opportunities, moving forward.

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

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

1000 Mrs. Blackburn. The gentleman yields back.

1001 Ms. Matsui, you're recognized for five minutes.

1002 Ms. Matsui. Thank you very much, Madam Chairman, and  
1003 welcome. It's good to see you back here in another role.

1004 I also want to talk about the spectrum. As you know,  
1005 Representative Guthrie and I have been focused on initiatives  
1006 for federal entities to share or relocate their spectrum-  
1007 dependent systems allowed for commercial use.

1008 Increasing the probability of sharing or relocating  
1009 federal spectrum is often a multi-phase multifaceted strategy  
1010 from research and development to planning to accommodate  
1011 sharing our new spectrum assignments.

1012 I commend your work with DOD at identifying 100  
1013 megahertz of spectrum for potential repurposing for wireless.  
1014 Do you have any thoughts on what incentives might be most  
1015 beneficial for federal entities, whether a uniform approach  
1016 across all federal entities is possible?

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1017 Mr. Redl. Well, thank you, Ms. Matsui.

1018 Thank you for the commendation on the work. I would be  
1019 remiss if I didn't note that getting to yes on that 100  
1020 megahertz required the hard work of a ton of folks across the  
1021 federal agencies.

1022 And that's what's interesting about doing federal  
1023 spectrum work is that it is rare that there is a band where  
1024 we don't have multiple uses across multiple geographies and  
1025 multiple places within the time domain.

1026 And so every band is a unique challenge. To that end,  
1027 providing incentives is not a one-size-fits-all approach. So  
1028 to the extent that Congress can continue to provide us with  
1029 tools to address each one of these users individually and  
1030 address their concerns with making sure their systems are not  
1031 impacted by any potential move, we would welcome that  
1032 conversation.

1033 Ms. Matsui. Okay. So there is not one approach at all  
1034 so there might be targeted solutions over every individual  
1035 agency?

1036 Mr. Redl. Yes.

1037 Ms. Matsui. Okay. Great.

1038 Making more spectrum available for commercial use and  
1039 new technologies will be critical to ensuring we remain the  
1040 global leader in 5G deployment.

1041 As you work to identify new bands that support new

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1042 generation broadband networks, it is also important that we  
1043 consider opportunities to use commercial bands more  
1044 efficiently.

1045 I am mindful of the ongoing work towards technical  
1046 solutions to terrestrial services in the L-band. What are  
1047 your thoughts on how we could push forward on spectrum  
1048 proceedings such as the L-band that protects incumbents from  
1049 interference and accommodate new spectrum use cases?

1050 Mr. Redl. So that's at the heart of what we do and the  
1051 L-band, perhaps the most well known example of trying to do  
1052 L-band sharing, is trying to find ways for the proposal  
1053 before the FCC for Ligado to use spectrum without adversely  
1054 impacting the global positioning system.

1055 NTIA spends a lot of time working across the federal  
1056 agencies to try to find ways to get to yes. But getting to  
1057 yes is going to mean finding ways to protect GPS without  
1058 having to make drastic changes.

1059 We are waist deep in that, to put it bluntly, and we are  
1060 going to continue driving forward on it. We think there is a  
1061 lot of work that's been done to figure out the technical  
1062 characteristics and there is a lot of work yet to be done to  
1063 get everybody at the table to yes. But it's something that  
1064 we are committed to.

1065 Ms. Matsui. Okay. Thank you.

1066 I applaud the FAA's interagency Spectrum Efficient

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1067 National Surveillance Radar, better known as SENSAR  
1068 feasibility study. The research and development for this  
1069 initiative provided under the Spectrum Pipeline Act is  
1070 focused on consolidating existing surveillance radar used to  
1071 track aircraft and weather.

1072 As you know, this initiative would make a minimum of 30  
1073 megahertz of spectrum in the 1300 to 1350 megahertz band  
1074 available. How could we be helpful in evaluating possible  
1075 solutions that will make the spectrum available?

1076 Mr. Redl. Well, we are currently in the process of  
1077 going through that. We are acutely aware of the deadlines in  
1078 the Spectrum Pipeline Act and are working actively across the  
1079 federal government on the SENSAR system to try and find ways  
1080 to get to yes.

1081 What can Congress do? Continue to support us in this  
1082 work. You know, we have a lot of work to do. Those are  
1083 systems that are critically important to national security.  
1084 And so your continued support in trying to help keep  
1085 everybody at the table and driving towards consensus is much  
1086 appreciated.

1087 Ms. Matsui. So it's continued effort, particularly,  
1088 encouraging other federal entities to look at their spectrum  
1089 systems to evaluate where they could be consolidated,  
1090 modernized, or otherwise allowed for sharing.

1091 So it's just continued work to try to find that special

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1092 little nugget that will move us forward then?

1093 Mr. Redl. Yes. Figuring out the puzzle pieces of  
1094 making spectrum work is what, you know, like I said, a good  
1095 half of NTIA's employees do every day, working to figure out  
1096 how to make all those authorizations work collectively  
1097 together in a way that gets our national mission done but  
1098 also makes spectrum available for commercial services.

1099 We appreciate the support. We appreciate the ongoing  
1100 dialogue with this committee that has been so engaged on  
1101 spectrum. So thank you so much.

1102 Ms. Matsui. Well, thank you very much for your dialogue  
1103 and I appreciate -- and I do appreciate working with you.  
1104 Thank you.

1105 I yield back.

1106 Mrs. Blackburn. Gentlelady yields back.

1107 Mr. Latta, you're recognized for five minutes.

1108 Mr. Latta. Thank you, Madam Chair, and Mr. Assistant  
1109 Secretary -- David, welcome back. Good to see you.

1110 In my role as the chair of the Digital Commerce and  
1111 Consumer Protection Subcommittee, we have done great work on  
1112 clearing the regulatory path to self-driving vehicles.

1113 We also made a clearer path for increased access to  
1114 spectrum. It's going to be the new wireless 5G tech networks  
1115 that drives some technology solutions supporting self-driving  
1116 cars.

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1117           Would you tell me how much more spectrum 5G networks we  
1118 will need and do you have any time frame within which we need  
1119 to make available a certain amount of spectrum to ensure the  
1120 advancement of self-driving cars become a reality?

1121           Mr. Redl. Mr. Latta, I wish it was a question that lent  
1122 itself to a simple answer but it doesn't. We are constantly  
1123 reevaluating how much spectrum is needed both for government  
1124 operations and for commercial operations and that's the heart  
1125 of our spectrum mandate.

1126           Self-driving cars are a unique mission but they are  
1127 another mission, and so as we look at all the things that we  
1128 are asked to accommodate we are working across the federal  
1129 government with our colleagues at the Department of  
1130 Transportation and certainly with our FCC colleagues to try  
1131 and figure out ways to make this a reality.

1132           Most of the self-driving car systems that have been  
1133 considered to date are a hodgepodge of different systems. WE  
1134 don't anticipate that changing.

1135           The spectrum at 5.9 that has been allocated to the  
1136 National Highway Traffic Safety Administration is part of  
1137 that puzzle and we certainly look forward to continuing to  
1138 engage with them to try and help self-driving cars become a  
1139 reality.

1140           Mr. Latta. Okay. Well, thank you.

1141           Also, with tax season upon us and fraudulent filings on

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1142 the rise, I've been concerned with an issue faced by a lot of  
1143 the certified public accountants out there in how the  
1144 Internet Committee for Assigned Names and Numbers manages the  
1145 award of generic top-level domains.

1146 I've highlighted one particular example that is -- that  
1147 is one of my concerns which involves how the CPA  
1148 organizations were not awarded the dot cpa domain.

1149 Would you share any thoughts or insights about how ICANN  
1150 manages the domain name process and if you are able to rise  
1151 your general specific concerns or observations with them  
1152 directly?

1153 Mr. Redl. Sure, and thank you, Mr. Latta. I am very  
1154 familiar with the dot cpa issue both from my time here and  
1155 now my time at NTIA.

1156 Certified public accountants had applied through --  
1157 excuse me, through ICANN's process for the generic top-level  
1158 domain dot cpa and that has been an ongoing process for  
1159 quite some time.

1160 My staff is engaging actively with the CPAs to try and  
1161 find a resolution. As our role on the ICANN Governmental  
1162 Advisory Committee, we will stand up for U.S. interests and  
1163 in this case this is one of those interests.

