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6 OVERSIGHT OF THE NATIONAL TELECOMMUNICATIONS

7 AND INFORMATION ADMINISTRATION

8 TUESDAY, MARCH 6, 2018

9 House of Representatives

10 Subcommittee on Communications and

11 Technology

12 Committee on Energy and Commerce

13 Washington, D.C.

14

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16

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

20 Members present: Representatives Blackburn, Lance,
21 Shimkus, Latta, Guthrie, Kinzinger, Bilirakis, Johnson, Long,
22 Flores, Brooks, Collins, Walters, Costello, Walden (ex

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23 officio), Doyle, Welch, Clarke, Loeb sack, Ruiz, Eshoo,
24 Butterfield, Matsui, McNerney, and Pallone (ex officio).

25 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.

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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
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

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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
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.

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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.

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

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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
145 majority's effort on spectrum policy in internet governance
146 and oversaw and directed policy for the full breadth of this
147 subcommittee's jurisdiction.

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

154 David, I want to wish you the best of luck with this

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155 critical and quite challenging task. That being said, I also
156 understand that you went to Penn State, which is my alma
157 mater, and that you married a girl from Pittsburgh.

158 So this shows good judgment on your part, too.

159 [Laughter.]

160 Mr. Doyle. But again, welcome back to the committee.

161 Our world grows more connected and interconnected by the day.
162 The number of connected devices will exceed the number of
163 people on the planet this year and research suggests that the
164 number of connected devices will be more than twice the
165 population of the planet by 2020.

166 This incredible growth has been fueled by innovation,
167 investment, and access to wireless spectrum. The U.S.
168 government remains the largest spectrum holder in the United
169 States and NTIA is charged with managing federal spectrum,
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

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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
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

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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
220 cumbersome, I hope that NTIA can continue to work through the

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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

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243 you're intimately familiar with, has held legislative
244 hearings on numerous infrastructure proposals this year and,
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

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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
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

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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.

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

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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
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

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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
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

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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
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.

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

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opening statement.

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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

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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.

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.

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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-
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

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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
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

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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
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

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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*****

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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

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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
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.

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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
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.

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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?

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.

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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
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

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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
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

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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
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

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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
692 topics.

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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.

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

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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
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

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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
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.

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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.

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.

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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
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

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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.

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

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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
867 self-serving.

868 But I feel like this is an area where we have been able

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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.

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

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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
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

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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?

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

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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
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?

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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
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.

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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?

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

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

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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 SENSUR
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 SENSUR 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

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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
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

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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.

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

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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
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

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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
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

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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
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

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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
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 --

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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
1242 are agnostic about this.

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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

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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
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

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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

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.

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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
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 --

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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
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.

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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
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

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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
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

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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
1417 to discuss priorities.

1418 I am also going to try to get through a number of

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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.

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

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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
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

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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
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

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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.

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.

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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.]

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

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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
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

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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.

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?

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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

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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.

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

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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
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

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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
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

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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.
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

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1727 is a primate 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?

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.

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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
1767 working group, which NTIA co-chairs with our colleagues at
1768 the Rural Utility Service with looking at three specific work
1769 streams that could bring federal assets to bear on the
1770 challenge, that could streamline for broadband projects, and

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1771 ways to look across the entire federal government at
1772 different funding programs and ensure that they are working
1773 together and complementing each other as we try to bring
1774 broadband to every corner of the country.

1775 Mr. Long. What are some of the lessons learned from
1776 previous efforts to clear federal users from the spectrum
1777 band?

1778 Mr. Redl. So the interesting thing is that this is an
1779 area that I think is a great case study in how we have taken
1780 lessons learned and Congress had incorporated them into
1781 legislation.

1782 The information we learned on AWS-1 in 2007 was then
1783 incorporated into changes to the Spectrum Relocation Fund in
1784 2012.

1785 After 2012, we learned that there were some challenges
1786 with making funding available to agencies and Congress made
1787 another change in 2015 to make that funding available in a
1788 more streamlined process.

1789 It's an iterative process and it gets better every time.
1790 So we thank you for all of the support in trying to make this
1791 as easy as possible.

1792 Mr. Long. Well, you're talking about Congress making

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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

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1815 1675, 1680 megahertz for shared government-commercial use for
1816 the past several years and we are very pleased that the
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.

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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
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

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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
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

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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.

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.

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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
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

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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
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

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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?

1967 Mr. Redl. Of course. Always.

1968 Mr. Shimkus. Great. Thanks.

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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

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1991 looking at.

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

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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
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

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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
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

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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
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

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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
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

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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.

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.

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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
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

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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

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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

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

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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
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.

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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
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.

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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
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

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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
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.

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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*****

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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*****

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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.]