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4 ``OVERSIGHT OF FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET)

5 AND EMERGENCY COMMUNICATIONS''

6 THURSDAY, MARCH 14, 2013

7 House of Representatives,

8 Subcommittee on Communications and Technology

9 Committee on Energy and Commerce

10 Washington, D.C.

11 The subcommittee met, pursuant to call, at 10:32 a.m.,  
12 in Room 2123 of the Rayburn House Office Building, Hon. Greg  
13 Walden [Chairman of the Subcommittee] presiding.

14 Present: Representatives Walden, Latta, Terry,  
15 Blackburn, Scalise, Lance, Guthrie, Kinzinger, Long, Ellmers,  
16 Barton, Upton (ex officio), Eshoo, Matsui, Braley, Welch,

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17 Dingell, Pallone and Waxman (ex officio).

18 Staff present: Ray Baum, Senior Policy Advisor/Director  
19 of Coalitions; Sean Bonyun, Communications Director; Matt  
20 Bravo, Professional Staff Member; Andy Duberstein, Deputy  
21 Press Secretary; Neil Fried, Chief Counsel, Communications  
22 and Technology; Debbie Hancock, Press Secretary; Nick  
23 Magallanes, Policy Coordinator, Commerce, Manufacturing and  
24 Trade; David Redl, Counsel, Telecom; Charlotte Savercool,  
25 Executive Assistant, Legislative Clerk; Lyn Walker,  
26 Coordinator, Admin/Human Services; Tom Wilbur, Digital Media  
27 Advisor; Roger Sherman, Democratic Chief Counsel; Shawn  
28 Chang, Democratic Senior Counsel; Patrick Donovan, FCC  
29 Detailee; and Kara van Stralen, Democratic Special Assistant.

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|  
30           Mr. {Walden.} I would like to call to order the  
31 Subcommittee on Communications and Technology for our hearing  
32 on oversight of FirstNet and emergency communications.

33           Good morning, everyone, and welcome, especially to our  
34 witnesses on both of our panels, as well as our colleagues  
35 and guests.

36           In last year's Middle Class Tax Relief and Job Creation  
37 Act, Congress created the First Responder Network Authority.  
38 FirstNet is an independent entity within the NTIA tasked with  
39 implementing a nationwide interoperable public safety  
40 broadband network. That is no small task. On the first of  
41 today's two panels, we will hear from FirstNet, States, a  
42 former chief of the FCC Public Safety Bureau, and private  
43 sector representatives on what progress is being made and  
44 where we should go from here.

45           The legislation as adopted was not my preferred approach  
46 for many of the reasons expressed in today's prepared  
47 testimony. I favored construction from the bottom up, not  
48 the top down, with certain minimum interoperability  
49 requirements and commercial providers running the network in

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50 partnership with the States. That approach is by no means  
51 guaranteed by the legislation as finally passed. But we must  
52 do our best to implement that model within the confines of  
53 the law if this endeavor is going to succeed. We owe it to  
54 the State and local first responders that risk their lives  
55 for ours, the men and women who are the literal boots on the  
56 ground. And we owe it to the taxpayers, who funded it up  
57 front with up to \$7 billion in federal revenue, and who will  
58 fund it over the long haul through their State and local  
59 taxes.

60 I am a firm believer that the work of Congress begins,  
61 not ends, when a bill is enacted into law. Even at this  
62 early stage, a recent forum of prospective participants  
63 highlighted concerns about how FirstNet is being administered  
64 and how the public safety broadband network will be realized.  
65 I look forward to exploring some of those concerns today.  
66 For example, will FirstNet meet the needs of both rural and  
67 urban parts of the country? Will it bring the needed  
68 innovation and efficiency of the commercial sector to public  
69 safety communications? Will FirstNet conduct open and  
70 transparent proceedings to ensure all potential stakeholders

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71 are heard?

72 As today's witnesses can attest, funding FirstNet will  
73 also be an essential element of making the network a reality.  
74 I was encouraged to hear Senator Rockefeller say at this  
75 week's FCC oversight hearing that the agency should conduct  
76 the incentive auctions in a way that maximizes participation  
77 and revenue. I agree that this will best ensure our public  
78 safety objectives are met.

79 We have learned time and again that in times of natural  
80 and national disaster, communication among our first  
81 responders is key. Ensuring communication lines are open to  
82 the public is equally important. With our second panel, we  
83 will examine the Emergency Alert System, Wireless Emergency  
84 Alerts, and 911 service.

85 As former broadcasters, my wife and I fondly recall  
86 running our required weekly tests of the broadcast emergency  
87 alert system. However, despite its more than 60 years of  
88 existence in one form or another, the EAS was only recently  
89 tested on a national level. While more than 90 percent of  
90 the stations properly ran the test message, technical  
91 challenges prevented stations in my home State of Oregon and

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92 elsewhere from receiving the message. This could have been  
93 catastrophic in a real emergency and it must be resolved in  
94 short order.

95 Broadcast alerts are a critical part of our emergency  
96 infrastructure, but emergency systems, like all  
97 communications media, have changed significantly over the  
98 last 20 years. In 1993 there were only 13 million cell phone  
99 subscribers in America. That was less than 5 percent of the  
100 U.S. population. Today, the broadcast emergency alert system  
101 is part of the Integrated Public Alert and Warning System,  
102 IPAWS, that incorporates broadcast, cable and satellite video  
103 programming distributors as well as more granularly targeted  
104 alerts to wireless devices. So I look forward to our  
105 witnesses giving us a better picture of the successes and  
106 challenges with the alerting systems.

107 Finally, while getting timely emergency information to  
108 the public is critical to emergency response, getting  
109 information from the public is just as crucial. Sadly,  
110 emergencies occur every day in our homes, in our offices, in  
111 our cars and on the streets. This is the world of our 911  
112 call centers. While no less devastating to those involved,

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113 these emergencies are often of a small scale, affecting just  
114 a few people. Every now and then, however, they occur on a  
115 large scale, taxing the resources of both the call centers  
116 and commercial providers. We cannot design the 911 system to  
117 cover every contingency but we should learn from our  
118 experiences to improve it whenever and however we can. We  
119 also need to discuss how we might incorporate more advanced  
120 technologies, which is why this committee incorporated Mr.  
121 Shimkus's and Ranking Member Eshoo's NextGen 911 Advancement  
122 Act in the Middle Class Tax Relief and Job Creation Act. I  
123 look forward to hearing how this national asset is adapting  
124 to serve our needs in a broadband world.

125 I would yield the last bit of my time to the vice chair  
126 of the committee, Mr. Latta.

127 [The prepared statement of Mr. Walden follows:]

128 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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|  
129           Mr. {Latta.} I appreciate the chairman for yielding and  
130 thank him very much and I also appreciate you holding the  
131 hearing today, and I think our distinguished panel of  
132 witnesses for testifying today.

133           Public safety and emergency communications are an  
134 extremely important topic, one that affects every single  
135 American. That is why it is imperative that FirstNet is  
136 successful. A nationwide interoperable public safety network  
137 is a massive undertaking and it is critically important to the  
138 communication system is done right by FirstNet for the sake  
139 of our economy and the safety of all Americans.

140           I am concerned that the role of the States is being  
141 overlooked. I would like to submit for the record, Mr.  
142 Chairman, a letter from the State of Ohio's Chief Information  
143 Officer on concerns regarding FirstNet's funding,  
144 communication planning and representation.

145           Mr. {Walden.} Without objection.

146           [The information follows:]

147 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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|

148 Mr. {Latta.} Thank you, Mr. Chairman.

149 I look forward to the hearing and the testimony from our  
150 witnesses and I look forward to a thoughtful and constructive  
151 discussion.

152 With that, Mr. Chairman, I yield back.

153 [The prepared statement of Mr. Latta follows:]

154 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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|  
155 Mr. {Walden.} The gentleman yields back. The Chair  
156 recognizes the ranking member from California, Ms. Eshoo.

157 Ms. {Eshoo.} Thank you, Mr. Chairman, and good morning  
158 to you, and thank you for holding this very important hearing  
159 today.

160 Mr. Chairman, through our bipartisan work in the 112th  
161 Congress, we laid the groundwork for the first-ever  
162 interoperable nationwide public safety broadband network.  
163 Now, more than 11 years after our Nation was attacked, it is  
164 the First Responder Network Authority, or FirstNet, who has  
165 been tasked with the build-out and maintenance of a network  
166 that will transform the way our first responders communicate.

167 To ensure that FirstNet remains on track, leverages the  
168 expertise of the communications sector, and does not repeat  
169 the mistakes that have plagued public safety communications  
170 for decades, I expect this will be the first of many  
171 oversight hearings because I think that is going to be  
172 important for us to do so, to keep everything on track, and  
173 as we do, all of the stakeholders will know how serious we  
174 are about.

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175           For today's hearing, I would like to offer several  
176 observations that I believe will guide the success of  
177 FirstNet and the transition to Next Generation 9-1-1. First,  
178 consistent with statute, FirstNet must ensure equipment used  
179 on the network is built to open, non-proprietary,  
180 commercially available standards. A \$5,000 radio is simply  
181 unacceptable, particularly when far superior, off-the-shelf  
182 technology can be purchased for a fraction of the price.

183           Second, FirstNet should leverage the expertise and  
184 innovative thinking found across Silicon Valley, my  
185 distinguished Congressional district. A modern, IP-based  
186 network in which first responders rely on Internet-enabled  
187 devices creates new opportunities for both device and  
188 application makers. Covia Labs, a Mountain View-based  
189 startup, is one example of the innovative thinking already  
190 underway.

191           Third, the transition to Next Generation 9-1-1 will  
192 require the continued support of Congress, the FCC, NHTSA and  
193 NTIA. Last month, the FCC issued a detailed roadmap to  
194 Congress on how best to advance and deploy NG9-1-1 across our  
195 country. I am encouraged by the progress made to date and I

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196 believe our success will ensure that local 9-1-1 call centers  
197 can quickly and accurately deliver emergency information to  
198 our first responders.

199       So I want to thank all of our witnesses today for being  
200 here and for your commitment to advancing our Nation's public  
201 safety communications.

202       And with that, Mr. Chairman, I would like to ask  
203 unanimous consent that a letter from the National Governors  
204 Association relative to our hearing today be placed in the  
205 record.

206       Mr. {Walden.} Without objection.

207       [The information follows:]

208 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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|

209 Ms. {Eshoo.} Thank you. I yield back. Does anyone  
210 want to use--Congresswoman Matsui, I would be happy to yield  
211 time to you.

212 [The prepared statement of Ms. Eshoo follows:]

213 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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|  
214 Ms. {Matsui.} I thank the ranking member for yielding  
215 me time.

216 Let me start by saying that FirstNet is here to stay and  
217 it is part of our responsibility to ensure it is efficient as  
218 well implemented. If not, we jeopardize the entire network  
219 and it is as simple as that.

220 I believe transparent governance is paramount and  
221 critical to ensure America's first responders have an  
222 efficient and effective interoperable network. I also  
223 believe States should and will play a critical role during  
224 this process. While not perfect, I believe the law put in  
225 place a strong governance framework with a focus on public-  
226 private partnerships to ensure we achieve our primary goal of  
227 providing a nationwide interoperable broadband network for  
228 our Nation's first responders.

229 Throughout my career, I have sat on a number of  
230 governance boards, and I truly understand the importance of  
231 their roles in providing clear leadership. Simply put, good  
232 governance is a linchpin of the public safety network that  
233 would determine success or failure. It must be done right

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234 from the outset.

235 Thank you, and I want to thank the witnesses for being  
236 here, and I yield back my time to the ranking member to do  
237 with as she pleases.

238 [The prepared statement of Ms. Matsui follows:]

239 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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240 Ms. {Matsui.} Would anyone like to use 35 seconds? I  
241 would be happy to yield.

242 I yield back.

243 Mr. {Walden.} I now recognize the chairman of the full  
244 committee, the gentleman from Michigan, Mr. Upton.

245 The {Chairman.} Well, thank you, Mr. Chairman.

246 Today's hearing is going to examine how we communicate  
247 in times of emergency. The first panel is going to focus on  
248 implementing provisions in our spectrum legislation to create  
249 a nationwide interoperable public safety network. That law  
250 could raise as much as \$7 billion for first responders, help  
251 build out the communications system, and still clear as much  
252 as 120 megahertz of spectrum to meet growing demand for  
253 wireless broadband. But to do so, the FCC must refrain from  
254 excluding potential bidders and maximize the amount of  
255 spectrum that it auctions and the revenue it raises. We also  
256 have to ensure that State and local governments play an  
257 integral role in designing that network.

258 The second panel is going to focus on how we communicate  
259 with our citizens and they with us when danger strikes. The

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260 emergency alert and 9-1-1 systems are pivotal links when the  
261 unfortunate happens, and I want to particularly welcome today  
262 my friend, Diane Kniewski, President and General Manager of  
263 WOOD TV, WOTV, and WXSP. These stations do an excellent job  
264 of keeping our communities in southwest Michigan informed  
265 both in times of emergency and during our day-to-day lives.

266 I would yield to other members wishing time. Seeing  
267 none, I yield back.

268 [The prepared statement of Mr. Upton follows:]

269 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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|  
270 Mr. {Walden.} The gentleman yields back the balance of  
271 his time. We now recognize the former chairman of the full  
272 committee, the gentleman from California, Mr. Waxman.

273 Mr. {Waxman.} Thank you very much, Mr. Chairman, for  
274 holding this hearing, and welcome to all of our witnesses and  
275 especially Sam Ginn, Chairman of the FirstNet Board. Mr.  
276 Ginn has offered to spearhead a historic undertaking that is  
277 vital to our Nation. We appreciate his service and the  
278 service of all the FirstNet board members.

279 Last year, Congress enacted the Public Safety and  
280 Spectrum Act, delivering on one of the last remaining  
281 recommendations from the 9/11 Commission to create a  
282 nationwide interoperable public safety broadband network for  
283 first responders. The Act was the result of bicameral,  
284 bipartisan negotiations that produced a strong and innovative  
285 law. Our job now is to work together to make the legislation  
286 a success.

287 To deliver on the promise of the law, we will need the  
288 cooperation of partners in industry and public safety. The  
289 Act was designed to take advantage of existing commercial

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290 networks and economies of scale. Given the magnitude of this  
291 project, it is critical that FirstNet and its partners  
292 operate efficiently and innovate aggressively.

293         There will be a substantial taxpayer investment in  
294 FirstNet. The law provides FirstNet with valuable spectrum  
295 and \$7 billion to build the new public safety network. We  
296 need to ensure that these public funds go as far as possible,  
297 and I am pleased that most stakeholders seem to recognize  
298 this and are committed to this shared goal.