1164 ICANN is holding one of its meetings next week in Puerto  
1165 Rico. I plan to be in attendance and I have a scheduled  
1166 meeting with the CPAs to try to see if we can figure out a

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1167 way to get this resolved through the ICANN process as  
1168 expeditiously as possible.

1169 Mr. Latta. That would be great. Thank you.

1170 In terms of the next steps in broadband mapping, what do  
1171 you propose can be done about identifying locations unserved  
1172 by broadband service?

1173 You know there has been a lot of work done by this  
1174 subcommittee and also with the working group concerned about  
1175 broadband out there, especially in our rural areas.

1176 Have you identified other government agencies' processes  
1177 or public utilities that can help you geolocate in those  
1178 target specific unserved addresses or locations to better  
1179 understand the demand in those more remote parts of our  
1180 country?

1181 Mr. Redl. Sure. So the president's request for  
1182 additional funding for NTIA for mapping is not just to  
1183 produce a map but also to produce an assessment of broadband  
1184 capabilities and provide a tool for policy makers both here  
1185 on the Hill and across the executive branch to better target  
1186 the funds that are allocated to broadband.

1187 Our approach, should we have the additional funding,  
1188 would be to not only look at the existing data sets but go to  
1189 try and find additional data sets. By overlaying that data  
1190 across different commercial products, you're able to take a  
1191 look and see where there are discrepancies and typically that

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1192 is the way you figure out where you need to do validation.

1193 We have had a lot of experience doing validation of data  
1194 and we have an extensive set of relationships through our  
1195 State Broadband Leaders Network with folks at the state and  
1196 local level who have continued the mapping work at the state  
1197 level throughout the last couple of years.

1198 Minnesota is a great example of that. They've continued  
1199 doing this mapping work, and incorporating that data -- that  
1200 boots-on-the-ground validated data -- would be part of what  
1201 we would like to do if we are, again, put into the job of  
1202 doing mapping.

1203 Mr. Latta. Well, thank you. And, again, it's really  
1204 important as you go forward to always remember that, looking  
1205 at the unserved versus the underserved, because there is a  
1206 lot of our areas in our districts that are totally unserved  
1207 right now. So I appreciate that.

1208 Madam Chair, my time has expired and I yield back.

1209 Mrs. Blackburn. Gentleman yields back.

1210 Ms. Eshoo, you're recognized for five minutes.

1211 Ms. Eshoo. Thank you, Madam Chairwoman.

1212 Welcome, Mr. Administrator. It was David. Now it's Mr.  
1213 Administrator.

1214 [Laughter.]

1215 Ms. Eshoo. It's great to see you here. Congratulations  
1216 to you, and it's wonderful that your wife is here as well. I

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1217 can see the pride in her smile.

1218           You know that the years that you've been with us on the  
1219 committee that I have pressed and pressed and pressed on  
1220 unlicensed spectrum because that really is the innovation --  
1221 the platform for innovation.

1222           So in my view, it's important to have unlicensed  
1223 spectrum and low, mid, and high bands the same way we do for  
1224 licensed in low, mid, and high bands because they have  
1225 different use cases, and this is the case with wi-fi  
1226 operations.

1227           Is NTIA studying any bands below 6 gigahertz that are  
1228 promising for unlicensed, giving more valuable bands below 6  
1229 gigahertz away for commercial use?

1230           I mean, I think that we need to know what your thinking  
1231 is on that. And are you willing to commit to that some of  
1232 this sub 6 gigahertz bands will be designated for unlicensed?

1233           Mr. Redl. So, I mean, I'd love to be able to make that  
1234 assurance but NTIA doesn't make those calls. So I think it's  
1235 important to note that --

1236           Ms. Eshoo. Who does? Who does?

1237           Mr. Redl. -- that the decision of whether licensed or  
1238 unlicensed allocations are made is an FCC determination.  
1239 What we are doing at NTIA is looking at all of the federal  
1240 frequencies and trying to find ones for which we can make  
1241 commercial use available and to nonfederal use available. We

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1242 are agnostic about this.

1243 Ms. Eshoo. Is there any -- is there any consultative  
1244 role that you play with the FCC on this?

1245 Mr. Redl. Of course, and as the --

1246 Ms. Eshoo. And so what would your conversation sound  
1247 like?

1248 Mr. Redl. So we haven't taken a firm position. But I  
1249 think you know personally that I have said before that we  
1250 believe in a balance of license and unlicensed and that's the  
1251 way that NTIA has looked at things in the past.

1252 Going forward, the up side to the fact that we are now  
1253 looking at a broader swath of spectrum than we were in the  
1254 past is that one of the biggest challenges we had to do we  
1255 make it licensed or do we make it unlicensed was scarcity.

1256 As we look at high band spectrum, we have so much more  
1257 available that it becomes easier to find ways to make some  
1258 available for both uses and I certainly think there is a role  
1259 for both, as we go forward, and we will continue to consult  
1260 with the FCC and make sure that we are pushing that forward.

1261 Ms. Eshoo. Well, it sounds somewhat promising.  
1262 Somewhat.

1263 [Laughter.]

1264 Ms. Eshoo. I have made it a point in my district to  
1265 meet with the PSAPs throughout the -- you know, each  
1266 community and I did that I think a week or 10 days ago in a

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1267 smaller community in my congressional district but  
1268 nonetheless the importance of that -- of that center.

1269           It was very interesting to me when I asked them if they  
1270 have had any communication from the federal government on  
1271 anything. And you know what? They haven't. They simply --  
1272 they said there isn't any outreach. There isn't anything.

1273           And I think that we need to be in communication with  
1274 them. I know it's been six years since the Middle Class Tax  
1275 Relief Job Creation Act was signed into law. There hasn't  
1276 been a single grant that has been put out there.

1277           But they need these resources. They need these  
1278 resources. They need a partner. They need a federal  
1279 partner.

1280           Now, I know that someone else asked about it and that  
1281 you went through when you anticipate the grants being granted  
1282 or -- the grants being granted?

1283           Mr. Redl. Yes, ma'am. So I've been on this job for a  
1284 little over three months and I know how much work you  
1285 personally put into those provisions in the Middle Class Tax  
1286 Relief and Job Creation Act and we have made it a priority to  
1287 get that moving.

1288           Ms. Eshoo. Now, OMB has to -- it's over at OMB now?

1289           Mr. Redl. So it is -- yes, it is in the clearance  
1290 process. We had -- so it's not exclusively within our  
1291 purview, as you know. It's a shared responsibility between

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1292 the Department of Commerce and the Department of  
1293 Transportation.

1294 So Commerce and Transportation have been working to  
1295 clear both of their respective processes and then the  
1296 document has to be cleared by OMB.

1297 We are in the process of making that happen and we are  
1298 hopeful we will get it out the door very soon.

1299 Ms. Eshoo. So what's the next step after very soon?

1300 Mr. Redl. The next step after that is that will  
1301 establish rules for a grant program and we will be then  
1302 taking applications for grants from interested parties to  
1303 improve Next Generation 911 services.

1304 Ms. Eshoo. Are you going to go out there and kind of  
1305 wave the flag and say, we have \$115 million, which is not a  
1306 lot of money when you divide it by 50 states and all the  
1307 PSAPs. We have, what, 6,000, approximately, PSAPs --

1308 Mr. Redl. Yes.

1309 Ms. Eshoo. -- in the country? I think that we -- I  
1310 think we need to really be aggressive about this. But you  
1311 know what?

1312 If they don't hear from us they need to be prepared to  
1313 put in for whatever they are thinking they need to put in for  
1314 and I think that you need to take a lead on that.

1315 It's -- I didn't -- I left this PSAP encouraged because  
1316 of all the things that they are doing. They are working so

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1317 hard and working very smart. But that they don't know that  
1318 anything exists 3,000 miles away is not very good.

1319 So I think that you have -- there is some work to be  
1320 done on that. And I think that today -- if I might say this  
1321 -- that this afternoon we are going to be taking up the RAY  
1322 BAUM'S Act -- you know, how life goes on.

1323 He's passed on. He would be very proud that you're here  
1324 today in your new role and I'll just end on that note.