299         We have profound respect and appreciation for our first  
300 responders, and it is their dedication and the searing  
301 experience of 9/11 that led to the creation of FirstNet. Now  
302 it is time for public safety to step up again and help make  
303 this promise a reality. This will require all parties to put  
304 aside old turf battles and collaborate in a way that puts the  
305 success of the national network first.

306         On the second panel, we will learn more about the FCC's  
307 recent activities to investigate the reliability and  
308 resiliency of our Nation's communications networks. This is  
309 a critical issue. Climate change is supercharging storms.  
310 In the aftermath of Superstorm Sandy, power outages and

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311 floods disrupted many types of communications services,  
312 including wireless, television, telephone and Internet  
313 services. It is absolutely critical that we explore the  
314 impact of weather emergencies on communications reliability.

315 It is fitting that we are discussing communications  
316 reliability at the same hearing during which we consider the  
317 construction of a public-safety-grade broadband network for  
318 first responders. One question I hope we can answer is  
319 whether ``public safety grade'' will become the new normal in  
320 a world in which natural disasters are more frequent.

321 Again, I want to thank all of our witnesses for  
322 appearing today and for your commitment to advancing our  
323 Nation's public safety communications. I thank the chairman  
324 for scheduling this important hearing. I look forward to the  
325 testimony. There is another hearing going on at the same  
326 time, so I will be back and forth. It in no way indicates a  
327 lack of interest on my part. If I don't get to hear your  
328 testimony, I will certainly get a chance to review it, and I  
329 appreciate everybody's participation in this hearing. Yield  
330 back my time.

331 [The prepared statement of Mr. Waxman follows:]

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|  
333           Mr. {Walden.} The gentleman yields back the balance of  
334 his time.

335           And now we are ready to hear from our witnesses. We  
336 welcome you all today. On panel one, to discuss the FirstNet  
337 issues and the interoperable public safety broadband network  
338 build-out, we have the Hon. Sam Ginn, who is Chairman of the  
339 First Responder Network Authority; Chris McIntosh, Statewide  
340 Interoperability Coordinator for Virginia; Ray Lehr, Director  
341 of Statewide Communications Interoperability Coordinator from  
342 Maryland; Admiral James A. Barnett, Jr., Rear Admiral, United  
343 States Navy, retired, former Chief, Public Safety and  
344 Homeland Security Bureau, Federal Communications Commission,  
345 Partner and Co-Chair, Telecommunications Group, Venable LLP--  
346 that takes 20 seconds of your time; Declan Ganley, Chairman  
347 and CEO, Rivada Networks. We thank all of you for being here  
348 and giving us the great value of your testimony and counsel.

349           Mr. Ginn, we are going to open with you. It is good to  
350 see you again, and I look forward to your testimony, and  
351 thank you. Go ahead.

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|  
352 ^STATEMENTS OF SAMUEL GINN, CHAIRMAN, FIRST RESPONDER NETWORK  
353 AUTHORITY; CHRISTOPHER MCINTOSH, STATEWIDE INTEROPERABILITY  
354 COORDINATOR, VIRGINIA; RAY LEHR, DIRECTOR, STATEWIDE  
355 COMMUNICATIONS INTEROPERABILITY COORDINATOR, MARYLAND; ADM.  
356 JAMES A. BARNETT, JR., REAR ADMIRAL U.S. NAVY (RET.), FORMER  
357 CHIEF, PUBLIC SAFETY AND HOMELAND SECURITY BUREAU, FEDERAL  
358 COMMUNICATIONS COMMISSION, PARTNER AND CO-CHAIR,  
359 TELECOMMUNICATIONS GROUP, VENABLE LLP; AND DECLAN GANLEY,  
360 CHAIRMAN AND CEO, RIVADA NETWORKS

|  
361 ^STATEMENT OF SAMUEL GINN

362 } Mr. {Ginn.} Thank you, Chairman Walden and Ranking  
363 Member Eshoo. Thank you for the invitation, and I would like  
364 to thank the committee for the opportunity to give you a  
365 status of where we are at FirstNet. But first I think we  
366 have all watched 9/11, Katrina, and more recently Sandy, and  
367 even if you have sat in a local operation dispatch center for  
368 the police department, you understand how important this  
369 legislation has been, and just as a citizen of this country,

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370 I want to thank you, and I want to thank Congress for this  
371 law because it was an incredible piece of legislation and I  
372 think if we can execute on our end, we will reduce cost, we  
373 will improve operations and we will save lives. So as  
374 Chairman of FirstNet, I thank you.

375 Now, these are early days of FirstNet, and I think the  
376 question I would ask myself is, how are you doing, and I will  
377 try to answer that question in just a few minutes. I think  
378 the first thing you have to understand is, this is probably  
379 the largest telecom project in our history. We will be  
380 building the equivalent of a commercial network over the next  
381 few years with very interesting requirements. We expect to  
382 cover every square meter of land. We expect to penetrate  
383 Manhattan skyscrapers. We expect to implement a new  
384 technology, LTE. We expect to engineer a network that is  
385 multi-carrier based, and we expect to put in this network  
386 public sector features that help them do their job better.  
387 So I think the point of saying this is, this is going to be a  
388 massive, complex and challenging mission, and I just think we  
389 have to understand that as we move into implementation.

390 The second thing that I think is important is what kind

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391 of leadership is gathering around this mission, and I would  
392 like to talk a bit about the board of directors, and first of  
393 all, technical competence is so important. I mean, when you  
394 get right down to it, this is a massive technical effort, and  
395 we have recruited board members with technical wireless  
396 backgrounds. They have engineered wireless systems all  
397 across the United States. They have engineered systems in  
398 Germany, Italy, Spain, Portugal, Sweden, Japan, India and  
399 South Korea. So I think you could be assured that what we  
400 have recruited on the board is a group of people who know how  
401 to engineer wireless networks, and I am confident myself that  
402 we have that technical competence.

403 The other thing I think is important about the board is  
404 the public safety representation. We have members on our  
405 board from police, fire, sheriff and EMS, and not only from  
406 those institutions but these people happen to be leaders in  
407 their disciplines. They are quite active and they make  
408 wonderful contributions. Also on the board, we have members  
409 with background in State government and cities, many years of  
410 experience. They know the issues that those entities face on  
411 a day-to-day basis. And I think the most important thing

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412 that I can report to you today is this board is coming  
413 together. It is beginning to operate as a team, and I think  
414 that is a first, wonderful implication of getting this  
415 project off on the right foot.

416 The second thing that I think needs to be said is, this  
417 is a startup. We are starting from a blank sheet of paper.  
418 We have no milestones to measure our performance. We have no  
419 employees to start with. We have no budget. We have no  
420 financial controls. We have no audit function. We have no  
421 history and no culture. And so institutions need to put all  
422 of these things in place, and we have been busy for the last  
423 few months putting these requirements in place. And I would  
424 say that things are coming together. Next week we will  
425 announce the appointment of a general manager, and I would  
426 guess that the senior manager of the team will be in place  
427 very quickly, so the report is, we are progressing to a more  
428 normal operation, which is, we can manage and measure.

429 Now, the other thing is that the world doesn't stop even  
430 though you have only a board and no employees, and so we have  
431 had to deal with a number of emerging issues. We have  
432 obviously had to deal with the conceptualization of the

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433 network itself, and let me just be a little more specific  
434 here. We are going to implement an LTE system. The LTE  
435 system is a commercial system, and it has to be modified for  
436 public safety requirements. We are in the process of doing  
437 that. If you don't do that, if you don't embed public safety  
438 needs into the standards, the standards get published and  
439 manufacturers don't deliver the kind of capabilities that  
440 public safety needs. So we have been heavily involved in the  
441 standards process making sure that public safety issues are  
442 addressed. We have been conceptualizing multi-carrier  
443 networks, and there are not many of these world, and there is  
444 a lot of work that needs to be done in terms of proof of  
445 concept and do multiple-carrier networks really work and how  
446 do they work best. So we have taken directors who have taken  
447 full-time jobs, one on technology, to work on these issues.  
448 We have a full-time director on outreach because you discover  
449 very quickly that the public safety community and other  
450 communities, for that matter, have points of view and they  
451 demand to be understood, and we understand that because  
452 customer expectations are clearly the way to solve these  
453 issues.

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454           Mr. Chairman, I will stop there and be willing to take  
455 your questions.

456           [The prepared statement of Mr. Ginn follows:]

457           \*\*\*\*\* INSERT 1 \*\*\*\*\*

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|

458 Mr. {Walden.} Thank you, sir.

459 We will now turn to Mr. McIntosh. We are pleased that  
460 you are here to give us from an on-ground perspective as the  
461 Statewide Interoperability Coordinator for Virginia, and  
462 please pull that mike up close and you have got your 5  
463 minutes. Thank you.

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|  
464 ^STATEMENT OF CHRISTOPHER MCINTOSH

465 } Mr. {McIntosh.} Thank you, Chairman Walden, Ranking  
466 Member Eshoo, distinguished members of the committee.

467 Communications is the one constant that forms the  
468 foundation for all other public safety disciplines. It is  
469 the bedrock of every response plan, the core of every  
470 procedure. In the past 11 years, billions of dollars have  
471 been spent across the Nation on communications programs. New  
472 radio systems have been fielded, interoperability has been  
473 greatly improved, and the ability of our first responders to  
474 communicate is better than ever.

475 Unfortunately, funding levels have been fallen  
476 precipitously. Virginia has seen consecutive 50 percent cuts  
477 in federally funded State homeland security grant programs,  
478 and historically, almost 30 percent of that funding has gone  
479 to support and maintain communications. In 2011 alone, the  
480 Commonwealth received \$43 million in requests from localities  
481 for communications grant funding and was only able to award  
482 \$2 million. Virginia has also recently seen the loss of

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483 funding of two Urban Area Security Initiatives resulting in  
484 the reduction of tens of millions of dollars in annual  
485 funding. Much of that went to communications program as  
486 well.

487       We stand on the verge of a revolution in emergency  
488 communications capabilities. However, traditional land  
489 mobile radio systems are beginning to become integrated with  
490 Voice over Internet Protocol technologies. By fusing voice  
491 communications with Internet technologies, new possibilities  
492 are becoming a reality. Virginia operates one of the largest  
493 public safety Voice over IP networks in the Nation. Soon any  
494 laptop, tablet or smartphone in the hands of a Virginia  
495 public safety professional will become a radio capable of  
496 communicating with any PSAP in the State or any responder on  
497 a radio connected to it and fusing that with crisis  
498 management video and geospatial information system-based  
499 information to allow previously unheard-of levels of  
500 situational awareness.

501       All of these capabilities rely on reliable connectivity,  
502 and public safety broadband offers a solution that addresses  
503 many of the connectivity issues faced by public safety. Now

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504 public safety professionals will have the opportunity to have  
505 unfettered access to wireless communications in order to  
506 improve their ability to respond to incidents safely and  
507 effectively. The challenge lies in making all this a reality  
508 in the current fiscal environment.

509 Public safety communications budgets like other budgets  
510 are heavily encumbered with existing core funding needs and  
511 have little flexibility to fund new programs or new  
512 capabilities. Public safety broadband will not replace  
513 existing or planned land mobile radio systems in the near  
514 future. LMR has proven its reliability, survivability and  
515 usability many times over. Cellular technologies, on the  
516 other hand, have proven to be susceptible to widespread  
517 failure during natural disasters. Cellular infrastructure  
518 density results in a dependence on reliable power supplies  
519 and redundant backhaul connectivity that is a major  
520 vulnerability. Even after mitigations to these issues are  
521 designed into the network, it will be some time before we can  
522 adequately evaluate their effectiveness. The cost of public  
523 safety broadband will be in addition to current land mobile  
524 radio costs currently paid by State and local governments.

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525 The time horizon for replacing LMR cost with public safety  
526 broadband cannot be determined.

527 The FirstNet Board has been on the record to state that  
528 the network will cover every square meter of the United  
529 States. They must do this with a network that greatly  
530 exceeds the design specifications and redundancies of  
531 commercial networks but with a fraction of the resources the  
532 private sector has currently expended in a network that only  
533 covers two-thirds of the country. The States are  
534 understandably nervous that the combination of increased  
535 costs and insufficient funding will result in the uncovered  
536 costs being passed on to State and local governments, further  
537 diminishing funding for other core first responder  
538 necessities. In light of this, States need the ability to  
539 define the level of partnership that they will engage in with  
540 FirstNet. States should be allowed to negotiate partnerships  
541 on their own with the private sector that are designed to  
542 generate revenue that can be applied to the network. Many of  
543 these potential partners are local or intrastate in nature,  
544 making the State-local team the appropriate governing  
545 structure for this arrangement as opposed to FirstNet.

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546 FirstNet cannot be expected to understand each State's unique  
547 circumstances and needs. It is through a partnership between  
548 States and localities and the FirstNet Board that this  
549 program will be successful.

550 In addition, adding a current State official to the  
551 FirstNet Board would be very helpful to this endeavor. The  
552 Act requires that each State or territory certify that they  
553 have designated a single officer or governmental body to  
554 coordinate, serving as a portal through which FirstNet will  
555 conduct its consultation with the State. Many States,  
556 including Virginia, have established this communications  
557 channel and are waiting for FirstNet to reciprocate. In the  
558 inaugural FirstNet Board meeting, a notional architecture for  
559 the network was presented, and we are told that a more  
560 refined version will be presented in April. This network is  
561 being designed before the consultation mentioned before has  
562 been done.

563 Public safety broadband is a far-reaching and mission-  
564 critical program. To succeed, it requires direct  
565 communication and coordination between FirstNet and the  
566 States. This will ensure that requirements are captured and

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567 adequate mechanisms are developed that permit the network as  
568 operations and maintenance and the planning, training and  
569 exercising and support are adequately and reliably funded.  
570 Establishing a vehicle for the designee of each State or  
571 territory to work directly with FirstNet within the FirstNet  
572 governing structure would vastly improve the collaboration  
573 between FirstNet and the States and territories. The  
574 partnership between the States and FirstNet must be direct,  
575 open, transparent and ongoing.

576 With that, I stand by for your questions.

577 [The prepared statement of Mr. McIntosh follows:]

578 \*\*\*\*\* INSERT 2 \*\*\*\*\*

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|

579           Mr. {Walden.} Thank you very much. I appreciate your  
580 testimony.

581           Now we will hear from Ray Lehr, who is the Director of  
582 Statewide Communications Interoperability Coordinator for the  
583 State of Maryland. We welcome you today and look forward to  
584 your comments, sir.

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|  
585 ^STATEMENT OF RAY LEHR

586 } Mr. {Lehr.} Thank you, Chairman Walden, Ranking Member  
587 Eshoo. Members of the committee, thank you for the  
588 opportunity to be here today. I have provided written  
589 remarks, which I believe you have available to you. Having  
590 previewed the testimony of the other panelists, and just  
591 heard my good friend Chris give his testimony, I am delighted  
592 to see we are mostly in agreement on the key elements. In an  
593 effort to save time, I am going to summarize my comments.

594 Let me start by formally thanking this committee, the  
595 entire Congress and the President for the passage of the  
596 legislation. This is a historic opportunity for public  
597 safety. A robust, reliable and secure broadband network will  
598 not only save citizens' lives, it will save first responders'  
599 lives on a daily basis.

600 Now that FirstNet has begun, it is in the best interest  
601 of every State to work with FirstNet to ensure that all of  
602 the requirements are met. How can we make that happen? I  
603 can tell you from personal experience in Maryland building a

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604 statewide radio system, you have to go to the source, the  
605 actual users of the system. We were designing coverage for  
606 our system and we found a half-mile by half-mile area that  
607 didn't have radio coverage. Looking at it on the map, it was  
608 heavily wooded, only had a single road so it looked like it  
609 would be minimal impact. But when we spoke to the local  
610 emergency managers, we found out this area sees a high level  
611 of public safety activity. Because of its isolation,  
612 criminals have used it as a dumping ground for stolen  
613 vehicles, and even a body. There have been field fires in  
614 the summer and traffic accidents on the windy single-lane  
615 road. This area needs coverage for police, fire and EMS.  
616 Even some federal task forces are now operating in the area.  
617 We never would have known this without the local input that  
618 we got during the design. This is why FirstNet needs to be  
619 involved with end users in the design and development of the  
620 broadband network.

621 I can assure you, we want to help. I urge FirstNet to  
622 build on the foundations that already exist in States, not  
623 only the network infrastructure but also the working groups  
624 that have been solving communication problems for first

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625 responders over the last decade. I believe the nationwide  
626 public safety broadband network has a much greater chance of  
627 success if all States opt in. That would make  
628 interoperability much easier and also take advantage of the  
629 seamless design. Also, the upgrades would occur in unison,  
630 ensuring continuity of operation.

631 To enable governors to make an informed opt-in decision,  
632 the States will need information on five key components.  
633 Number one is the network design security redundancy and  
634 reliability. Public safety needs a robust network and  
635 broadband devices that can operate during the worst  
636 conditions imaginable, because that is what our public safety  
637 folks are in the field. Number two: State assets that can  
638 be leveraged, towers, fiber optics, microwave, network  
639 operation centers. By using State assets which are built to  
640 higher standards than commercial networks, we increase  
641 reliability, and States should realize some cost offsets by  
642 virtue of their infrastructure investments in the nationwide  
643 network. Number three is coverage, both in building and  
644 rural. As stated earlier, only the State and local public  
645 safety leaders can speak to their needs. The early input

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646 will ensure the network meets the expectations of each  
647 community. Number four, network priorities. Long-term  
648 evolution, or LTE, as it is known, is a standard that allows  
649 for a wide range of priorities for network access under  
650 different types of emergencies. Often these priorities will  
651 be dynamic as the event evolves so local control is  
652 absolutely essential. And number five is the cost to operate  
653 and maintain. This is of great concern to States because  
654 they will be asked to pay an unknown amount to use and  
655 maintain the network. The costs need to be no greater than  
656 what they are paying for cellular service today.

657         While it is possible that FirstNet could negotiate a  
658 better deal with national carriers, there are other potential  
659 partners in the region and at the local level. States need  
660 the ability to work with local business partnerships in order  
661 to help raise revenue where possible.

662         In closing, I would like to express our excitement about  
663 this once-in-a-lifetime opportunity. It is going to  
664 ultimately save lives, protect people and property, and  
665 enhance our performance during times of national crisis as  
666 well as every day.

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667           With that, I thank you again and I look forward to your  
668 questions.

669           [The prepared statement of Mr. Lehr follows:]

670           \*\*\*\*\* INSERT 3 \*\*\*\*\*

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|  
671 Mr. {Walden.} Mr. Lehr, thank you for your testimony.

672 It is most insightful.

673 We will now go to James A. Barnett, Rear Admiral, U.S.  
674 Navy, retired, former Chief of Public Safety and Homeland  
675 Security Bureau, Federal Communications Commission, and now a  
676 Partner and Co-Chair at Telecommunications Group, Venable  
677 LLP. So we welcome you with the broad range of background  
678 you bring and the experience, and we appreciate the report  
679 you have provided for each of us, and its at times colorful  
680 analogies. Admiral Barnett, thank you for being here. We  
681 look forward to your testimony.

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|  
682 ^STATEMENT OF JAMES A. BARNETT, JR.

683 } Admiral {Barnett.} Thank you, Chairman Walden, Ranking  
684 Member Eshoo and distinguished members of the subcommittee  
685 and for the opportunity to talk about FirstNet's challenges  
686 and road to success.

687 As you mentioned, I used to be the Senior Vice President  
688 of Potomac Institute for Policy Studies, which is an  
689 independent, nonpartisan science and technology policy think  
690 tank in the area, and as such, I was pleased to serve as the  
691 Principal Investigator for a study titled ``What Should  
692 FirstNet Do First'', which as the chairman mentioned is there  
693 and offered for the record.

694 FirstNet has many advantages and opportunities: a  
695 highly experienced governing board, 24 megahertz of great  
696 spectrum, and initial funding of \$2 billion. But the  
697 challenges that FirstNet faces are daunting, as Chairman Ginn  
698 mentioned. The full funding of \$7 billion is not enough for  
699 a nationwide network, and no model or precedent exists for  
700 establishing this network. Just like the failed D block

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701 auction, there are existential risks, and success is not  
702 assured. But everybody involved wants FirstNet to succeed,  
703 and in that spirit I would offer four recommendations. The  
704 first is to embrace the States, the second is, one size does  
705 not fit all, the third is to develop a cost model, and the  
706 fourth is to contract for expertise now.

707 First, FirstNet must embrace the States in a way that it  
708 has not previously. Before the FirstNet board members were  
709 seated, there was a confusion that developed that both public  
710 safety is both the user and the customer, as it has been in  
711 the past. The States, which may be huge stakeholders and  
712 customers for FirstNet, perceive that they have been ignored  
713 and excluded from the table. So for a chronically  
714 underfunded and undercapitalized network, alienating your  
715 customers at the outset is a huge problem. FirstNet can  
716 forestall the active consideration by some States to opt out  
717 statutorily if it opens its process. As I suggested in the  
718 FirstNet report, Chairman Ginn and the FirstNet board have  
719 reached out to the National Governors Association, to the  
720 governors, the State CIOs, the States' BTOP recipients, and  
721 this effort should be continued and expanded to fully

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722 incorporate governors and State CIOs into the process with  
723 direct input to the board and ultimately representation on  
724 the board. FirstNet must be open to early deployers, public-  
725 private partnerships, innovative arrangements from the State  
726 to attract private capital, public infrastructure and more  
727 users into the network. The talk about signing over State  
728 assets to FirstNet must give way to discussions about how  
729 FirstNet will serve the States' needs and how FirstNet can  
730 contractually use State infrastructure. Increased  
731 information sharing and transparency with the States will  
732 help also.

733 To achieve Congress's central goal, FirstNet should  
734 adopt a principle of national interoperability with local  
735 control, and one size will not fit all. Some States and  
736 localities may wish to combine into regions for the network.  
737 Some States may wish to form public-private partnerships with  
738 carriers or public utilities. Some may be able to obtain  
739 essential network funding if they are allowed to proceed now  
740 with their deployment plans.

741 FirstNet must retain the technical capability to  
742 administer the national network and ensure that it will be

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743 interoperable, but if it has that capability by contracting  
744 with experts, then the network can go faster and can achieve  
745 early wins.

746 To attract funding into the network, FirstNet should  
747 consider what might be called a franchise operation under its  
748 control. The decision to reopen the question of whether BTOP  
749 recipients may proceed is a very encouraging development and  
750 is consistent with the concept that one size does not fit all  
751 and that a network of networks may be the key to success.

752 FirstNet should develop a cost model and a financial  
753 analysis that will explain to State customers, public safety  
754 users and other stakeholders such as carriers and equipment  
755 providers what this network will cost to build and use. This  
756 is critically important. To move quickly and expertly,  
757 FirstNet should be allowed to contract with its cost model  
758 and financial analysis, and until this is developed, anyone  
759 making plans for use of the network would be speculating on  
760 what the services would cost and be. A cost model and plan  
761 would be a very high priority and must precede decisions that  
762 would limit where the model and plan might lead.

763 FirstNet needs more expertise and human resources right

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764 away. The FirstNet board members are an extraordinarily  
765 qualified and a very talented and experienced group but they  
766 are a board and they are not a full-time staff. They need a  
767 full-time staff. Some employees are being obtained but  
768 FirstNet needs access to the expertise now quickly, and to  
769 help them analyze and plan and coordinate and manager, and  
770 the fastest and best way is to contract for that expertise  
771 and to use government employees to oversee those contracts.

772 So thank you for this opportunity to talk to you about  
773 how FirstNet can be successful.

774 [The prepared statement of Admiral Barnett follows:]

775 \*\*\*\*\* INSERT 4 \*\*\*\*\*

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|

776           Mr. {Walden.} Thank you, Admiral. We appreciate your  
777 testimony and the report.

778           We will go now to our final witness on this panel, the  
779 Chairman and CEO of Rivada Networks, Declan Ganley. Mr.  
780 Ganley, we are delighted you are here this morning and we  
781 look forward to your testimony, sir.

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|

782 ^STATEMENT OF DECLAN GANLEY

783 } Mr. {Ganley.} Good morning, Chairman Walden and Ranking  
784 Member Eshoo. Thank you for your invitation this morning.

785 My wife's family business was headquartered in World  
786 Trade Center Two, and 9/11 was a very impactful event for my  
787 family, and I had rolled out a broadband across several  
788 countries in Europe. I do not envy Chairman Ginn the task  
789 that he faces in getting this thing rolled out here, but 9/11  
790 brought home to us in a very personal way the issues that the  
791 9/11 Commission reported covered so well highlighted, of  
792 course, the establishment, the passing of this legislation  
793 and the establishment of FirstNet goes a long way to  
794 achieving the objectives of the 9/11 Commission report.

795 I want to say right at the outset, I see no other way to  
796 get it done other than this in terms of what FirstNet has  
797 been tasked with doing, getting the job done and getting it  
798 done as expeditiously as possible, and the board that has  
799 been put together certainly contains the competence, the  
800 ability, the public safety expertise to accomplish many of

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801 those goals.

802           During Hurricane Katrina, Rivada Networks, my company,  
803 deployed emergency cellular base stations in Louisiana with  
804 satellite backup, and while able to provide emergency  
805 communications to first responders, we found that when usage  
806 capacity was at a maximum, we were unable to provide  
807 prioritized access to those who needed it. So there were  
808 times when the system would be at maximum capacity, a Coast  
809 Guard admiral would key up, try to get on and would have to  
810 wait to be able to get on.

811           And as a result of that experience, Rivada spent a  
812 number of years developed tiered priority access--we call it  
813 TPA--allowing us to allocate access to bandwidth based on  
814 prioritization of the end user, and having developed tiered  
815 priority access, we realized that if we could tier priority  
816 access at a local level, we could do it on any scale,  
817 allowing bandwidth to be commoditized and allocated to users  
818 based on real-time valuation, dynamic allocation of that  
819 bandwidth and of access to that bandwidth. TPA allows public  
820 safety control over its own permanent, dedicated network--it  
821 is their network--granting full and absolute priority when

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822 needed through a throttling mechanism while making the  
823 surface bandwidth dynamically available to the wholesale  
824 commercial users during the significant periods of fallow  
825 time when the bandwidth is not being used by emergency  
826 responders. This dynamic-spectrum arbitrage revenue-  
827 generating capability can allow private capital sufficient  
828 security to construct these networks for cities and States  
829 and in a great many of these cities and States will provide  
830 surplus funding, which could be used to help the FirstNet and  
831 fund the FirstNet mission.

832 In our view, FirstNet has the best opportunity to  
833 achieve a nationwide public safety network that is fully  
834 interoperable, and while the States opting out of the  
835 FirstNet model is permitted by the legislation, it is, in our  
836 opinion, neither optimal nor necessary. The best path to  
837 success for States and cities is under the FirstNet umbrella.  
838 The ability to provide a dedicated network that guarantees  
839 absolute prioritization for public safety while eliminating  
840 the burden to the taxpayer and generating surplus revenue to  
841 fund the maintenance, expansion and improvement of the  
842 network is obviously compelling. Partnering with private

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843 capital, public safety gains a state-of-the-art network built  
844 to public safety standards and a new stream of revenue that  
845 eases and in cases may even eliminate this burden on the  
846 America taxpayer.

847 And so these core goals, the highest quality of public  
848 safety network built to public safety standards, flexibility  
849 to allow these networks to start getting built out in an  
850 expeditious a manner as possible and a positive revenue  
851 outcome are unlikely to be achieved in a more efficient way  
852 than that type of approach.

853 So in essence, the good news is, because this spectrum  
854 that this legislation allocated is prime real estate, it is  
855 very valuable, public safety can own and control it  
856 themselves, but by allowing cities, States, FirstNet to be  
857 able to allow dynamic access to that spectrum, you have a  
858 source here to generate revenue that under the legislation  
859 can offset and maybe even eliminate the burden to the U.S.  
860 taxpayer of building these networks. That has got to be good  
861 news for the American taxpayer, and for public safety.

862 [The prepared statement of Mr. Ganley follows:]

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863 \*\*\*\*\* INSERT 5 \*\*\*\*\*

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|  
864 Mr. {Walden.} Mr. Ganley, thank you very much for your  
865 testimony. Thanks to all of you on the panel. We will now  
866 go into the next phase of our hearing, which is the question-  
867 and-answer part.

868 I want to ask Mr. McIntosh and Mr. Lehr representing the  
869 two States, well, the Commonwealth of Virginia and the State  
870 of Maryland--I will try to get that right--in the governors'  
871 letter to us, they point out that they remain disappointed  
872 States were not better represented on the FirstNet board. So  
873 what is really going on there?

874 Mr. {McIntosh.} Thank you, Mr. Chairman. As was  
875 alluded to by all the members up here, the partnership--one  
876 thing we have learned through interoperable communications is  
877 partnership begins with participation.