1325 Thank you.

1326 Mrs. Blackburn. Gentlelady yields back.

1327 Mr. Guthrie, you're recognized.

1328 Mr. Guthrie. Thank you, Madam Chairman, and that is a  
1329 great tribute to ray in the RAY BAUM'S Act and then an  
1330 acronym to come up with the RAY BAUM'S Act that is just --  
1331 it's important and I know he would be so proud as just to  
1332 finish what my friend from California would say.

1333 Speaking of another friend from California, Ms. Matsui,  
1334 so Doris and I -- Ms. Matsui and I have worked on the Federal  
1335 Spectrum Incentives Act to provide financial incentive to  
1336 government agencies to relocate or share their spectrum  
1337 licenses, which are very familiar -- you're very familiar  
1338 with, and given that one of the incentives included in the  
1339 bill which would allow agencies to use funds to offset  
1340 sequestration, and now that we have a two-year budget  
1341 agreement, are there ways to consider updating the bill and

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1342 whether in terms of how auctions proceeds could be used or  
1343 otherwise -- for proceeds to be used.

1344 And what about allowing agencies to use funds to  
1345 purchase equipment or other things? How would you just touch  
1346 on updating that act?

1347 Mr. Redl. Mr. Guthrie, you know, I think -- as I said  
1348 earlier, having as many tools as possible and reducing the  
1349 friction as much as possible for federal agencies that are  
1350 being asked to relocate their systems while maintaining their  
1351 existing mission profile is something that we should always  
1352 be considering.

1353 The challenge with relocating these systems is it's not  
1354 like you can simply shut them off and stop doing the job.  
1355 These agencies have to maintain mission readiness throughout  
1356 the entire process. It's a long process and it's a long and  
1357 costly process.

1358 So anything we can do to make sure that we are not  
1359 burdening our agencies unduly is welcomed.

1360 Mr. Guthrie. All right. Thank you.

1361 And one other issue that we have discussed today is the  
1362 National Broadband Map. I know you talked some of that with  
1363 Mr. Latta.

1364 First, I am glad to see a budget request that includes  
1365 mapping as I believe NTIA is the best place to house it. In  
1366 my district, census blocks are too big to perform 477 data to

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1367 be useful because in the rural areas, even a few miles of my  
1368 city of Bowling Green, which is the home of Connected Nation,  
1369 who's represented here as well, which is a growing southern -  
1370 - like one of the new South growth cities -- but if you could  
1371 just -- fastest growing city in the state -- if you just get  
1372 out -- right outside of our city limits there is access to  
1373 broadband.

1374         Some development and being able to move forward is kind  
1375 of limited to broadband. That's a big county issue with our  
1376 County Fiscal Quarter Counting Commission, as most people  
1377 call it. And so it's a big concern not just in rural rural  
1378 Kentucky but just outside of growth Kentucky.

1379         So there is a lot of information we need. Census maps -  
1380 - census tracks just aren't enough. I know you talked with  
1381 Mr. Latta, but have you talked about getting granular service  
1382 availability data from providers?

1383         Mr. Redl. So in addition to what we would like to do if  
1384 we were given the new appropriation with additional data  
1385 sets, NTIA recently filed comments at the FCC expressing the  
1386 administration's position on how to improve the FCC's 477  
1387 data and these are the issues we looked at.

1388         And, essentially, our comments broke down to say there  
1389 are two things you need to improve. You need to improve  
1390 accuracy and you need to improve granularity. But also, we  
1391 need to balance the need for increased accuracy and

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1392 granularity with the burden that we are placing on filers.  
1393 And I don't envy the FCC in striking that balance but we need  
1394 more accurate and more granular data.

1395 Mr. Guthrie. All right. Thank you.

1396 And finally, regarding high band spectrum, are NTIA and  
1397 the administration generally on board with Chairman Pai's  
1398 recent announcement that the commission will move forward  
1399 with auctions in the 24 to 28 gigahertz bands?

1400 Mr. Redl. We are excited about more spectrum being made  
1401 available to bring to bear on our broadband challenges. I  
1402 mean, the president has made it very clear that getting  
1403 broadband out to rural America is a priority and we think  
1404 that the high band spectrum is one way for us to do that.  
1405 The potential for fixed wireless in those bands could be a  
1406 real game changer in rural America.

1407 Mr. Guthrie. All right. Thank you, and I'll yield back  
1408 my time.

1409 Mrs. Blackburn. Gentleman yields back.

1410 Mr. Kinzinger, you're recognized for five minutes.

1411 Mr. Kinzinger. Well, thank you, Madam Chair, for  
1412 yielding.

1413 I want to congratulate you on your job. It's great.  
1414 It's good to have you here. I enjoyed meeting with you in  
1415 your new capacity back in February and I appreciate that  
1416 you've been making the rounds with members of this committee

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1417 to discuss priorities.

1418 I am also going to try to get through a number of  
1419 questions with my time. So if you can keep your answers as  
1420 brief as possible, that would be great.

1421 I'd like to discuss the February 26th announcement that  
1422 NTIA and the Pentagon have identified a 100 megahertz band of  
1423 spectrum. It's a 3450 to 3550 band that could be potentially  
1424 repurposed to spur commercial wireless innovation including  
1425 advanced wireless services.

1426 I am all for opening up spectrum for commercial use.  
1427 But as a military guy myself, I tend to look at things  
1428 through a national security lens.

1429 So I would want assurances from the Pentagon that  
1430 introducing commercial operations to this band of spectrum  
1431 would have no negative effects on defense.

1432 First, will you reaffirm your commitment to ensure that  
1433 the military communications operating in this band must be a  
1434 priority?

1435 Mr. Redl. Absolutely.

1436 Mr. Kinzinger. And now in the event that the  
1437 engineering study shows that this is feasible and there will  
1438 be no degradation of military operations, I'd like you to  
1439 briefly describe what sorts of commercial ventures we might  
1440 see in this band.

1441 You know, might we, for instance, see spectrum sharing

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1442 technologies that essentially allow for dual use while  
1443 prioritizing government ops?

1444 Mr. Redl. So that's the phase we are in now -- figuring  
1445 out what the options will be once we figure out through the  
1446 engineering studies what the profile of existing DOD systems  
1447 will look like in a post-transition.

1448 We would be working with the FCC to figure out how this  
1449 fits into the larger spectrum picture. You know, this  
1450 spectrum is immediately adjacent to the 3.5 gigahertz band,  
1451 which we are in the process at NTIA of certifying the systems  
1452 to make the sharing in that band possible.

1453 We will work with the FCC, going forward, to figure out  
1454 what the right play is to make that available in the best way  
1455 possible.

1456 Mr. Kinzinger. The extensive federal and nonfederal use  
1457 of this band makes it an ideal candidate for spectrum  
1458 sharing.

1459 Will NTIA and the DOD focus on dynamic spectrum sharing  
1460 as a way to maximize its use? You basically kind of answered  
1461 that.

1462 As you know, this 100 megahertz band is immediately  
1463 adjacent to the Citizens Broadband Radio Service and the  
1464 FCC's rules for CBRS are almost finalized now.

1465 If the NTIA and DOD move forward to open this band it  
1466 would save time and money to simply extend the CBRS rules to

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1467 the adjacent band rather than go through a potentially long  
1468 rulemaking process.

1469 In order to accelerate its commercial use, will NTIA and  
1470 DOD consider applying the same rules under the FCC's Part 96  
1471 of the CBRS to this 100 megahertz band?

1472 Mr. Redl. So, ultimately, the decision of how the  
1473 nonfederal use would be done will be done through notice and  
1474 comment at the FCC. But we will participate in that process.

1475 Mr. Kinzinger. I know at least one company that's  
1476 worked closely with the DOD on this band tier structure and I  
1477 think it's safe to say that with the industry assistance this  
1478 process can be much less painful.

1479 Do you agree that industry can help accelerate and ease  
1480 the transition process for NTIA and the DOD to enable shared  
1481 use of this band?

1482 Mr. Redl. Absolutely. We have got two advisory  
1483 committees at NTIA that are on both sides of this equation to  
1484 help us out -- the Commercial Spectrum Management Advisory  
1485 Committee for looking at the commercial side of the equation,  
1486 the Interdepartmental Radio Advisory Committee on the  
1487 government side -- and those two advisory committees give us  
1488 at NTIA a more complete picture of both what the government  
1489 users need and what spectrum users on the commercial side are  
1490 looking for.

1491 Mr. Kinzinger. Okay. And I'd like to briefly discuss

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1492 the future of spectrum both in terms of what we can do with  
1493 the spectrum that's currently being utilized as well as  
1494 ultra-high and super-high frequencies that are not yet widely  
1495 utilized in commercial ventures.

1496 In your opinion, what's the most efficient way to deploy  
1497 the spectrum that's already more accessible today? Would it  
1498 be sharing, clearing, or some other means?

1499 Mr. Redl. So when it comes to reallocating federal  
1500 assets to nonfederal, Congress has been very clear that we  
1501 need to prioritize clearing over sharing.

1502 But that doesn't mean that we don't look at all  
1503 potential tools that we have in our toolkit, and sharing and  
1504 the request we made for leasing authority are part of those  
1505 potential tools that we could bring to bear.

1506 Mr. Kinzinger. And how can we make the process -- the  
1507 progress gap in developing and deploying 5G?

1508 Mr. Redl. Yes. I think the work that Congress is doing  
1509 to continue to press the issue and make more spectrum  
1510 available is particularly helpful. But I think what we are  
1511 really going to have to do as a country to see this move  
1512 forward is continue pressing the private sector on standards.

1513 Standards, at the end of the day, are where these fights  
1514 are won and lost and we, as a country, have been a leader in  
1515 4G standards. We need to continue pressing forward to be a  
1516 leader in 5G standards.

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1517           Mr. Kinzinger. And do you believe that we will be --  
1518 still be fighting over the same spectrum bands in 20 years or  
1519 do you think the technology will allow us to either share  
1520 better or unlock higher and lower frequencies to spread  
1521 things around?

1522           Mr. Redl. I think it's yes to both. I think we will  
1523 still be fighting over these spectrum bands in 20 years but I  
1524 think we will also have new technologies to bring to bear.

1525           I mean, just in the last couple of years we have moved  
1526 up into the spectrum frontiers in Horizon's portion of the  
1527 FCC's work and, you know, five or 10 years ago that was  
1528 unthinkable.

1529           So at NTIA we continue to constantly reevaluate and  
1530 figure out what technology has done to change our underlying  
1531 assumptions.

1532           Mr. Kinzinger. And very last question -- does the NTIA  
1533 have the authorities necessary to operate in the current  
1534 environment or in these future scenarios so that it can  
1535 quickly deploy the use of spectrum?

1536           Mr. Redl. The only thing is the request that we made in  
1537 the president's fiscal 2019 budget with respect to leasing  
1538 authority.

1539           Mr. Kinzinger. All right. You did a great job. Thank  
1540 you for getting through so many questions. I yield back.

1541           [Laughter.]

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1542 Mrs. Blackburn. Mr. McNerney, you're recognized for  
1543 five minutes.

1544 Mr. McNerney. Well, I thank the chair and I thank the  
1545 witness. I am sorry I missed some of your testimony. I had  
1546 to step out.

1547 But I am concerned about the FCC's reluctance to embrace  
1548 cybersecurity as an issue. I think we have serious problems  
1549 with cybersecurity and then when a significant portion of  
1550 government experts are told to stand down I think we are  
1551 asking for trouble.

1552 Can you commit that in your role as head of NTIA you  
1553 will help protect our nation's networks?

1554 Mr. Redl. Absolutely, and we are -- we are continuing  
1555 to do that now. The president, as you know, last year issued  
1556 an executive order asking Commerce and Homeland Security to  
1557 look at distributed threats like botnets and we are actively  
1558 working to -- with our sister agency NIST and with Homeland  
1559 to put together a report to the president on that issue.

1560 Mr. McNerney. You have the resources that you need?

1561 Mr. Redl. I mean, everyone always would like more  
1562 resources. But yes, we are -- we are doing very well with  
1563 the resources we have and certainly we are looking forward  
1564 and hope that the president's fiscal 2019 budget will give us  
1565 the money that we need.

1566 Mr. McNerney. Okay. Well, following the rise in the

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1567 disruptive IOT cybersecurity attacks, I introduced the  
1568 Securing IOT Act.

1569 NTIA has been active on this issue and I understand that  
1570 in recent meetings of NTIA's multi stakeholders working group  
1571 on IOT security upgradeability and patching that was held  
1572 back in November. Can you update us on the progress of this  
1573 multi stakeholder working group?

1574 Mr. Redl. Sure. That working group produced documents  
1575 that were consensus documents from the stakeholders to  
1576 address some of the concerns related around patchability and  
1577 conveying that information to consumers.

1578 We are really proud of that work. We think it's a real  
1579 good start in terms of bringing security to bear on IOT, and  
1580 I know that IOT security is a priority for Secretary Ross  
1581 across the entire department.

1582 Mr. McNerney. Well, what meaningful advances in IOT  
1583 security can we expect?

1584 Mr. Redl. Stay tuned. We are in the process of working  
1585 that out. You know, part of the interesting aspect of the  
1586 multi stakeholder process is you don't always know what will  
1587 come next. The stakeholders have a way of asserting  
1588 themselves.

1589 Mr. McNerney. Well, I know that NTIA has also published  
1590 a draft report on how to protect against botnets. You  
1591 mentioned that a little earlier.

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1592           How can -- how do you expect that the findings and  
1593 recommendations from this report will be used in practice by  
1594 government and industry?

1595           Mr. Redl. We will have to see. We are in the process  
1596 now of incorporating comments to the draft report.

1597           Our draft report was put out in January and both NTIA  
1598 and NIST have been seeking comment from stakeholders to  
1599 improve the draft in anticipation of deliver to the president  
1600 in May.

1601           What happens to the document and the recommendations  
1602 therein will be up to the president and we are hoping to  
1603 continue working on it.

1604           Mr. McNerney. It would be nice to have some mechanism  
1605 to ensure that federal agencies and government contractors  
1606 follow these recommendations.

1607           Mr. Redl. Sure would.

1608           Mr. McNerney. I want to change direction a little bit.  
1609 I want to make sure that my constituents have access to  
1610 broadband and that that access is affordable.

1611           How can NTIA's BroadbandUSA program help?

1612           Mr. Redl. So BroadbandUSA has been continuing to do  
1613 outreach and maintain relationships with the states and with  
1614 local governments through the State Broadband Leaders Network  
1615 and we have been trying to help produce best practices for  
1616 communities to get investment from private sector entities

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1617 because the economics of broadband are typically the biggest  
1618 challenge to deployment.

1619 We continue maintain that capability and work with our  
1620 state colleagues and the president's request for an  
1621 additional \$50 million to provide and assessment and map of  
1622 broadband availability I think would certainly aid policy  
1623 makers both within the executive branch and certainly up here  
1624 on Capitol Hill in trying to define what the unserved parts  
1625 of our country really look like.

1626 Mr. McNerney. I am going to change directions again.  
1627 Does the NTIA have jurisdiction over drones?

1628 Mr. Redl. So NTIA has jurisdiction over some of the  
1629 issues related to federal counter UAS activities and that has  
1630 played out certainly on Capitol Hill over the last couple of  
1631 years.

1632 But with respect to drones, I think the majority of that  
1633 work is done interagency with our colleagues at the FAA.

1634 Mr. McNerney. Okay. Is there a broad outline of drone  
1635 regulations at NTIA? Is there some sort of regulatory  
1636 structure that can help guide where we are going to be going  
1637 with this technology?

1638 Mr. Redl. I don't have one prepared for you today but  
1639 I'd certainly be happy to work with your office, going  
1640 forward, to figure out what the right steps are, going  
1641 forward, for us on drone security.

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1642 Mr. McNerney. I mean, you can see drone security is a  
1643 huge potential issue for us. I mean, they could fly a drone  
1644 over the Capitol and blow us up any time they want. So we  
1645 need to move forward aggressively on that, in my opinion.

1646 Mr. Redl. Yes, sir.

1647 Mr. McNerney. Thank you. I yield back.

1648 Mrs. Blackburn. Gentleman yields back.

1649 Mr. Johnson, you're recognized for five minutes.

1650 Mr. Johnson. Thank you, Madam Chair, and welcome, Mr.  
1651 Assistant Secretary. That has a nice ring to it. Just kind  
1652 of rolls of there. So welcome.