878 Mr. {Walden.} Right.

879 Mr. {McIntosh.} And the fact that there is not a  
880 current State official on the FirstNet board--

881 Mr. {Walden.} But there is supposed to be somebody by  
882 statute on the board representing the State interest, right?

883 Mr. {McIntosh.} The one member that I am aware of that

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884 is there to fulfill that requirement is not a current State  
885 official.

886 Mr. {Walden.} How does that happen?

887 Mr. {McIntosh.} I don't know.

888 Mr. {Walden.} Mr. Lehr, do you care to comment on that  
889 point? Who made the appointments?

890 Mr. {Lehr.} Chris is absolutely correct. The current  
891 member is a former CIO Of two States, I think California and  
892 Michigan, but not currently representing or doesn't hold an  
893 active role in the State. Also, Mr. Chairman, I will point  
894 out that when the National Governors Association met two  
895 weekends ago in Washington, the Wyoming Governor, Governor  
896 Mead, also made a pitch that not only should the NGA be  
897 represented but perhaps a governor himself or herself should  
898 be the representative on the FirstNet board.

899 Mr. {Walden.} Because I assume--I won't put words in  
900 Admiral Barnett's mouth but, you know, he was an admiral and  
901 he was at the FCC and then he was off at a think tank and now  
902 doing whatever it is you do, you don't get to speak for the  
903 Navy now, right?

904 Admiral {Barnett.} No, sir, I do not.

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905           Mr. {Walden.} And so why would we have a federal  
906 employee speaking for the States? Mr. Ginn, how did that  
907 happen?

908           Mr. {Ginn.} Mr. Chairman, I was not privy to the  
909 appointment of the board.

910           Mr. {Walden.} Who makes the appointments to the board?

911           Mr. {Ginn.} The Secretary of Commerce.

912           Mr. {Walden.} All right. So we will take up that  
913 matter with the Secretary of Commerce then.

914           Mr. {Ginn.} But just a comment--

915           Mr. {Walden.} Are you comfortable with that situation?

916           Mr. {Ginn.} Well, I would say this. Diversity is  
917 really important, but you reach a point where knowledge and  
918 competence is just as important.

919           Mr. {Walden.} So are you saying that the States don't  
920 have anybody that would be knowledgeable or competent enough  
921 to represent--

922           Mr. {Ginn.} No, I am just saying that the current  
923 appointee is an outstanding member of the board.

924           Mr. {Walden.} Well, I don't dispute that. It is just  
925 that we wanted somebody that actually was from a State. I

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926 guess we should have been more clear in the statute, but  
927 somebody representing the States' interests we thought would  
928 mean somebody from a State, not from the federal bureaucracy.

929 Mr. {Ginn.} I guess that got interpreted as since she  
930 had been a CIO for both California and Michigan, that she met  
931 the requirement.

932 Mr. {Walden.} Well, it feels like an insider deal to me  
933 in terms of federal government pretending to represent  
934 somebody it is not, and that is not any aspersion on the  
935 individual. I am just saying that it seems to me it would be  
936 better if actually the governors had that say in making a  
937 recommendation. I realize you don't make that appointment  
938 but, hey, you re the only one we have before us today.

939 And you and I have talked on a number of occasions, Mr.  
940 Ginn, starting at the end of last year about some of the  
941 urgent, specific problems you felt needed to be rectified  
942 through legislation, and I know in your testimony you said  
943 you wanted to work with Congress to explore obvious and  
944 reasonable measures. This is your opportunity to make those  
945 obvious measures known to us and to the public. Can you be  
946 real specific about the issues you are encountering and what

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947 it is you think needs to be changed statutorily?

948 Mr. {Ginn.} Well, I think the way to start this is to  
949 say that someone coming from a commercial enterprise and  
950 faced with the acquisition and procurement rules and  
951 government, you see that potentially they can increase the  
952 costs or extend the time that we can build this network, and  
953 what I would suggest is that we work together looking at  
954 those procedures and give us the freedom to really execute  
955 this network more efficiently than we otherwise could. So  
956 that is the point I made in my testimony.

957 Mr. {Walden.} Do you have specific recommendations for  
958 us? Because when we talked at the end of the year, I was  
959 under the impression that you had some or were at least  
960 developing some, because there was--

961 Mr. {Ginn.} Well, we have developed some. We have  
962 actually submitted some recommendations to your staff and the  
963 staff at the Senate, and what we would like to do is take the  
964 time to sit down with you and discuss those. We are not  
965 trying to move away from what is competitive and open, and  
966 all the requirements that I know that you would insist on and  
967 I would insist on, but all I am saying is, government rules

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968 in a complex project like this are not necessarily geared to-  
969 -

970 Mr. {Walden.} Well, that is why I was hoping in the  
971 context of this hearing, we would get more of that out on the  
972 table.

973 My time is now expired so I will recognize the  
974 gentlelady from California, Ms. Eshoo.

975 Ms. {Eshoo.} Thank you, Mr. Chairman, and thank you to  
976 each of the witnesses. You have been absolutely terrific,  
977 and I thank you for what you are doing. What I really have  
978 drawn out of this and I appreciate is the wonderful spirit  
979 that is at the table, and there are obviously some sticky  
980 wickets that we have to work out. This is the first time in  
981 the history of our Nation that we are taking this on, and  
982 each one of you mentioned that in some way, shape or form,  
983 but the spirit in which you have approached this, I really  
984 appreciate and I think that that remains with us as we work  
985 our way through all of this.

986 Let me start with Mr. Ginn. Thank you for being the  
987 first heading up FirstNet. Congratulations to you. The  
988 chairman just mentioned your meeting with him. We met in my

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989 Palo Alto office, my district office, on the 21st of  
990 February, and you also met with Mr. Waxman to go through the  
991 concerns that you have. I think the sooner you get these  
992 issues to us, the specifics of them, that we can start to  
993 work on them because, you know, the subcommittee wants all of  
994 this to work just the way you do, and you know that I was  
995 concerned that what you were sharing with me would ensnare  
996 the work and really throw stand in the gears relative to  
997 ensuring that we have a nationwide interoperable public  
998 safety network. So the sooner you get this to us, I think  
999 the better off we are going to be.

1000           What I would like to ask is, what steps is FirstNet  
1001 taking to achieve economies of scale in device costs? I have  
1002 been concerned about that all along, and if you could just  
1003 answer that as quickly as possible because I have three other  
1004 questions I would like to ask.

1005           Mr. {Ginn.} Okay. Well, good. Well, one of the  
1006 advantages of a national architecture is, you take advantage  
1007 of scale, and with scale, you get reduced cost, and  
1008 specifically with terminals, I think what is going to come  
1009 out of this program is a completely engineered terminal for

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1010 first responders, and it is going to be multichannel, it is  
1011 going to have special features built into it. It will be  
1012 positioned to service police and fire and emergency medical.  
1013 And when you order in volumes, you can drive down the costs.

1014 Ms. {Eshoo.} Now, have you considered integrating  
1015 adjacent spectrum bands used by commercial wireless providers  
1016 into 4G LTE-based public safety devices as a way to drive  
1017 down cost?

1018 Mr. {Ginn.} Absolutely.

1019 Ms. {Eshoo.} Good, good. And given the sensitive  
1020 nature of data that will travel across the nationwide  
1021 networks, what steps is FirstNet considering to ensure that  
1022 security is built into the network from day one?

1023 Mr. {Ginn.} It is a really important issue.  
1024 Cybersecurity has got to be a part of the system.

1025 Ms. {Eshoo.} Good.

1026 Mr. {Ginn.} We are going to rely on DHS and Department  
1027 of Defense, who have some real experts in this arena, to help  
1028 us put that plan in place.

1029 Ms. {Eshoo.} Is it too early, or has the FirstNet board  
1030 received threat and vulnerability briefings from agencies

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1031 such as DHS or NSA?

1032 Mr. {Ginn.} Well, what we--

1033 Ms. {Eshoo.} It might be too early for that. I don't

1034 know.

1035 Mr. {Ginn.} Let me tell you where we are.

1036 Ms. {Eshoo.} Quickly, because I have 59 seconds left.

1037 Mr. {Ginn.} You know, from a nationwide point of view,

1038 from our point of view, a number of things have to be in

1039 place: interoperability, which means that these systems not

1040 only have to communicate between local police and fire but

1041 they have to be able to communicate across States, number

1042 one. You have to have a nationwide security system. You

1043 have to have reliability standards that are nationwide, and

1044 because we anticipate an application engine for the entire

1045 network. That needs to be engineered on a national basis.

1046 So we are in the process of establishing these. When we

1047 establish them, we are open to States to do whatever they

1048 want, and just let me say here--

1049 Ms. {Eshoo.} Well, we are just about out of time.

1050 Maybe you can respond in writing.

1051 If I might, Mr. Chairman, and I appreciate what was

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1052 given to us and the work that was done by the Potomac  
1053 Institute for Policy Studies, but as I opened it this  
1054 morning, I looked at page 8. I am struck by something, and  
1055 again, I appreciate all the work that has gone into this, and  
1056 I will read the entirety of the report. There were women  
1057 involved in this, women Members of Congress, to produce this  
1058 legislation, namely Kay Bailey Hutchinson in the Senate. She  
1059 contributed mightily from the very beginning on this issue.  
1060 You are looking at someone that worked very hard to keep this  
1061 bipartisan and to produce a great product. So, you know,  
1062 looking at this, it seems as if it is a very old Congress  
1063 that doesn't have any women and women involved in it, and I  
1064 don't think that is the message that you intended to send  
1065 out, but I was struck by it and I wanted to raise it, and it  
1066 is National Women's History Month too. So thank you for our  
1067 service to our country. We are in service to our country as  
1068 well.

1069 Mr. {Walden.} May I take a point of personal privilege?

1070 Ms. {Eshoo.} Certainly, Mr. Chairman.

1071 Mr. {Walden.} You just referred to a very old Congress,  
1072 and I see my picture is one of those.

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1073 Ms. {Eshoo.} No, you deserve to be there. You are the  
1074 chairman of the committee.

1075 Mr. {Walden.} But it is the old part I was--

1076 Ms. {Eshoo.} No, no, no, no.

1077 Mr. {Walden.} This is now an age discrimination issue I  
1078 am going to take up with you at a later date.

1079 Ms. {Eshoo.} No, no, no. You know what I am referring  
1080 to, Congresses of yesteryear.

1081 Mr. {Walden.} And you were terrifically involved in  
1082 this whole process, and you and I and our staffs spent many,  
1083 many hours involved, and we couldn't have done it without  
1084 your leadership and help.

1085 We will now turn to the vice chairman of the  
1086 subcommittee, Mr. Latta.

1087 Mr. {Latta.} Thank you very much, Mr. Chairman, for  
1088 yielding, and if I may say, sometimes it is not the age, it  
1089 is sometimes the mileage.

1090 Mr. {Walden.} I take a personal--

1091 Mr. {Latta.} I appreciate you for yielding.

1092 Back when I was in the Ohio General Assembly in the  
1093 1990s, Ohio was in the development of the State's land mobile

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1094 radio system, what we call the Multi-Agency Radio  
1095 Communications System, or MARCS for short. And you fast  
1096 forward to today and MARCS is currently providing a critical  
1097 mission voice and data for Ohio's public safety and first  
1098 responders. The system is currently through a \$90 million  
1099 upgrade and is actively pursuing local government and the  
1100 adoption and steadily increasingly. Now with the  
1101 establishment of FirstNet last year, the folks back in Ohio  
1102 were concerned that the FirstNet has already designed a  
1103 system without that State input, and if I could, and  
1104 following on with Chairman Walden talked about a little bit  
1105 earlier, Mr. Ginn, if I could ask this first question to you.  
1106 In your testimony, you are very encouraging to the committee  
1107 in that you appear to recognize the need for State and local  
1108 input into FirstNet's decisions. You have also indicated  
1109 your intention to maintain local control and management of  
1110 the network. And again, as stated by the chairman, Ohio and  
1111 other States have raised concerns about their inclusion in  
1112 the network design and the build process and about the need  
1113 for local control and about the financial impact, and on page  
1114 4 of your testimony, you do state that it must be affordable

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1115 to the user and States' participation in FirstNet.

1116 I also hear you say that it is your intent to reach out  
1117 to the States, but given that this has not happened to a  
1118 significant degree some 6 months into the process, can you  
1119 assure us and the States when this is going to start  
1120 happening, that the States are going to be involved in these  
1121 decisions that are happening, and especially the governors  
1122 because I know in Ohio, they are very, very concerned about  
1123 what is happening, and so if I could just pose that first  
1124 question to you as to some kind of a timetable.

1125 Mr. {Ginn.} Well, yeah. I think first of all, there is  
1126 a lot of outreach already taking place. Many of us have  
1127 attended many forums, communicated about FirstNet and its  
1128 goals and objectives, and there is an enormous outreach  
1129 effort in place today. Now, I think you need to understand  
1130 that what we anticipate is a national architecture with local  
1131 control and operations, okay? And that is the way I think  
1132 this network has to operate, and if you take a look at Adams  
1133 County, Colorado, I am fascinated by what happened there in  
1134 the BTOP arena. Here you had local public safety, you had  
1135 local political structure. They got together. They

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1136 dedicated buildings and dark fiber and all kind of  
1137 capabilities to that system and built it at a very, very  
1138 inexpensive cost. So once we get the national architecture  
1139 in place, we are quite open to States and cities constructing  
1140 their own system so long as they follow the national  
1141 standards around interoperability, cybersecurity and  
1142 reliability.

1143 Mr. {Latta.} And again, it is getting that information  
1144 to the States, because again, there is very much of a concern  
1145 that they are not involved in the process.

1146 And if I can shift real quick to Mr. McIntosh, if I can  
1147 ask you this. On page 4 of your testimony, you cite concerns  
1148 regarding the costs associated with public safety broadband  
1149 network and that resonates with me because I have heard those  
1150 same concerns again from your counterpart in the State of  
1151 Ohio, and I can tell you, and I am not sure how it is in  
1152 Virginia, but I have a lot of volunteer departments out  
1153 there, and I try to hit as many of them and support the  
1154 pancake breakfasts and the fish fries and the chicken  
1155 barbecues that they have just to raise funds for those  
1156 departments. And have you seen any evidence of a business or

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1157 cost recovery model evident yet in FirstNet planning?

1158 Mr. {McIntosh.} Not from FirstNet, no, sir. The only--

1159 we have been approached by the private sector on some

1160 business and cost recovery models, some of which are

1161 intriguing, but as far as direct communications from

1162 FirstNet, no, we have not gotten anything.

1163 Mr. {Latta.} Mr. Lehr, may I ask you that same

1164 question?