1653 Last week, the FCC released a map showing areas across  
1654 the country eligible to receive support for 4G LTE service  
1655 over the next 10 years as part of phase two of the Mobility  
1656 Fund.

1657 The map almost immediately came under attack for  
1658 inaccurately portraying areas as covered, including parts of  
1659 my district, that were not. This continues to raise  
1660 questions as to whether the FCC should be in charge of  
1661 broadband mapping, wireless or otherwise.

1662 My bill, MAPPING NOW Act, would move federal broadband  
1663 mapping away from the FCC back to NTIA. So, Mr. Assistant  
1664 Secretary, what will the NTIA do to ensure broadband maps are  
1665 accurate?

1666 Mr. Redl. Mr. Johnson, as a threshold matter, I want to

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1667 applaud the FCC for what it's been doing on mapping.  
1668 Certainly, any effort to bring more accurate data to the way  
1669 we deploy our resources as a federal government should be  
1670 welcomed and I also thank you for your leadership in making  
1671 mapping a priority for discussion here in Congress.

1672 At NTIA, we spent a lot of time working on ways to  
1673 define the need for broadband, where those problem areas are,  
1674 and we are happy that the president had asked for an  
1675 additional \$50 million for us to move forward with that.

1676 That \$50 million, if it is brought to bear on our  
1677 mapping challenges, will be used not only to produce a map  
1678 but to do an assessment of the data in that map.

1679 And bringing together multiple data sets and figuring  
1680 out why they don't 100 percent line up should give us a  
1681 better idea of the real need we have in rural America.  
1682 Anyone who's spent any time in rural America knows we have a  
1683 real need for broadband infrastructure in rural America.

1684 Mr. Johnson. Sure, and I want to echo what you said. I  
1685 certainly applaud the work that's been done up until this  
1686 point. But we got to take it to a new level. I mean, we  
1687 have got -- the urban-rural divide is a very real phenomenon.

1688 We have got lots of intellectual capital that is not  
1689 being recognized because young people can't get access to the  
1690 internet for their school work.

1691 Businesses can't come in to rural areas because they

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1692 can't set up operations because they can't communicate with  
1693 their customers, their suppliers, et cetera.

1694 So I applaud that work as well and I agree with you.  
1695 But it's time to take this to the next level. So what  
1696 strengths -- you had talked about some of the things you  
1697 would do but what strengths does NTIA bring to the mapping  
1698 efforts over what's currently being done at the FCC?

1699 Mr. Redl. I think a real strength we bring to the table  
1700 is our existing relationships with the state and local  
1701 governments.

1702 The BroadbandUSA group at NTIA has spent the last few  
1703 years continuing to cultivate our State Broadband Leaders  
1704 Network and these are officials within state and local and  
1705 county governments who spend their time thinking about how to  
1706 improve the broadband situation and it's yielded real results  
1707 for us in terms of states that have been willing to take on  
1708 the difficult challenge of maintaining these maps and getting  
1709 good data.

1710 As I mentioned earlier, Minnesota is a great example of  
1711 a state that has continued to push forward and use state  
1712 resources to produce good actionable data. I think it's  
1713 those relationships and our ongoing work with them -- we had  
1714 our state broadband leaders here in town just a few weeks ago  
1715 to explore ways to continue working together between the  
1716 different state and federal entities that are engaged here.

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1717 It's a real asset for us.

1718 Mr. Johnson. Great. Great.

1719 Shifting gears just a little bit, a lot of discussion  
1720 has focused on high band spectrum and how NTIA can help  
1721 accelerate the U.S. in deploying 5G.

1722 But my constituents are still struggling to get 4G or  
1723 even to sustain a phone call driving down the highway. So  
1724 Mr. Assistant Secretary, is NTIA is looking at lower bands  
1725 that could be freed up for commercial use?

1726 Mr. Redl. So the announcement of 3450 to 3550 I think  
1727 is a prime candidate for the kind of thing you're talking  
1728 about. It's mid-band spectrum that provides a good mix of  
1729 coverage versus capacity availability and, hopefully, we will  
1730 be able to drive forward and get those studies completed so  
1731 that we can bring that to market as soon as possible.

1732 But that's the kind of work we are doing to bring  
1733 spectrum to market to meet actual real-world demands.

1734 Mr. Johnson. Okay. And one final questions in the last  
1735 30 seconds -- a multi-agency groups that includes NTIA is  
1736 exploring the possibility of making changes to the FAA's  
1737 long-range radars operating in that band and relocating them  
1738 to another band.

1739 What's the status of that effort to free up the 1300 to  
1740 1350 megahertz band? Is that process moving in a -- in a  
1741 reasonable time frame?

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1742 Mr. Redl. The process is moving in a reasonable time  
1743 frame. Our Interdepartmental Radio Advisory Committee, which  
1744 is the group that works across the U.S. government to make  
1745 sure that federal equities are respected and that our  
1746 missions are maintained, are spending a lot of time trying to  
1747 figure out how to make that system work in a smaller  
1748 footprint or in a different band.

1749 I am pleased with the progress. We are going to  
1750 continue to push forward. It's a real priority for us.

1751 Mr. Johnson. Great.

1752 Madam Chairman, I yield back.

1753 Mrs. Blackburn. Yields back.

1754 Mr. Long, you're recognized for five minutes.

1755 Mr. Long. Thank you, Madam Chair.

1756 Last week, FCC announced that it plans to vote on an  
1757 item streamlining the process of small cell deployment at its  
1758 March meeting.

1759 Is the administration supportive of this effort and what  
1760 is NTIA doing to work with federal agencies to streamline the  
1761 process for facilities, deployment on buildings, and land  
1762 administered by -- and managed by the federal government?

1763 Mr. Redl. Mr. Long, I appreciate your asking. It's an  
1764 area we have started working really hard on in the last  
1765 couple of weeks.

1766 The president has tasked the broadband interagency

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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 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 on 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.

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1792 Mr. Long. Well, you're talking about Congress making  
1793 changes. What should we, this committee -- as a committee,  
1794 what should we be doing to assist in this effort?

1795 Mr. Redl. I mean, I think you're doing it, which is  
1796 raising the profile of the issue and --

1797 Mr. Long. Could you repeat that?

1798 Mr. Redl. Yes.

1799 [Laughter.]

1800 Mr. Redl. And continue to engage with us in ways that  
1801 make sure that we can meet the dual mandate. That's our  
1802 daily challenge is we know that Congress wants us to make  
1803 more spectrum available for commercial users.

1804 But we also know, because we spend so much time with our  
1805 federal government users that we have to protect the critical  
1806 mission that they are doing as well.

1807 So anything that Congress does to support us in making  
1808 sure our federal users have what they need, whether it be  
1809 what they have now or what they will have tomorrow, while  
1810 also supporting us and making sure we have the resources to  
1811 bring commercial spectrum to market, is always helpful.

1812 Mr. Long. Okay.

1813 As you're aware, many on this committee have  
1814 consistently supported common sense policy of auctioning  
1815 1675, 1680 megahertz for shared government-commercial use for  
1816 the past several years and we are very pleased that the

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1817 administration-proposed budgets for both of them reflect a  
1818 priority in seeing this policy through.

1819 Does the FCC have everything it needs from your team at  
1820 NTIA to move this policy forward with a notice of proposed  
1821 rulemaking and, if so, do you support the FCC's issuing  
1822 notice of proposed rulemaking in the coming weeks to keep the  
1823 process moving forward?

1824 Mr. Redl. It will surprise you not at all, sir, that we  
1825 spend a lot of time working with the FCC on every spectrum  
1826 band that could be reallocated from federal use.

1827 And so it's an ongoing process and we continue to make  
1828 sure that whatever the FCC needs that we can provide.

1829 Mr. Long. Okay. So you do keep the process moving  
1830 forward?

1831 Mr. Redl. Yes. I mean, I think the question of whether  
1832 or not the FCC has what it needs is probably a question for  
1833 the FCC. But we stand ready to provide them with whatever  
1834 they need.