1165 Mr. {Lehr.} Congressman Latta, let me first of all let

1166 you know in front of me I have an email from Darryl Anderson

1167 from the State of Ohio. As soon as he heard that I was going

1168 to be testifying today, boom, the email lit up and it, you

1169 know, make sure you tell them that Ohio is in the same boat,

1170 we need to get some more information. He was very

1171 complimentary of your support for them with their Ohio MARCS

1172 system.

1173 I can tell you that the public safety community, we are

1174 the ultimate, I hate to use the term ``old boy network,``

1175 after especially the admiral got nailed for that, but when we

1176 are building new 700 voice system in the State of Maryland,

1177 so the first thing I did was call up Ohio, and your CIO and

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1178 Darryl got on the phone with our CIO and myself and gave us,  
1179 you know, the benefit of lessons learned, what they did, so  
1180 the public safety community is used to having those kind of  
1181 forums and exchanging information. I don't think Verizon  
1182 calls up AT&T when they are going to deploy their 4G network  
1183 and says, you know, tell us how you did it. So that is the  
1184 kind of information we are hoping FirstNet is going to tap  
1185 into.

1186 Mr. {Latta.} Thank you. Mr. Chairman, my time has  
1187 expired and I yield back.

1188 Mr. {Walden.} The chairman recognizes the former  
1189 chairman of the committee, Mr. Dingell, for 5 minutes.

1190 Mr. {Dingell.} Mr. Chairman, I thank you for your  
1191 courtesy.

1192 I first want to welcome Ms. Diane Kniewski, who is  
1193 General Manager of several broadcast stations in western  
1194 Michigan. I want to thank her for the work she and her  
1195 stations do to provide viewers with excellent service and  
1196 emergency information.

1197 Now, I want to also welcome Mr. Ginn and the rest of our  
1198 panel members. The Middle Class Tax Relief and Job Creation

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1199 Act requires FirstNet to take all actions necessary to  
1200 consult with, amongst others, federal, State, tribal, local  
1201 public safety entities in building and operating FirstNet.  
1202 Now, Mr. Ginn, these questions will be yes or no. Now, will  
1203 FirstNet establish long-term relationships with State,  
1204 regional, tribal and local public safety entities to ensure  
1205 their input receives full consideration in FirstNet's  
1206 proposed architecture as well as in its ongoing operations?  
1207 Yes or no.

1208 Mr. {Ginn.} Yes.

1209 Mr. {Dingell.} Mr. Ginn, again, is the preliminary  
1210 technical and engineering work initiated by FirstNet based on  
1211 known public safety requirements? Yes or no.

1212 Mr. {Ginn.} Yes.

1213 Mr. {Dingell.} Now, Mr. Ginn, does such work represent  
1214 foundation upon which outcomes of your consultations with  
1215 regional, State, local, tribal and public safety entities  
1216 will be based? Yes or no.

1217 Mr. {Ginn.} Yes.

1218 Mr. {Dingell.} Now, Mr. Ginn, in other words, this  
1219 preliminary design work is just that and not final? Yes or

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1220 no.

1221 Mr. {Ginn.} It is not final.

1222 Mr. {Dingell.} Thank you. Mr. Ginn, further, will the  
1223 network allow for local customization to meet unique local  
1224 operational requirements? Yes or no.

1225 Mr. {Ginn.} Yes.

1226 Mr. {Dingell.} And I want to apologize to you. I hate  
1227 to do this to witnesses but it helps us get a lot on the  
1228 record.

1229 Mr. Ginn, will FirstNet consult with a variety of  
1230 equipment manufacturers and vendors as it considers  
1231 operations for network architectures, technologies and  
1232 deployment options? Yes or no.

1233 Mr. {Ginn.} Yes.

1234 Mr. {Dingell.} Mr. Ginn, many States like my State of  
1235 Michigan find themselves presently in serious financial  
1236 straits. I think it is extremely important that FirstNet  
1237 work with the States to make the operation and the  
1238 maintenance of the public safety network affordable for all.  
1239 Do you commit to doing so in a meaningful fashion? Yes or  
1240 no.

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1241 Mr. {Ginn.} Yes.

1242 Mr. {Dingell.} Now, I would like to return to the issue  
1243 of FirstNet's architecture. I think it is very important  
1244 that FirstNet serve the reliability, security and functional  
1245 needs of public safety around the country. Recognizing there  
1246 are no absolute guarantees when it comes to network  
1247 resiliency, I would like to ask you the following questions.  
1248 Again, Mr. Ginn, in regions of this country that experience  
1249 severe weather such as hurricanes, will FirstNet be designed  
1250 to ensure that towers can withstand these forces? Yes or no.

1251 Mr. {Ginn.} Yes.

1252 Mr. {Dingell.} I assume you will also be doing that  
1253 with regard to backup power facilities. Is that correct?

1254 Mr. {Ginn.} Yes.

1255 Mr. {Dingell.} And also with regard to things like  
1256 earthquakes and other disasters. Am I correct?

1257 Mr. {Ginn.} Would you repeat that, sir?

1258 Mr. {Dingell.} And so you are going to see to it that  
1259 it is hardened against other natural disasters and also  
1260 perhaps the activities of terrorists and others. Is that  
1261 right?

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1262 Mr. {Ginn.} Yes, sir.

1263 Mr. {Dingell.} Now, Mr. Ginn, will it also be designed  
1264 with sufficient power-surge protection?

1265 Mr. {Ginn.} Yes.

1266 Mr. {Dingell.} Mr. Ginn, will the network be designed  
1267 for peak usage capacity?

1268 Mr. {Ginn.} Yes.

1269 Mr. {Dingell.} Now, Mr. Ginn, will the network be  
1270 designed to ensure that public safety has network priority at  
1271 all times? Yes or no.

1272 Mr. {Ginn.} Yes.

1273 Mr. {Dingell.} Mr. Ginn, will the network be designed  
1274 to ensure that critical mission services have enhanced  
1275 security? Yes or no.

1276 Mr. {Ginn.} Yes.

1277 Mr. {Dingell.} I want to thank you, Mr. Ginn. You have  
1278 been most gracious, and I want to encourage you to keep these  
1279 matters in mind as you implement the public safety portions  
1280 of the Act. Thank you for your courtesy.

1281 Mr. Chairman, I thank you for your kindness to me. Have  
1282 a good day.

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1283           Mr. {Walden.} The gentleman yields back the balance of  
1284 his time. The Chair now recognizes the former chairman of  
1285 the Commerce Committee, the gentleman from Texas, Mr. Barton.

1286           Mr. {Barton.} Thank you, Mr. Chairman. And I want to  
1287 say on the record that I want to commend you and Ms. Eshoo  
1288 for holding this hearing. This is an example of the  
1289 committee at its finest. FirstNet is really not operational.  
1290 I think your first board meeting was last month, and we are  
1291 conducting an oversight hearing in a bipartisan fashion to  
1292 try to make sure that things go as they should go, so this  
1293 shows the country that we can do things that are positive,  
1294 and I want to commend both of you.

1295           I want to tell Mr. Ginn that it is not all peace and  
1296 love. I am quite frankly skeptical of this whole concept. I  
1297 would not have designed the legislation the way it was  
1298 designed. I would not have passed the bill that became law  
1299 exactly as is, but it is what it is, and we want you to be  
1300 successful. But there are a few of us, at least me, that  
1301 have some grave doubts about this, and again, knowing that  
1302 you are just getting started, you know, you are going to get  
1303 the benefit of the doubt, but some of the questions that

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1304 former Chairman Dingell just asked you, the only question he  
1305 didn't ask was, when FirstNet is fully operational, will it  
1306 have a direct line to heaven without a long-distance call.  
1307 If you do everything you say you are going to do, this is  
1308 going to be a phenomenal network, and I hope it is  
1309 successful. But we are going to keep a watchful eye as  
1310 FirstNet develops. I just want that to be on the record.

1311 Now, my specific questions are Texas specific, which  
1312 normally I don't ask regional questions, but because FirstNet  
1313 is in its infancy and Texas is something of an exception in  
1314 that it had a BTOP grant in the Harris County-Houston, Texas,  
1315 area, I am going to ask you some fairly specific questions,  
1316 and if you need to have staff take a look at them, I totally  
1317 understand.

1318 The first question deals with the BTOP project that was  
1319 already underway in Texas. Texas has gotten an FCC waiver to  
1320 continue that, but in the site visit that your agency made to  
1321 Texas, they were told that if Texas wants to participate in  
1322 FirstNet, they have to give the current assets they have  
1323 already put in place to FirstNet. The question is, wouldn't  
1324 the effect of this transfer of assets eliminate the State's

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1325 statutory authority to opt out of the FirstNet deployment  
1326 since it would otherwise be left with no beneficial access to  
1327 those assets?

1328           Mr. {Ginn.} Well, first of all, Texas was funded  
1329 through a different program than the BTOP program, and just  
1330 let me say that we have included it because we would like to  
1331 implement a showcase project. We would actually like to use  
1332 these BTOP locations including the Houston area as showcases.  
1333 Let us build them, let us take a look at them, let us let  
1334 public safety take a look at them, let us upgrade our designs  
1335 as a result of them, and then continue to implement across  
1336 the country.

1337           You know, I don't know what happens with the investment.  
1338 Let me just say this. I am really--the issue of opt-out and  
1339 opt-in, I think, is not so important. What is important is  
1340 getting a national architecture in place so that you have  
1341 interoperability, that you have cybersecurity, that you have  
1342 network standards, and then who builds it and who owns is  
1343 less important to me so long as we have those principles in  
1344 place. So that is where I come out. I don't know who took  
1345 that position but I will try to understand it and--

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1346           Mr. {Barton.} I like your answer. I think that is a  
1347 fair answer.

1348           In my last 14 seconds, I have one more Texas-specific  
1349 question. In the first FirstNet board meeting, which was  
1350 recently held, the board approved Resolution 18, which  
1351 directs the board to negotiate spectrum lease agreements with  
1352 BTOP public safety grant recipients within 90 days. Texas  
1353 was not included within that resolution, and there are  
1354 concerns with the special temporary authority process because  
1355 it is temporary, causing jurisdictions concern about  
1356 investing money into the network and planning in Texas. Is  
1357 there planning within NTIA and FirstNet to ensure that Texas  
1358 is allowed to negotiate a long-term spectrum lease agreement,  
1359 and if so, when might that be expected?

1360           Mr. {Ginn.} Well, hopefully within the next 90 days.

1361           Mr. {Barton.} Well, that is a good answer. But do you  
1362 understand the intent? Texas doesn't want to negotiate a  
1363 short-term deal and then not be able to do a long-term deal.  
1364 What I am hearing you say is that in your position, you are  
1365 open to that.

1366           Mr. {Ginn.} Well, yes, I am open to who builds the

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1367 network in Texas so long as you meet the national standards  
1368 that we put in place.

1369 Mr. {Barton.} It sounds good to me. I have several  
1370 other questions but I will submit them for the record. Thank  
1371 you, Mr. Chairman.

1372 Mr. {Walden.} Thank you. I will now turn to the  
1373 gentlelady from California, Ms. Matsui, for 5 minutes.

1374 Ms. {Matsui.} Thank you, Mr. Chairman. Thank you all  
1375 for being here.

1376 Mr. Ginn, I have a few questions here, following along  
1377 with the question about States. There have been a lot of  
1378 questions regarding outreach and some aspects of this, and  
1379 just generally speaking, would you commit to getting these  
1380 critical questions that have been occurring answered to the  
1381 States' satisfaction before they have to make a decision  
1382 about whether to opt out of the FirstNet network?

1383 Mr. {Ginn.} Well, you know, I think one of the first  
1384 principles, if you don't satisfy your customers, you don't  
1385 succeed. So the idea that we are somehow not interested in  
1386 custom requirements is just not true. We are going to spend  
1387 a lot of time trying to understand them and incorporate them

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1388 into our engineering.

1389 Ms. {Matsui.} That is a good answer. So you are going  
1390 to be continuing to reach out to the States to ensure that  
1391 their concerns are addressed, because there are some States  
1392 obviously hesitant to sign on as a partner, which I believe  
1393 will not really benefit the goal here, but if it seems like--  
1394 I don't know what this is--if not enough States could  
1395 ultimately opt out, do you have a backup plan for this?

1396 Mr. {Ginn.} Well, as I said before, to me, the opt-in,  
1397 opt-out issue is not so important as us putting in place  
1398 national standards that everybody agrees to so that we have  
1399 interoperability, so that we have cybersecurity, that we have  
1400 network standards. Who builds the network and operates the  
1401 network beyond that, I think, is open and negotiable.

1402 Ms. {Matsui.} Okay. Following along with that then, in  
1403 his testimony, Mr. Barnett outlines a network-of-networks  
1404 approach in which FirstNet's network will be based on a  
1405 shared architecture approach with each smaller network  
1406 presumably controlled at the State or local level, and Mr.  
1407 Barnett argues that such an approach would present many more  
1408 options to get private equity and public infrastructure

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1409 involved. What do you think about his recommendation?

1410 Mr. {Ginn.} Well, the problem I have with it is I think  
1411 you take risks around the issue of interoperability. If you  
1412 have 15 people engineering a network, how you come out of  
1413 that with national interoperability, I think, is a risk, the  
1414 same with cybersecurity and the same with the standards of  
1415 maintenance and reliability.

1416 Ms. {Matsui.} Okay. I just right now would just like  
1417 to make a statement for the record. I know it was brought up  
1418 today about an individual that is on the FirstNet board who  
1419 apparently there is some concern about whether this  
1420 individual has knowledge to fulfill that position. I must  
1421 say that this individual has been a CIO of two large States,  
1422 Michigan and California, and I would just like to state for  
1423 the record that she definitely understands the State focus,  
1424 and, you know, I just need to say for the record. I think it  
1425 is important because this board is really just starting to  
1426 form to a great degree and I think it is really very  
1427 important that you get the best people there who understand  
1428 what is going on at the State level. So I just want to make  
1429 that comment. I appreciate very much, and if you want to

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1430 make a comment, Mr. Ginn.

1431 Mr. {Ginn.} I would just say that she is an outstanding  
1432 talent and I am so pleased with having her on board.

1433 Ms. {Matsui.} Thank you, and I yield back the balance  
1434 of my time.

1435 Mr. {Walden.} The gentlelady yields back the balance of  
1436 her time. The Chair now recognizes the gentleman from  
1437 Nebraska, Mr. Terry.

1438 Mr. {Terry.} Thank you, Mr. Chairman.

1439 Mr. Ginn, we will just stay with you. First of all, I  
1440 am going to associate myself slightly with Mr. Barton's  
1441 remarks. This seems to such a monumental task, a huge beast  
1442 that I am just wondering what its ultimate costs and  
1443 bureaucracy will end up being. That is just a comment, not a  
1444 question.

1445 I am curious. This is a question. The way it has been  
1446 presented or I am envisioning what you are saying is, is it  
1447 accurate to say this is a public safety intranet system  
1448 nationwide?

1449 Mr. {Ginn.} Yes. I have been trying to think of a way  
1450 to explain it simply, but let us just think of your

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1451 electrical grid. We are going to put a wireless grid in  
1452 place, and conceptually in any State or city, you can plug in  
1453 the applications that make sense for running your operations.  
1454 So with the app engine that we are going to put in, it is  
1455 really going to revolutionize public safety. Let me put it  
1456 to you this way. When you got your first cell phone, could  
1457 you have predicted the number of apps that are available to  
1458 you today?

1459 Mr. {Terry.} No, I couldn't, but I guess what I am  
1460 saying is, there is going to be no other users accessing  
1461 these transmission wires. I mean, there is not going to be  
1462 other State activities or university activities or medical  
1463 hospital to medical hospital? This is all going to be just  
1464 traffic from public safety?

1465 Mr. {Ginn.} That is my understanding of the  
1466 legislation, although hospitals may be included. I am not  
1467 sure.

1468 Mr. {Terry.} All right. That is my understanding too.  
1469 I just wanted to make sure, so I would call that an intranet  
1470 when it is just, other users not allowed to be involved in  
1471 that.

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1472           Now, in your testimony you said that FirstNet must be  
1473 larger, more resilient and more secure than commercial  
1474 networks. I assume that is why it is more of an intranet  
1475 than an internet, but you also stated it is going to be  
1476 cheaper for users than any alternatives but we don't know  
1477 what the costs there are, so I would want to know how it is  
1478 going to be cheaper, but can you explain how a better network  
1479 is going to be cheaper when by definition you have fewer  
1480 users on that network?

1481           Mr. {Ginn.} Yes. I think the assumptions we are making  
1482 here with scalability, with terminals, for instance, instead  
1483 of ordering several thousand, we are ordering 4 to 5 million,  
1484 we drive down dramatically the cost of the terminal. The  
1485 same with radio access networks. If you order in volume, you  
1486 get lower pricing.

1487           Mr. {Terry.} So you are going to be the central  
1488 supplier of the equipment to each one of the public safety  
1489 entities, so Omaha Fire Department comes to you for their  
1490 handhelds?

1491           Mr. {Ginn.} Well, if they do, they will be able to get  
1492 it, in my opinion, a lot cheaper.

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1493 Mr. {Terry.} What do they do with their old equipment?

1494 Mr. {Ginn.} With their older?

1495 Mr. {Terry.} Their current handheld devices, radio  
1496 services that they already have, do they scrap what they  
1497 have?

1498 Mr. {Ginn.} Well, I think for mission-critical  
1499 services, they will be used for a number of years, but for  
1500 basic cellular traffic, that will be converted to the network  
1501 almost immediately.

1502 Mr. {Terry.} Okay. That is a question that keeps  
1503 several of our public safety and our State OI has asked me,  
1504 are they going to be able to use the same equipment, are they  
1505 going to have to swap it out or buy from you. There is a lot  
1506 of unanswered questions here, and I understand it is very  
1507 embryonic stage.

1508 Mr. {Ginn.} Yes. All of the above, by the way.

1509 Mr. {Terry.} All of the above?

1510 Mr. {Ginn.} And I think each State is going to have to  
1511 make its own decisions about the rate of adoption and just  
1512 what they implement in their State.

1513 Mr. {Terry.} All right. Last question. Does the

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1514 FirstNet plan on charging municipality users to use the  
1515 network?

1516 Mr. {Ginn.} The rate structures really haven't been  
1517 developed, and I just would prefer not to comment until we  
1518 have a sense of what our total costs are going to be and how  
1519 we recover them.

1520 Mr. {Terry.} All right. Perfect. Yield my second.

1521 Mr. {Walden.} The gentleman yields back the balance of  
1522 his time. The Chair now recognizes the new ranking member  
1523 for the hour, Mr. Welch.

1524 Mr. {Welch.} Thank you very much.

1525 How does FirstNet plan to ensure that rural areas get  
1526 access to the public safety broadband network? I know you  
1527 probably have been talking a little bit about that but, you  
1528 know, we have got problems with the build-out in rural areas  
1529 that are different, as you know, than urban areas.

1530 Mr. {Ginn.} I think the answer is that in some cases--

1531 Mr. {Welch.} Can I interrupt? I think I jumped ahead  
1532 of the line. All right. We are on the verge of doing  
1533 something that Congress doesn't like to do, you know, jump  
1534 over seniority. Very dangerous when you are the jumper, so

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1535 thank you, Mr. Pallone. Go ahead.

1536 Mr. {Ginn.} I think in some cases, we might negotiate  
1537 with one of the existing carriers who now serves the rural  
1538 areas to cover it.

1539 Mr. {Welch.} So you would partner with local carriers  
1540 in rural areas?

1541 Mr. {Ginn.} Absolutely, and we would partner with rural  
1542 local telephone companies or we might even cover those rural  
1543 areas with satellite.

1544 Mr. {Welch.} So is the partnering going to save you  
1545 some money and also--

1546 Mr. {Ginn.} You would hope so. I mean, we have talked  
1547 about, it has been mentioned in this forum about the value of  
1548 the spectrum, and so we would use that to the maximum  
1549 advantage to get perhaps a carrier to serve a rural area in  
1550 exchange for some other use of the spectrum in another city.

1551 Mr. {Welch.} All right. Let me just ask you one other  
1552 thing. You know, it is terrific of the Chair to have this  
1553 hearing because it is tough to get a hearing before this  
1554 committee and subcommittee, so all of us are eager to get the  
1555 1-2-3 problems that you see as the biggest impediments to

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1556 being successful in the effort, so what would you describe  
1557 those to be?

1558 Mr. {Ginn.} What would--

1559 Mr. {Welch.} You have got challenges. You have got  
1560 impediments. You have got regulations.

1561 Mr. {Ginn.} Yes, we do.

1562 Mr. {Welch.} You have got hassles, and you are being  
1563 polite here, okay? So just tell us what is going on, the  
1564 biggest problems and impediments this committee needs to be  
1565 aware of.

1566 Mr. {Ginn.} As I tried to say in my opening remarks,  
1567 this is an enormous technical challenge.

1568 Mr. {Welch.} Well, we know that.

1569 Mr. {Ginn.} And basically trying to pull all the  
1570 technical issues together along with a new--

1571 Mr. {Welch.} I am not asking you that. That is the  
1572 challenge. I am asking you what are the things that we are  
1573 doing or policy-wise that are getting in the way of you being  
1574 able to succeed in taking on that challenge?

1575 Mr. {Ginn.} Well, the chairman and I have had these  
1576 discussions.

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1577 Mr. {Welch.} Yes, but we haven't.

1578 Mr. {Ginn.} And, you know, if you look at government  
1579 acquisition rules and procurement rules, in my opinion, they  
1580 were designed for a specific purpose.

1581 Mr. {Welch.} So if you would change them, you would do  
1582 what?

1583 Mr. {Ginn.} Well, I would greatly simplify them.

1584 Mr. {Welch.} Give me an example.

1585 Mr. {Ginn.} Well--

1586 Mr. {Welch.} Look. Let me--

1587 Mr. {Ginn.} --right now--

1588 Mr. {Welch.} We have to get real here. I mean, this is  
1589 a big problem for the country. You are the guy who knows  
1590 what the problems are. I am asking you what they are. Tell  
1591 me what they are.

1592 Mr. {Ginn.} Well, I am told by government attorneys  
1593 that if you want to negotiate a contract, you have to assume  
1594 it is 18 months. Now, that is going to--in the commercial  
1595 world, that is way beyond what it would ever take.

1596 Mr. {Welch.} So in order to--

1597 Mr. {Ginn.} Number one.

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1598 Mr. {Welch.} Go ahead.

1599 Mr. {Ginn.} And number two, in an iterative process, if  
1600 you are looking-if you are negotiating with one carrier and  
1601 you get an offer from a second carrier, you can't go back and  
1602 change the document that allows you to negotiate with carrier  
1603 A, so you--

1604 Mr. {Welch.} So that is a practical challenge.

1605 Mr. {Ginn.} It is a practical challenge.

1606 Mr. {Welch.} Right.

1607 Mr. {Ginn.} And so it is going to add months and  
1608 perhaps years to the implementation process.

1609 Mr. {Welch.} That is helpful to know. That is very  
1610 helpful to know.

1611 Mr. {Ginn.} But I am very sensitive because I  
1612 understand the need to be open and transparent and  
1613 competitive, and I want to do that.

1614 Mr. {Welch.} So essentially, the big problem you have  
1615 identified so far is the contracting process that takes too  
1616 long and prohibits easy counteroffers.

1617 Mr. {Ginn.} Yes. It reduces our flexibility.

1618 Mr. {Welch.} Okay. Thank you.

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1619           Mr. {Walden.} The gentleman yields back the balance of  
1620 his time. The Chair now recognizes the gentleman from  
1621 Louisiana, Mr. Scalise, for 5 minutes.

1622           Mr. {Scalise.} Thank you, Mr. Chairman. Thanks for  
1623 having the hearing and again for your leadership in getting  
1624 this done in the first place, something that hadn't been done  
1625 for years and years in Congress finally actually getting  
1626 written into law. The tough part of getting the program put  
1627 in place, getting the spectrum, getting the funding has been  
1628 done but now your task is to do the tough part of actually  
1629 building out the network, and so when you look at just how  
1630 big of an undertaking this is going to be, I want to ask you,  
1631 Mr. Ginn, how do you all go forward to make sure that you are  
1632 able to ensure the solvency of this, to oversee that you  
1633 don't have cost overruns that drive it up to a point where it  
1634 ultimately is not able to be built out the way that Congress  
1635 intended, you know, since you are still in some of those  
1636 early stages? You know, we have seen, unfortunately, bad  
1637 track records of big government projects yet there is the  
1638 ability to get things like this done if it is laid out right  
1639 in the front end. So how are you all approaching that to

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1640 make sure those kind of problems don't happen?

1641 Mr. {Ginn.} I think in a very traditional way. You  
1642 start out with a set of milestones, benchmarks, and then you  
1643 measure yourself in performance and cost-wise in achieving  
1644 those benchmarks, and if you get off scale, you deal with it,  
1645 and so that is the way we are going to run FirstNet. We are  
1646 going to run it like a business enterprise, and if people  
1647 don't perform or people miss their budgets, we will deal with  
1648 it. So I have done this before. It is not my first rodeo.  
1649 So I think we are capable of managing to the budgets that we  
1650 put forward to the organization.

1651 Mr. {Scalise.} It is good to hear, and obviously we are  
1652 going to be watching and working with you along the way to  
1653 make sure that it happens that way because it is important to  
1654 all of us like it is to you that it gets done correctly but  
1655 it also gets done in a fiscally responsible way, the way it  
1656 was intended.

1657 I want to talk to you about the timetables for moving  
1658 forward with deployment. I know we have heard a lot about  
1659 those BTOP grants that some States got through stimulus, you  
1660 know, States like mine, Louisiana, that didn't get it yet

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1661 have been moving forward on their own with building out an  
1662 interoperable network because we can't wait. Unfortunately,  
1663 we get a lot more than our fair share of hurricanes and other  
1664 natural disasters and so our State has been moving forward  
1665 building out its interoperable network. What would be a  
1666 timetable that we could expect so that we are not hindered?  
1667 You know, we can't afford to wait maybe 5, 6 years from now  
1668 and in the meantime there is going to be other things that we  
1669 may have to deal with.

1670 Mr. {Ginn.} I wish I could be more specific, but I  
1671 think our focus now is BTOP, get these agreed to and  
1672 constructed and run the assessments on their performance and  
1673 basically after that see where we are, and I am sorry I can't  
1674 at this point go any further than that.

1675 Mr. {Scalise.} Because I know FCC granted something  
1676 like 21 waivers to different States to at least have some  
1677 waiver ability. Our State and others put in waiver requests  
1678 that were rejected, and again, you know, we still have the  
1679 same needs with our first responders and we have been putting  
1680 up our own money.

1681 Mr. {Ginn.} You know, our objective is to get this done

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1682 as quickly as we possibly can, and so that is the only  
1683 promise I can make to you is we want to get this system  
1684 implemented as soon as we can.

1685 Mr. {Scalise.} All right. Thank you.

1686 Mr. Barnett, if I can ask you, in your Potomac Institute  
1687 paper you talked about the opt-out process, and you said, I  
1688 think your quote was, the opt-out process for States is akin  
1689 to asking someone ``to obtain the broom from the Wicked Witch  
1690 of the West, nearly impossible and fraught with risk.'' Can  
1691 you explain that, kind of expand on what you mean by that?

1692 Admiral {Barnett.} Yes, sir. The statute does in fact  
1693 provide an opt-out process for States but the time frames  
1694 that are allowed the governor, after FirstNet determines that  
1695 the cost and what would be done for the State, it is  
1696 presented to the governor. The governor has 90 days to  
1697 inform them whether they are going to opt out or not. They  
1698 have 180 days to not only start but complete an RFP. So at  
1699 the most, the amount of time would be 270 days, which is very  
1700 difficult for a State to do, particularly for those States  
1701 that may be on a biannual legislation process. There would  
1702 have to be a whole lot of planning to happen before that, if

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1703 they even have a chance, and even then, they have to get, in  
1704 essence, approval from the FCC and from the NTIA, so it is a  
1705 two-step process. So it is a pretty difficult process. All  
1706 that can be obviated by bringing the States inside the tent  
1707 rather than kind of outside and making sure that they  
1708 understand what the needs are so that the States don't even  
1709 to consider opting out.

1710 Mr. {Scalise.} All right. Thanks, Mr. Chairman. I  
1711 yield back the balance of my time.

1712 Mr. {Walden.} The gentleman yields back the balance of  
1713 his time. The Chair now recognizes, as he should have  
1714 earlier, the gentleman from New Jersey, Mr. Pallone, for 5  
1715 minutes.

1716 Mr. {Pallone.} Thank you, Mr. Chairman.

1717 I wanted to ask Mr. Ginn a question in regard to  
1718 Hurricane Sandy and the lessons from that. My district and  
1719 many other areas of my State were devastated by Superstorm  
1720 Sandy last fall, and given the coastal location of our State  
1721 and the associated emergency weather events, I was just going  
1722 to ask what particular lessons do you think FirstNet could  
1723 learn from New Jersey's BTOP grant, assuming it allowed to

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1724 proceed in the near future? You know, in other words, what  
1725 could be done better for the public to disseminate  
1726 information or for first responders to communicate with each  
1727 other, whatever, if you would try to respond to that.