1835 Mr. Long. Okay. Thank you. And I think this is a  
1836 world record, but I yield back a minute 30.

1837 Mrs. Blackburn. I cannot believe Billy Long is giving  
1838 me back time. That is a first.

1839 Mr. Costello, you're recognized for five minutes.

1840 Mr. Costello. Thank you very much. I also want to thank  
1841 -- congratulate Mr. Redl but also thank him for the time that

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1842 he spent with me in my office just yesterday.

1843 I wanted to focus on FirstNet. As you're beginning your  
1844 build out, what are you doing to make sure that we get the  
1845 National Public Safety Broadband Network up and running as  
1846 quickly as possible?

1847 And the other piece of this, just in terms of getting it  
1848 up and running, is do you foresee any roadblocks,  
1849 particularly regarding interoperability?

1850 Mr. Redl. So in terms of getting things rolling, I know  
1851 that FirstNet is currently working hard to get Task Order 4  
1852 out to AT&T, and Task Order 4 is what will start the process  
1853 whereby AT&T begins to build out the state plans that were  
1854 provided to each governor as part of the opt in and opt out  
1855 process.

1856 We were pleased to see that AT&T as part of this  
1857 immediately made their network available to public safety  
1858 users on a priority and preemptive basis, and as we get  
1859 forward with build out we are going to continue pushing them  
1860 to make sure they meet the milestones in the contract and  
1861 that they are building out in a way that is -- that comports  
1862 with all the state plans they handed out.

1863 Mr. Costello. The State and Local Implementation Grant  
1864 Program 2.0, which allocates, I think, a little under \$44  
1865 million to help FirstNet build out, the Pennsylvania -- the  
1866 state police have a \$425,000 grant, and I want to ask you how

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1867 NTIA is working with state and local officials on the grant  
1868 program and how your efforts might differ state to state  
1869 depending on relative risk to different types of disasters or  
1870 public safety threats.

1871 Mr. Redl. Sure. You know, we have -- SLIGP, as it is  
1872 lovingly known -- SLIGP 2.0 grants are in process now and all  
1873 of the states have reached out to try to find ways to use  
1874 that funding to further integration of state assets into  
1875 FirstNet since all 56 states and territories have opted into  
1876 FirstNet's RAN build.

1877 We are working with our colleagues at FirstNet to make  
1878 sure that we engage with the states on a day to day basis.  
1879 You know, FirstNet spent a lot of time throughout this  
1880 process doing outreach to state points of contact on these  
1881 issues and engaging with the public safety community and we  
1882 are lucky that both NTIA and FirstNet have a great  
1883 relationship with state governments and with public safety  
1884 users.

1885 So we are going to continue working collectively to make  
1886 sure that those folks in each state who know the needs of  
1887 their communities are heard.

1888 Mr. Costello. I appreciate your testimony and your  
1889 answers to my questions.

1890 I yield back the balance of my time.

1891 Mrs. Blackburn. Gentleman yields back.

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1892 Mr. Shimkus, you're recognized for five minutes.

1893 Mr. Shimkus. Thank you very much, Madam Chairman.

1894 How do we pronounce your name? Is it Reedle, Ridell?

1895 [Laughter.]

1896 Mr. Shimkus. It's great to have you here. Thank you  
1897 for being here.

1898 The -- as you know, I am the founder -- the co-chair of  
1899 the Next Generation 911 Caucus. In this role, I've seen  
1900 firsthand how outdated many of our 911 centers are how Next  
1901 Generation 911 -- where it's deployed has been a force  
1902 multiplier for public safety.

1903 It is more reliable and resilient and faster than legacy  
1904 systems and improves emergency responses and protection of  
1905 the public and first responders.

1906 As 911 enters its fiftieth year -- and I haven't been  
1907 here for all those years -- the urgency of the deployment of  
1908 Next Generation is greater than ever.

1909 I know that -- and you know in 2012 Congressman Eshoo  
1910 and I, along with your help, introduced Next Generation 911  
1911 Advancement Act, enacted as part of the Middle Class Tax  
1912 Relief -- you mentioned that in your opening statement -- and  
1913 Job Creation Act of 2012.

1914 It provides for a \$115 million match grant program to  
1915 fund some of the implementation of Next Generation 911  
1916 services. And I know the chairman -- chairwoman mentioned

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1917 that about updating in her question.

1918           What I wanted to follow up on was additionally effective  
1919 development of critical 911 infrastructure dictates that  
1920 scarce funding resources must be dedicated to their stated  
1921 purpose of enhancing first responder capabilities.

1922           However, despite states -- and this is where we have the  
1923 challenges -- quote, unquote, "self-identifying" as non-  
1924 diverters, the FCC Public Safety and Homeland Security Bureau  
1925 continues to identify state funds collected for 911 being  
1926 diverted for non-911 related purposes.

1927           Given the new program, what steps is NTIA taking to  
1928 combat 911 fund diversion and what can we do to help?

1929           Mr. Redl. Well, you know, I want to thank you and  
1930 Congressman Eshoo for your leadership on these issues.

1931           You know, it's interesting to watch. We have consumers  
1932 who are dialing 911, have smart phones with advanced  
1933 capability. Now that FirstNet is being stood up and in  
1934 addition the other providers who are providing, first  
1935 responders with capabilities have advanced smart phone style  
1936 capabilities on their devices.

1937           But the 911 call centers in the middle that are  
1938 connecting the two in their most dire times haven't been able  
1939 to keep pace.

1940           And so looking at ways to bring that forward is  
1941 something that we are painfully aware of and are trying to

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1942 get that grant program out the door as quickly as possible to  
1943 bear on the problem.

1944 As far as diverters go, I think you're aware the FCC  
1945 produces a report every year that looks at which states have  
1946 been diverting funds -- I believe it was under the Net 911  
1947 Act -- that will identify states that have been diverting  
1948 funds away from their 911 programs for other purposes.

1949 This will help inform our grant making, as we go  
1950 forward, as is consistent with the law.

1951 Mr. Shimkus. And you know the concern is that the  
1952 states could fully fund -- they could put money in and then  
1953 once the time for reporting occurs then they take the money  
1954 back out, and it's something we have argued about.

1955 So in your process as you're reviewing this, if there is  
1956 a better way for us to be more specific and, you know, you  
1957 can ask us to help refine this because it's just -- again, as  
1958 I've said, criminal neglect to charge someone for a purpose  
1959 and then not use that money for the purpose it was intended  
1960 to go to.

1961 Mr. Redl. If we find that there are states that are  
1962 gaming the system that aren't being identified because of  
1963 foibles of the law, we'd be happy to work with you to try and  
1964 --

1965 Mr. Shimkus. And if we can point some out to you, you  
1966 would be happy to receive that information?

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1967 Mr. Redl. Of course. Always.

1968 Mr. Shimkus. Great. Thanks.

1969 The next thing I want to briefly talk about is the 5G  
1970 cell siting and, as you know, last week FCC announced that it  
1971 plans to vote on an item streamlining process for small cell  
1972 deployment at its March meeting.

1973 This approach is similar to the bill I introduced called  
1974 the SPEED Act, which reduces the regulatory overhang for the  
1975 siting of small cells. These efforts are incredibly  
1976 important in winning the international race to 5G. Of  
1977 course, you mentioned that also in your opening statement.

1978 Is the administration supportive of these efforts to  
1979 modernize the siting process for small cells and what is NTIA  
1980 doing to work with federal agencies to streamline the process  
1981 for facilities deployment on buildings and land administered  
1982 and managed by the federal government?

1983 Mr. Redl. Mr. Shimkus, the president has made it clear  
1984 that getting broadband out to the parts of rural America that  
1985 don't have it now is a priority for this administration and,  
1986 certainly, the work that we are doing in our Broadband  
1987 Internet Working Group will help to bear upon that.

1988 The Broadband Internet Working Group has been  
1989 established. It's co-chaired by NTIA and the Rural Utility  
1990 Service and this is one of the issues we are currently  
1991 looking at.

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1992           How do we streamline federal permitting processes in  
1993 order to make it easier to build out? How do we bring  
1994 federal assets to bear on this challenge?

1995           How do we make sure that different funding programs  
1996 across the U.S. government are coordinated in a way that gets  
1997 us the best outcome. We are dedicated to this challenge and  
1998 we are really excited about getting to yes on some of these  
1999 issues.