1728 Mr. {Ginn.} Well, you know, in engineering circles, it  
1729 is not a secret. Typically what happens is, you lose power  
1730 or towers become disabled, and so clearly in those prone  
1731 areas of hurricanes, natural disasters, we are going to have  
1732 to step up and strengthen the standards in those locations  
1733 particularly, and we will do that. There is some--it is  
1734 being debated at the moment but basically putting 150-mile-  
1735 an-hour standard on new towers, and that would get the vast  
1736 majority of hurricanes that are likely to hit New Jersey.

1737 Mr. {Pallone.} Well, you know, I have to say just for  
1738 my own experience as I was going around in the aftermath, in  
1739 the immediate aftermath, that many times it was the same  
1740 locations. You know, in other words, we have had--I mean,  
1741 this was certainly the worst I have ever seen but you had  
1742 Irene, you had nor-easters, and many times it was the same  
1743 location. Go ahead. I am sorry.

1744 Mr. {Ginn.} The other thing that happens, you lose

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1745 backhaul, particularly if it is aerial, and so, you know, we  
1746 are going to look at all those standards in those critical  
1747 locations.

1748           Mr. {Pallone.} I appreciate that because, you know, it  
1749 gets frustrating after a time whether it is communications or  
1750 it is power or whatever, you have so many people, and of  
1751 course, now many of them are interested in buyouts have just  
1752 had the same experience over and over again, and of course  
1753 they come back to us and say well, you already knew that this  
1754 was the problem area where we were going to have this  
1755 problem, what are you doing about it. So I just want to  
1756 stress that what you are doing is really important in terms  
1757 of communications. That is really the key when these  
1758 disasters strike and people expect us to do something about  
1759 it and particularly now since they have had the experience a  
1760 few times.

1761           Thank you very much. I yield back.

1762           Mr. {Walden.} The gentleman yields back the balance of  
1763 his time. The Chair would ask unanimous consent to insert in  
1764 the record a letter from Textron Systems Corporation  
1765 detailing issues including their information that is

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1766 available at [www.connectingfirstresponders.com](http://www.connectingfirstresponders.com). Without  
1767 objection, so ordered.

1768 [The information follows:]

1769 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

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|  
1770 Mr. {Walden.} And now the Chair will recognize the  
1771 gentleman from Missouri, Mr. Long.

1772 Mr. {Long.} Thank you, Mr. Chairman, and I am glad that  
1773 it is Ginn because if the guy across from me hollers ``gin''  
1774 that is usually not a good thing.

1775 Have you taken into consider EMPs, electromagnetic pulse  
1776 attacks on this new system that according to Congressman  
1777 Dingell is going to be vanguard against everything but I  
1778 think that there is a very real possibility in the world we  
1779 work in today that if a terrorist launched a missile off of  
1780 the U.S. coast from a freighter that could release an EMP,  
1781 that the damage would be immense. Are there any safeguards  
1782 being built into the system?

1783 Mr. {Ginn.} Well, the technical group has taken a look  
1784 at these issues, and I don't know. I am totally unfamiliar  
1785 with how it might impact our system, but it is theoretically  
1786 possible, but I don't at this point understand how we would  
1787 deal with it, to be honest with you.

1788 Mr. {Long.} Okay. Well, I would definitely recommend  
1789 it because that is not only theoretically possible, I think

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1790 that it is probable and one of the easier attacks for people  
1791 to carry out against our country, so I would definitely think  
1792 that the board members would definitely want to take that  
1793 under advisement, and taking into consideration all of  
1794 Congressman Dingell's questions, as Mr. Barton said was going  
1795 to be built for everything, do you think that \$7 billion is  
1796 going to get this job done?

1797 Mr. {Ginn.} I don't know. I will have a conversation  
1798 with that when we get more equipment pricing, we know what  
1799 these systems are going to cost, the radio access is going to  
1800 cost, what the terminals are going to cost, and the benefits  
1801 of arbitrage deals that we may make with carriers. When I  
1802 can pull all that information together, I think I can give  
1803 you a reasonable estimate.

1804 Mr. {Long.} With taking into consideration the EF-5  
1805 tornado that we had in my district that was half-mile, three-  
1806 quarter-mile wide, 6 miles on the ground that went through a  
1807 town of 50,000 people, Joplin, Missouri, and the devastation,  
1808 Congressman Dingell was asking you about generators and  
1809 protecting them against natural disasters, and when a seven-  
1810 story hospital is completely destroyed to the point that it

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1811 was moved and had to be torn down, their backup generators,  
1812 they were in the back of the building, ended up in the front  
1813 parking lot of the building. So I don't know, but normally  
1814 when the government thinks something will cost \$7 billion, it  
1815 usually costs about three times and takes about three times  
1816 as long to do as what they think, but in rural areas with  
1817 buildings, maintaining telecommunications networks is quite  
1818 extensive. Does FirstNet plan to partner with existing rural  
1819 telecommunication providers to build out and maintain the  
1820 public safety broadband network?

1821 Mr. {Ginn.} Say that again. I am sorry.

1822 Mr. {Long.} Do you plan to partner with existing rural  
1823 telecommunications providers to build out the system?

1824 Mr. {Ginn.} Absolutely.

1825 Mr. {Long.} You do?

1826 Mr. {Ginn.} Where it makes sense, we will.

1827 Mr. {Long.} Good.

1828 Mr. {Ginn.} We view it as a really good option if we  
1829 can do that.

1830 Mr. {Long.} One of the most common criticisms of the  
1831 broadband stimulus is that grants were awarded before work

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1832 was completed to determine the investment was needed and now  
1833 we hear testimony that FirstNet will produce its network  
1834 build plan before it has finished asking States where they  
1835 need additional assets. Shouldn't FirstNet conduct its  
1836 consultation with the State before it decides where and how  
1837 to build?

1838 Mr. {Ginn.} Well, see, I don't quite understand that.  
1839 We have been directed to build an LTE network. We know what  
1840 we are going to build, so the question is, how do we go about  
1841 doing that and what kind of features and functions do we put  
1842 in place.

1843 Mr. {Long.} But you can't do that before you talk to  
1844 the States, can you, and find out what their needs are?

1845 Mr. {Ginn.} Well, the other assumption that you make is  
1846 not true from my point of view is, we develop concepts,  
1847 network concepts. We have not completed a final design, and  
1848 we are not likely to ever complete a final design because as  
1849 you learn, you update your architecture, and that will happen  
1850 over time.

1851 Mr. {Long.} Let me move on real quick in my last few  
1852 seconds here. What interaction has the National

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1853 Telecommunications and Information Administration, NTIA, or  
1854 the FCC had with other agencies that are not on the FirstNet  
1855 board but have valuable expertise and critical infrastructure  
1856 and telecommunications, and is everyone talking together? So  
1857 again, what interaction have they had with other agencies  
1858 that are not on the board?

1859 Mr. {Ginn.} I met with the chairman of the FCC  
1860 yesterday, and NTIA has been wonderfully supportive of our  
1861 efforts, given the fact that we were just getting started, no  
1862 employees, no space, no anything, and they have been very  
1863 helpful.

1864 Mr. {Long.} Okay. Thank you, and thank all our  
1865 panelists for being here today, and I yield back.

1866 Mr. {Walden.} The Chair now recognizes the gentlelady  
1867 from North Carolina, Mrs. Ellmers, for 5 minutes for  
1868 questions.

1869 Mrs. {Ellmers.} Thank you, Mr. Chairman.

1870 Mr. Ginn, I do want to kind of follow up on my colleague  
1871 from Missouri on the question of partnering with other  
1872 networks. Is this network going to be only used or  
1873 exclusively used by emergency personnel for emergency

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1874 purposes or will you be replacing non-emergency uses  
1875 currently offered by commercial providers to emergency and  
1876 non-emergency personnel?

1877 Mr. {Ginn.} We will be providing, and I think the  
1878 legislation supports communications for first responders for  
1879 public safety, both mission critical and non-mission  
1880 critical.

1881 Mrs. {Ellmers.} So it will be exclusively emergency  
1882 usage?

1883 Mr. {Ginn.} Public safety.

1884 Mrs. {Ellmers.} Public safety emergency. Okay. Great.  
1885 Thank you. And again, thank you to all the panelists that  
1886 are here.

1887 Mr. Ganley, your business model seems to be predicated  
1888 on finding sufficient private equity interest to build out a  
1889 network based on your technology. Have you secured this  
1890 financial backing for such a project, and if not, why do you  
1891 think that is?

1892 Mr. {Ganley.} First of all, actually the bulk, in many  
1893 cases all of the funding would be debt, not equity. The  
1894 reason that it can be structured as debt rather than equity

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1895 is cheaper money is because of the value of the spectrum.  
1896 Now, sort of coming back to one of the questions you asked  
1897 earlier, the legislation as created does allow for  
1898 partnering, commercial partnering and for commercial use of  
1899 the spectrum when public safety isn't using it, and as it  
1900 happens, when you build these networks and they are large  
1901 networks, public safety will not use or need all of the  
1902 capacity on all of the cell towers all of the time. In fact,  
1903 that will rarely, if ever, happen where they will need all of  
1904 the capacity on all of the cell towers for a big period of  
1905 time. So dynamically, you can create an arbitrage process  
1906 where carriers and utilities and perhaps new businesses that  
1907 we can't even think of right now but new entrants will come  
1908 in and say we will pay, we will bid dynamically in real time  
1909 for access to that bandwidth and we will do it on a free-  
1910 market, competitive basis and compete with each other and we  
1911 will name the prices that we will pay at any given moment to  
1912 dynamically access that bandwidth. That creates a revenue  
1913 flow, so they could be carriers, they could be, as I say, new  
1914 entrants. That creates a source of revenue from this very  
1915 valuable spectrum that can be used to pay for the

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1916 accomplishment of the mission at the local, State and  
1917 nationwide basis.

1918           So I expect that with this model, debt financed in most  
1919 cases for rollouts in different parts of the country that it  
1920 will provide not just the ability to pay for the build-out of  
1921 the network in full and to pay for operations and maintenance  
1922 and refreshing of handsets and equipment but in addition it  
1923 will provide a surplus from several of the parts of the  
1924 country that can go into a FirstNet pool. This is not my  
1925 place to determine but I am just speculating here but could  
1926 go into a FirstNet pool that can pay for all of the  
1927 additional applications, services and many of the demands  
1928 that public safety are going to look to FirstNet to be able  
1929 to achieve.

1930           So the short answer to your question is debt can pay for  
1931 these networks because this spectrum is prime real estate.  
1932 In the context of New York City, it is like a block of land  
1933 on 55th and 5th. So let us say public safety needs four  
1934 stories of the building every day. So we are saying build an  
1935 80-story building, public safety have their first four  
1936 stories, and if they need 80 stories on any given moment,

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1937 they can have all of them immediately. When they are not  
1938 using it, they can use all of that space to sublet to whoever  
1939 wants to pay the most for it, kind of like those offices  
1940 where you can rent an office for a day or a few hours, people  
1941 can come in, whoever wants to bid the most gets the space.  
1942 That income then is used to offset and pay down the debt so  
1943 you service your debt first, you pay your fees, etc., your  
1944 refreshing fees for the equipment and then you can then fund  
1945 your nationwide mission also from that pool of capital. And  
1946 the answer to your question, are the markets prepared to fund  
1947 that model? The answer to that is, we believe so. We have  
1948 been working with Wall Street, with one of the top three  
1949 banks on Wall Street has partnered with us on this, and they  
1950 believe that the demand is likely to be there to ensure that  
1951 the debt markets will very competitively fund the rollout of  
1952 these types of networks, these LTE networks.

1953 Mrs. {Ellmers.} Thank you.

1954 And Mr. Chairman, if you could indulge me for just a  
1955 moment, I was just going to see if Mr. Ginn had maybe a  
1956 follow-up to the answer that Mr. Ganley gave.

1957 Mr. {Walden.} I think we can do that. Without

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1958 objection.

1959 Mr. {Ginn.} Yes. What I would say is, this is one  
1960 method but this spectrum is going to be arbitrated one way or  
1961 the other, and the question is, do you follow that process or  
1962 do you follow another process that we negotiate with the  
1963 carriers for the arbitrage or the use of the secondary  
1964 spectrum.

1965 Mrs. {Ellmers.} Great. Thank you so much. I  
1966 appreciate it. So this is one method, not necessarily the  
1967 one that will be--

1968 Mr. {Ginn.} Well, there are a number of ways to do  
1969 this. That is one way.

1970 Mrs. {Ellmers.} Okay. Thank you so much, and thank  
1971 you, Mr. Chairman, for allowing me to ask that follow-up.

1972 Mr. {Walden.} Absolutely. We are here to get answers.  
1973 We now recognize the gentleman from New Jersey, Mr. Lance,  
1974 for 5 minutes, and if you don't have any questions on this  
1975 panel, I believe we have exhausted our members and probably  
1976 the panel, so we appreciate your participation. We look  
1977 forward to continuing this dialog. As you know, I believe in  
1978 doing the oversight, and just because we pass a law doesn't

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1979 mean we are done with that law, and your counsel has given us  
1980 more issues to deal with. So thank you very much for your  
1981 good work for the country, and we will work together to build  
1982 out this interoperable public safety broadband network for  
1983 our first responders and for the safety of our citizens.  
1984 Thank you, you are dismissed.

1985 We will welcome our second panel of witnesses. As our  
1986 panelists make their way to the witness table, I am going to  
1987 turn over the chairmanship to the gentleman from New Jersey,  
1988 Mr. Lance, who obviously represents a State that was very  
1989 adversely affected by Hurricane Sandy, and I thought it  
1990 appropriate for him to chair this segment of our hearing so  
1991 we can all learn more about emergency response.

1992 Mr. {Lance.} [Presiding] Good afternoon, and we  
1993 certainly welcome the panel. We have four witnesses, and we  
1994 will ask our first witness, Mr. Turetsky, the Chief of the  
1995 Public Safety and Homeland Security Bureau of the Federal  
1996 Communications Commission for an opening statement, and we  
1997 welcome you, Mr. Turetsky, and you have 5 minutes for an  
1998 opening statement. Thank you.