2000           Mr. Shimkus. Thank you very much.

2001           Madam, my time has expired.

2002           Mrs. Blackburn. Gentleman yields back.

2003           Mr. Bilirakis, you're recognized for five minutes.

2004           Mr. Bilirakis. Thank you, Madam Chair, and thank you,  
2005 Mr. Secretary, for your testimony. I appreciate it so very  
2006 much.

2007           On the opening day of this subcommittee's infrastructure  
2008 push, I introduced House Resolution 687 to coordinate  
2009 regulations and permitting processes between the federal,  
2010 state, and local governments. We regularly acknowledged the  
2011 need to remain a leader in technology innovation.

2012           However, the unintended complexity of our broadband  
2013 infrastructure rules is causing us to fall behind and lose  
2014 investment.

2015           Our competitors, such as China, Japan, and Europe, are  
2016 already racing to deploy 5G for commercial use. What can we

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2017 do today to ensure that the U.S. stays in the lead of this  
2018 innovation and speed our new spectrum bands to market as  
2019 quickly as our competition?

2020 Mr. Redl. Well, sir, at the Department of Commerce,  
2021 Secretary Ross has made it clear that 5G leadership should be  
2022 a priority and we are driving full steam ahead to engage on  
2023 every front with Congress, across the administration, and,  
2024 perhaps most importantly, with our private sector colleagues  
2025 to make sure that we are able to drive standards, that we are  
2026 able to make as much spectrum available as possible, and that  
2027 we are able to replicate in 5G the kind of success the United  
2028 States had in 4G?

2029 Mr. Bilirakis. Very good.

2030 Representing the great state of Florida, although I do  
2031 have Pittsburgh, blood by the way -- you know that my dad's  
2032 from Pittsburgh and I root for the Pirates and the Steelers  
2033 and the Rays, of course, and the Bucks -- but in any case,  
2034 representing the great state of Florida in the Tampa Bay  
2035 area, Florida is a payer state, as you know, into the  
2036 Universal Service Fund.

2037 There have been -- long been questions about the  
2038 accuracy of the broadband data collection and the use of  
2039 resources. While I truly believe that everyone should have  
2040 access to internet services, I want to ensure that  
2041 constituent money is going to the locations that need it

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2042 most, of course.

2043           The FCC has made a number of data improvements in the  
2044 last year. The NTIA recently provided suggestions to the FCC  
2045 on updating its data collection practices specifically  
2046 regarding the Form 477 data program, as you know.

2047           Expanding on Mr. Guthrie's questioning, can you discuss  
2048 the importance of Form 477 to NTIA decision making and how  
2049 the recommendations NTIA provided to the FCC will improve  
2050 broadband data accuracy to help payer states such as this  
2051 great state of Florida?

2052           Mr. Redl. Sure, Mr. Bilirakis.

2053           You know, the Form 477 data is a critical tool that we  
2054 all have as part of looking at where broadband is available.

2055           The FCC has long maintained this data, and while, you  
2056 know, we can all quibble over whether it's accurate enough or  
2057 granular enough -- and I think NTIA has been very clear we  
2058 think it needs to be more accurate and more granular -- it  
2059 still represents a critical data set.

2060           And as we look at what the president asks us to do if we  
2061 get the additional appropriations to do an assessment and a  
2062 map, 477 data would form the basis of one of those data sets.  
2063 Having as many data sets as possible and as many of them  
2064 validated as possible will lead us to the best possible  
2065 outcomes.

2066           And, you know, I think we want to get good data in your

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2067 hands. We want to get good data in the rest of the executive  
2068 branch's hands. Doing so will require us to look not just at  
2069 Form 477 but at a lot more information than that.

2070 Mr. Bilirakis. Very good. Thank you.

2071 I yield back, Madam Chair. Appreciate it.

2072 Mrs. Blackburn. Gentleman yields back.

2073 Mrs. Brooks, you're recognized for five minutes.

2074 Mrs. Brooks. Thank you, Madam Chairwoman, and

2075 congratulations. It's good to have you here.

2076 I have been focused for quite some time on FirstNet and  
2077 want to ask whether or not -- how is FirstNet doing, in your  
2078 opinion, with respect to their commitment to specify the 15  
2079 percent geographic requirement to partner with rural telecom?  
2080 How is that going?

2081 Mr. Redl. So, Mrs. Brooks, we are -- we are at the  
2082 threshold of seeing FirstNet start to deploy its own network  
2083 through AT&T.

2084 As I mentioned earlier, they -- FirstNet is working with  
2085 AT&T now on Task Order 4. Task Order 4 will be the order  
2086 that has AT&T go out and begin building the state-based plans  
2087 for the Radio Access Network.

2088 We are aware that it is our job at NTIA and at FirstNet  
2089 to make sure that AT&T is living up to the terms of the  
2090 contract it signed with the U.S. government.

2091 We are joined at the hip for the next 25 years on making

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2092 sure that AT&T lives up to that contract and that public  
2093 safety first responders get the tools that Congress intended  
2094 in the law. And so we are going to continue pushing forward  
2095 to make sure that's the case.

2096 Mrs. Brooks. Thank you.

2097 I am also curious, following on to Representative  
2098 Shimkus' question, about the diversion of fees -- the 911  
2099 fees of states.

2100 How does -- how does your agency follow up when states  
2101 have to certify they've not diverted the 911 fees? What does  
2102 certifying mean and what is your agency's role in ensuring  
2103 that the states -- rather than us maybe providing you  
2104 information we might hear about, do you know what kind of  
2105 mechanism is in place to ensure that 911 fees aren't -- when  
2106 a state certifies they haven't diverted fees?

2107 Mr. Redl. So that report is produced and the  
2108 methodology behind it is done by the FCC. That would be a  
2109 question for the FCC but I am certainly happy to follow up  
2110 with them and with your office if you would like.

2111 Mrs. Brooks. Okay. I think the -- people are probably  
2112 most curious -- the spectrum -- in the last auction the  
2113 auctions have produced significant revenue for the federal  
2114 government, far more than everyone expected and, of course,  
2115 when it comes to our federal budgeting process we need as  
2116 much revenue as possible.

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2117 Do you have any opinion as to which bands might raise  
2118 the most money for the Treasury as we continue to contemplate  
2119 the spectrum auctions?

2120 Mr. Redl. So I think -- you know, the traditional  
2121 wisdom has been that low band spectrum would produce the best  
2122 revenue outcome.

2123 But it's much more complicated than that when we are  
2124 looking at which bands are going to be the most lucrative.  
2125 There are a number of different factors that go into that.  
2126 Relative scarcity is one of them.

2127 International harmonization is another. The  
2128 availability of equipment in a timely manner is one. How  
2129 fast it can be brought to market and cleared of incumbents is  
2130 another.

2131 So it's a complicated equation to figure out what those  
2132 revenues might look like and it does seem to be evolving  
2133 quite rapidly. You know, high band spectrum as I mentioned  
2134 earlier, was not considered particularly valuable just a few  
2135 years ago and yet now here we stand looking at high band as  
2136 having the potential to really drive 5G leadership.

2137 So I don't envy those that have to do the estimates of  
2138 what spectrum will bring in in terms of revenue. But it is a  
2139 moving target on its best day.

2140 Mrs. Brooks. Thank you.

2141 And Congresswoman Debbie Dingell and I formed the 5G

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2142 Caucus and in talking about that you mentioned -- and I am  
2143 curious what your agency's role is.

2144 In response to Representative Kinzinger's questions, you  
2145 mentioned pressing the private sector on standards. And talk  
2146 to me about what your role is, what's the timing, because I  
2147 hear that quite a bit from the private sector.

2148 What -- talk to us a little bit more about that  
2149 statement that you made and how do we accomplish that and  
2150 what's your role in accomplishing that?

2151 Mr. Redl. Sure.

2152 So, you know, NTIA plays a role in its engagement with  
2153 the private sector as the president's principal advisor on  
2154 telecommunications and, certainly, as the agency to which the  
2155 secretary's communications and information functions were  
2156 delegated.

2157 It would be worth noting that this is a shared  
2158 obligation when it comes to standards as our colleagues at  
2159 NIST are also very engaged in working in these standards  
2160 bodies.

2161 You know, the scientists at NIST are fantastic and we  
2162 certainly work hand in glove with our sister agency to make  
2163 sure that we are producing good outcomes for the United  
2164 States.

2165 For our part, we are going to continue pressing the  
2166 industry. Industry participation is the backbone of getting

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2167 private sector-led standards adopted.

2168           So from our pulpit, we will continue to push them to  
2169 make sure that they are engaged at every phase.

2170           Mrs. Brooks. Thank you.

2171           I certainly believe, because I understand at the Mobile  
2172 World Congress recently 5G was all anybody talked about. So  
2173 we better get this right and everybody better speed it up.

2174           Thank you, and I yield back.

2175           Mrs. Blackburn. Gentlelady yields back, and by  
2176 unanimous consent Mr. Tonko has joined us and you are  
2177 recognized for five minutes.

2178           Mr. Tonko. Thank you, Madam Chair.

2179           Assistant Secretary Redl, welcome, and thank you for  
2180 being here today.

2181           Broadband internet access is often the difference  
2182 between success or failure for many Americans whether they  
2183 are students doing homework, job seekers training for a new  
2184 career, doctors reading a medical scan or entrepreneurs  
2185 starting a small business.

2186           To date, our government has done a poor job, I believe,  
2187 of tracking broadband deployment, especially with public  
2188 investments that are made with too little accountability and  
2189 oversight on behalf of the taxpayer.

2190           I hope this is an issue that we can address together.  
2191 As you know, I have been working with my colleague and

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2192 friend, Representative Lance, on a bill called Access  
2193 Broadband that would begin to address this issue.

2194 Our bill would establish a coordinating office for  
2195 federal broadband resources at NTIA. It would track federal  
2196 broadband dollars, streamline management of federal broadband  
2197 resources across multiple agencies and, most notably, it  
2198 would simplify the process for small business and local  
2199 economic developers to access them.

2200 It would also help notify communities that these  
2201 resources exist to help them expand their own local broadband  
2202 access. The bill already has strong bipartisan support.

2203 My thanks to the 10 members of this committee who have  
2204 co-sponsored it to date. I would ask everyone here to help  
2205 us advance this effort.

2206 So, Secretary, to your knowledge, does NTIA or any  
2207 federal agency currently track the construction and use of  
2208 broadband infrastructure resources across all federal  
2209 agencies that provide broadband funding and support?

2210 Mr. Redl. Well, Mr. Tonko, this is an issue that NTIA  
2211 is currently in the process of evaluating.

2212 The president tasked the broadband interagency working  
2213 group, which NTIA co-chairs with the Rural Utility Service,  
2214 with looking at this issue specifically -- how to look across  
2215 all the programs in the federal government that are providing  
2216 funding for broadband and make sure that they are coordinated

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2217 with each other and are complementary to each other.

2218 Mr. Tonko. Does NTIA or any federal agency coordinate  
2219 broadband funding so it can be distributed in an efficient  
2220 manner, in a financial sustainable manner, and with the goal  
2221 of serving the largest number of persons in the United States  
2222 while promoting the most job and economic growth for all  
2223 residents in our country?

2224 Mr. Redl. Well, I am sure that every one of the  
2225 programs looks at that individually. The across government  
2226 aspect of that is what we are currently looking into right  
2227 now.

2228 Mr. Tonko. Okay. And just the coordinating activity  
2229 amongst agencies, because I know in our research before we  
2230 drafted the bill there was this plethora of agencies that are  
2231 involved and perhaps not communicating well enough with each  
2232 other.

2233 Mr. Redl. Absolutely, and this subcommittee certainly  
2234 has a rich history of looking into those issues and trying to  
2235 ensure that we don't have duplicative funding in multiple --  
2236 from multiple agencies.

2237 Mr. Tonko. And have you encountered any barriers to  
2238 working across offices or agencies?

2239 Mr. Redl. You know, the Broadband Internet Working  
2240 Group that we have been -- we have been tasked with chairing  
2241 has been around for a couple of years and I think it's proven

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2242 to be a real dynamic way for the agencies to get together  
2243 that all have equities in internet work and find ways to work  
2244 despite the fact that we are all from different agencies and  
2245 that we have different missions.

2246 It's been a -- it's been an eye-opening experience to  
2247 see how well these agencies are capable of working when they  
2248 are given a direct task and asked to go do it across  
2249 boundaries.

2250 Mr. Tonko. Thank you. And could tracking this funding  
2251 better ensure that the money is not duplicative or wasteful?

2252 Mr. Redl. I certainly hope so. I mean, the last thing  
2253 we want to do as a federal government is to spend more money  
2254 than we have to achieve our goals.

2255 That's what we are looking at doing if we were to get  
2256 additional funding for mapping. It's what we are looking at  
2257 in the broadband interagency working group.

2258 We'd like to find ways to reach that last part of  
2259 America that does not have broadband in a way that's as  
2260 fiscally responsible as possible.

2261 Mr. Tonko. And is NTIA in the best position to track  
2262 broadband funding across federal agencies?

2263 Mr. Redl. Well, we are working in a group right now  
2264 that is NTIA and Rural Utility Service from Ag along with  
2265 others. But at the moment, it's a team effort across the  
2266 entire federal government and we are happy to be working with

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2267 our colleagues.

2268 Mr. Tonko. Would there be another agency that were  
2269 perhaps better suited to track this funding?

2270 Mr. Redl. Not that I am aware of. I mean, we are  
2271 certainly trying to figure that out right now. Part of the  
2272 challenge is that broadband is one of those issues that  
2273 crosses so many jurisdictional boundaries.

2274 It provides service in so many different vertical and  
2275 other aspects of government service that we are trying to  
2276 bring all those stakeholders together in a way that addresses  
2277 everybody's needs.

2278 We are at the early stages. You know, I don't want to  
2279 sort of over promise here. But we are at the early stages  
2280 and we are really looking forward to getting down and getting  
2281 our hands dirty and getting this work done.

2282 Mr. Tonko. And NTIA engages in outreach to communities  
2283 that need greater access. So what community outreach have  
2284 you conducted in the past year and have you seen indications  
2285 that these outreach efforts and workshops are valuable to our  
2286 communities?

2287 Mr. Redl. We absolutely have. You know, our State  
2288 Broadband Leaders Network has extensive relationships with  
2289 folks at the state, county, and local level and we continue  
2290 to bring them together on a fairly routine basis to exchange  
2291 best practice, to share success stories, frankly, to share

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2292 failure stories as well for failure to, you know, get the  
2293 economic investment that they were looking for.

2294 We are excited to be doing a workshop in Nashville,  
2295 Tennessee in the coming months. And so this is an ongoing  
2296 process for us to continue to reach out to state and local  
2297 leaders and say, what have you learned and how can we  
2298 disseminate that information across the entire country.

2299 Mr. Tonko. Thank you very much.

2300 And with that, Madam Chair, I yield back.

2301 Mrs. Blackburn. The gentleman yields back, and there  
2302 are no further members wanting to ask questions.

2303 Mr. Doyle. Madam Chair.

2304 Mrs. Blackburn. You're recognized, Mr. Doyle.

2305 Mr. Doyle. Thank you.

2306 I ask unanimous consent to submit for the record a  
2307 letter to the subcommittee from the Electronic Privacy  
2308 Information Center.

2309 Mrs. Blackburn. Without objection, so ordered.

2310 [The information follows:]

2311

2312 \*\*\*\*\*INSERT 2\*\*\*\*\*

2313 Mr. Doyle. Thank you.

2314 Mrs. Blackburn. And I also have a UC request for a  
2315 letter from the Utilities Technology Counsel. Without  
2316 objection, so ordered.

2317 [The information follows:]

2318

2319 \*\*\*\*\*INSERT 3\*\*\*\*\*

2320 Well, you've gotten the first one under your belt, Mr.  
2321 Redl, and I think you see that there is agreement from both  
2322 sides up here that we have efficient use of the funds that  
2323 are there for NG 911. We are all concerned about mapping and  
2324 broadband rollout, making certain that we utilize spectrum  
2325 well.

2326 So we thank you for the insight you've provided.

2327 Pursuant to committee rules, I remind members that they  
2328 have 10 business days to submit additional questions for the  
2329 record and I ask that you will submit these written answers  
2330 within 10 business days.

2331 Seeing no further business, to come before the  
2332 subcommittee today, committee is adjourned.

2333 [Whereupon, at 11:54 a.m., the committee was adjourned.]