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|  
1999 ^STATEMENTS OF DAVID TURETSKY, CHIEF, PUBLIC SAFETY AND  
2000 HOMELAND SECURITY BUREAU, FEDERAL COMMUNICATIONS COMMISSION;  
2001 DIANE KNIOWSKI, PRESIDENT AND GENERAL MANAGER,  
2002 WOOD/WOTV/WXSP, LIN MEDIA; CHRISTOPHER GUTTMAN-MCCABE, VICE  
2003 PRESIDENT, REGULATORY AFFAIRS, CTIA-THE WIRELESS ASSOCIATION;  
2004 AND TREY FORGETY, DIRECTOR, GOVERNMENT AFFAIRS, NATIONAL  
2005 EMERGENCY NUMBER ASSOCIATION

|  
2006 ^STATEMENT OF DAVID TURETSKY

2007 } Mr. {Turetsky.} Thank you, Congressman, and I should  
2008 say from the outset that I grew up in New Jersey and went to  
2009 high school there, so--

2010 Mr. {Lance.} Where did you grow up in New Jersey?

2011 Mr. {Turetsky.} I grew up in Paramus, New Jersey.

2012 Mr. {Lance.} Bergen County. Lots of good shopping in  
2013 Paramus.

2014 Mr. {Turetsky.} There is.

2015 Mr. {Lance.} Thank you very much.

2016 Mr. {Turetsky.} Except on Sundays.

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2017 Mr. {Lance.} Blue laws still exist in Bergen County,  
2018 yes.

2019 Mr. {Turetsky.} Thank you for the opportunity to appear  
2020 before you. Today I will address first the FCC's efforts to  
2021 strengthen the resiliency of our Nation's critical  
2022 communications including emergency 9-1-1; second, modernizing  
2023 our 9-1-1 system through next-generation technology; third,  
2024 enhancing our emergency alert and warning systems; and  
2025 fourth, securing our cyber environment.

2026 First, a critical test of the reliability of our  
2027 communications networks was the fast-moving and unexpected  
2028 derecho storm in June that severely disrupted service  
2029 provider networks that serve 9-1-1 facilities. Seventeen 9-  
2030 1-1 call centers, also called PSAPs, lost service completely,  
2031 affecting the ability of over 2 million people to reach 9-1-  
2032 1. Seventy-seven PSAPs serving more than 3.6 million people  
2033 lost some degree of connectivity including vital 9-1-1  
2034 location information. The FCC's Public Safety and Homeland  
2035 Security Bureau conducted an extensive inquiry into the  
2036 causes and released a report finding that 9-1-1  
2037 communications were disrupted largely due to planning and

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2038 system failures that could have been avoided if providers had  
2039 followed industry best practices and guidance. Next week,  
2040 the Commission will consider launching a proceeding seeking  
2041 public input on recommendations from the report including  
2042 ensuring that service providers conduct periodic audits of 9-  
2043 1-1 circuits and maintain adequate backup power at central  
2044 offices.

2045 Yet another challenge to our communications networks  
2046 came in October, of course, with Superstorm Sandy. For  
2047 example, about 25 percent of mobile antenna sites in the  
2048 affected region went out of service with higher service  
2049 losses in New Jersey and parts of New York. The 9-1-1  
2050 networks, however, fared much better than in the derecho. In  
2051 Sandy's wake, the Commission began field hearings exploring  
2052 communications resiliency and related topics. The first was  
2053 held in early February in New York City and in Hoboken, New  
2054 Jersey, and the second was held 2 weeks ago in California.  
2055 The FCC will use the information gathered to consider options  
2056 to ensure greater network robustness.

2057 Second, we are moving forward with Next Generation, or  
2058 NG, 9-1-1 technology, as it is called, which will improve the

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2059 reliability and performance of 9-1-1 in future disasters.  
2060 Specifically, NG 9-1-1 will facilitate interoperability and  
2061 improve connections and information for and between 9-1-1  
2062 call centers. It will not only support traditional 9-1-1  
2063 calls but also the transmission of text, photos, videos and  
2064 data so that emergency responders can respond more  
2065 effectively.

2066 As we consider the path to NG 9-1-1, the Commission has  
2067 been working with stakeholders to achieve the near-term step  
2068 of enabling text messaging to 9-1-1, which might sometimes be  
2069 the only way for a person to get help. The Commission  
2070 initiated a rulemaking in December that builds on a voluntary  
2071 agreement by AT&T, Verizon, Sprint Nextel and T-Mobile along  
2072 with APCO and NENA under which each carrier would provide  
2073 text to 9-1-1 service by May of next year to requesting  
2074 PSAPs.

2075 Also last month, pursuant to the NG 9-1-1 Advancement  
2076 Act, the Commission submitted to Congress a report with  
2077 recommendations on how to address legal and regulatory  
2078 barriers to the transition. The lead recommendation is for  
2079 Congress to create incentives for States to become early

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2080 adopters of NG 9-1-1.

2081           Third, we are working with FEMA and others to make  
2082 people safer by ensuring that the public can receive  
2083 emergency alerts and warnings over multiple communications  
2084 technologies. Wireless emergency alerts, or WEA, addressed  
2085 by the WARN Act is an example. The public receives  
2086 geographically targeted alerts over mobile devices about  
2087 imminent threats to life and property. We are working with  
2088 stakeholders on a voluntary basis to continue to improve the  
2089 program. The Emergency Alert System, or EAS, also continues  
2090 to be a critical part of our Nation's primary alerting  
2091 system, and along with our federal partners, we are working  
2092 to modernize and diversify it.

2093           Finally, we are committed to promoting the cybersecurity  
2094 of our critical communications infrastructure. We work with  
2095 stakeholders in a public-private partnership to develop  
2096 voluntary measures and best practices. We have also  
2097 developed tools to promote mobile cybersecurity like our  
2098 smartphone security checker, which helps consumers protect  
2099 their mobile devices, and our Small Biz Cyber Planning for  
2100 small businesses.

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2101 I thank you for the opportunity to testify, and I am  
2102 pleased to answer any questions.

2103 [The prepared statement of Mr. Turetsky follows:]

2104 \*\*\*\*\* INSERT 6 \*\*\*\*\*

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|  
2105           Mr. {Lance.} Thank you very much, and I am very  
2106 impressed you came within 2 seconds of your time. You had 2  
2107 seconds to go, so that is a very good job and I am very  
2108 impressed.

2109           Our next witness is Diane Kniewski, President and  
2110 General Manager of WOOD, WOTV, WXSP, Lin Media, and we  
2111 welcome you to Washington.

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|

2112 ^STATEMENT OF DIANE KNIOWSKI

2113 } Ms. {Kniowski.} Good morning, Congressman Lance and  
2114 Congressman Welch. Thank you for the opportunity to speak  
2115 with you today about the valuable, often lifesaving services  
2116 that local radio and television broadcasters provide during  
2117 disasters and other weather emergencies.

2118 At our core, broadcasters are first and foremost and for  
2119 decades have been the most important source of vital  
2120 emergency information for all Americans. When a tornado rips  
2121 through Missouri or an earthquake shakes California,  
2122 listeners and viewers turn to their local broadcasters for  
2123 news and information. When the power goes out, when phone  
2124 service and the Internet may go down, broadcasters are there  
2125 and on the air.

2126 I have seen it personally in Michigan. In February  
2127 2011, a major blizzard dropped 25 inches of snow in a 24-hour  
2128 period. We knew it was coming, so we went into action.  
2129 Three days prior to the storm, we began alerting the public  
2130 on what areas would be hit and what essentials would be

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2131 needed in the home. We sent teams into the field keeping  
2132 abreast of what was happening. We stayed on the air for 3 to  
2133 4 days until the roads were cleared and we knew there was no  
2134 loss of life. I still remember the many letters we received  
2135 from viewers thanking us. And stations around the country do  
2136 the same thing.

2137         For example, during Hurricane Sandy, WABC-TV in New York  
2138 prepared in advance for the storm. They shored up their  
2139 infrastructure, inspecting and securing rooftop and tower  
2140 antennas and testing backup transmission paths. On the radio  
2141 side, the engineering team at Clear Channel's radio stations  
2142 moved backup generators and reserve transmitters into the  
2143 area. They implemented longstanding fuel contracts and  
2144 gathered satellite phones and mobile housing for staff. As  
2145 the storm knocked out other means of communications in many  
2146 parts of the tri-state area for nearly a week, broadcasters  
2147 were ready for the storm's fallout.

2148         For decades, radio and television broadcasters have been  
2149 the backbone of the Nation's Emergency Alert System, known as  
2150 EAS. EAS is a national public warning network that connects  
2151 public safety authorities to the public through over-the-air

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2152 radio and television stations and cable systems with a simple  
2153 push of a button. In addition to alerting the public of  
2154 local weather emergencies such as tornadoes and flash foods,  
2155 EAS is designed to allow the President to speak to the United  
2156 States within 10 minutes. The EAS system works through a  
2157 chain reaction of alerting that begins at the broadcast radio  
2158 level. For example, WTOP here in D.C. is a primary station  
2159 that other broadcast stations and cable systems monitor for  
2160 local alerts. All EAS participants are required to maintain  
2161 FCC-certified EAS equipment that continuously monitors the  
2162 signals of at least nearby sources for EAS message.  
2163 Broadcasters work in partnership with State, county and local  
2164 emergency managers and public safety officials on how best to  
2165 deploy EAS in each State. Although EAS can be triggered by  
2166 the President and State or local authorities under certain  
2167 conditions, the majority of the alerts are originated by  
2168 local emergency managers and the National Weather Service.  
2169 The EAS is also used for Amber Alerts. This was created by  
2170 broadcasters and local law enforcement in Texas in 1996. To  
2171 date, over 600 abducted children have been successfully  
2172 recovered, and at my station, we routinely put these alerts

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2173 out with much success, and it is one of the most gratifying  
2174 parts of my job as a broadcaster.

2175       Clearly, EAS participation is an important component of  
2176 our public service, and broadcasters are proud of our pivotal  
2177 role. Although participation in EAS on the local level is  
2178 technically voluntary, virtually every radio and television  
2179 station in the country participates, and we do so  
2180 enthusiastically. All EAS equipment is purchased by  
2181 broadcasters at their own expense and all stations must test  
2182 their EAS systems on a weekly and monthly basis. At my  
2183 station, we also conduct surprise emergency rehearsals four  
2184 times a year because rehearsals help identify problems and  
2185 issues.

2186       In November 2011, FEMA and the FCC conducted the first-  
2187 ever nationwide test. The purpose of the test was diagnostic  
2188 and included participation from every radio and television  
2189 station in the United States. The test was successful and  
2190 served its purpose of finding where any technical problems  
2191 may exist. The issues that were discovered are being  
2192 addressed, which is precisely why we fully support testing  
2193 the EAS on a regular basis.

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2194 I am grateful for this opportunity to share my views on  
2195 broadcast emergency communication. I look forward to working  
2196 with you toward our shared goal of keeping the American  
2197 people safe through timely alerts and warnings. Thank you.

2198 [The prepared statement of Ms. Kniewski follows:]

2199 \*\*\*\*\* INSERT 7 \*\*\*\*\*

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|  
2200 Mr. {Lance.} Thank you very much, and thank you for our  
2201 public service regarding emergencies that occur across the  
2202 country.

2203 Ms. {Kniowski.} My pleasure.

2204 Mr. {Lance.} Our next witness is Christopher Guttman-  
2205 McCabe, who is the Vice President for Regulatory Affairs at  
2206 CTIA-The Wireless Association. Good afternoon.

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|  
2207 ^STATEMENT OF CHRISTOPHER GUTTMAN-MCCABE

2208 } Mr. {Guttman-McCabe.} Good afternoon, and thank you,  
2209 Congressman and member of the subcommittee.

2210 On behalf of CTIA-The Wireless Association, thank you  
2211 for the opportunity to speak with you today on the subject of  
2212 emergency communications. The wireless industry recognizes  
2213 its role as a link between citizens and public safety  
2214 officials and works hard to ensure that this link is as  
2215 vibrant and reliable as possible.

2216 Today, my testimony will focus on two areas. First, I  
2217 want to provide the subcommittee with an update on the  
2218 Wireless Emergency Alert Program. This program is a true  
2219 public-private success story. Second, I want to urge you to  
2220 work with the wireless industry and other interested parties  
2221 to create a uniform national baseline for liability protect  
2222 for text to 9-1-1 and NG 9-1-1 services.

2223 The Wireless Emergency Alert Program is an outgrowth of  
2224 this committee's efforts to enact the WARN Act. CTIA  
2225 supported this legislation, which we believe struck a balance

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2226 by augmenting the existing emergency alerting system without  
2227 imposing new prescriptive mandates on the wireless industry.  
2228 This approach was consistent with and built up previous  
2229 public-private partnerships that led to the successful  
2230 creation of Wireless Priority Service and the Wireless Amber  
2231 Alert Program. In the period since enactment of the WARN  
2232 Act, we have moved from an advisory committee to an FCC  
2233 rulemaking, standards development, coordination with FEMA and  
2234 now deployment.

2235 I am pleased to say that the results of the Wireless  
2236 Emergency Alert Program justify the effort. Just last month,  
2237 the National Weather Service alone sent 100 tornado alerts,  
2238 80 blizzard alerts, 40 flash food warnings and five ice storm  
2239 alerts, and as a father, in a story that warms my own heart,  
2240 last month also saw the first successful recovery of an  
2241 abducted child as a result of a wireless Amber Alert. As  
2242 Minnesota's Public Safety Commissioner observed, wireless  
2243 emergency alerts are another important way to ensure that the  
2244 public receives vital information right away wherever they  
2245 are.

2246 The wireless alert program is working as this committee

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2247 envisioned it would. Its utility will only grow as  
2248 additional alert-capable handsets are deployed and the  
2249 carriers and FEMA work towards a more granular alerting  
2250 capability. With this in mind, CTIA urges Congress to resist  
2251 calls to impose new technology or participation mandates that  
2252 could threaten the public-private collaboration that has  
2253 produced a 21st-century complement to the television and  
2254 radio alerts that we all grew up with. Those broadcast and  
2255 radio alerts remain valuable but are inadequate by themselves  
2256 for today's highly mobile citizenry. Wireless alerts fill  
2257 the gaps by notifying those not within the reach of radio or  
2258 television.

2259       The second issue we commend to the attention of the  
2260 committee is the need for clear, comprehensive, standardized,  
2261 nationwide limitation of liability protection for all  
2262 entities participating in any aspect of emergency  
2263 communications including text to 9-1-1 and NG 9-1-1 services.  
2264 The existing protections flow from the State-based laws that  
2265 are originally adopted for wireline providers in the 1970s,  
2266 1980s and 1990s. Those protections were extended to wireless  
2267 and VoIP providers under federal law but they vary by State.

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2268 Merely extending the patchwork of State legislation to 9-1-1  
2269 service providers is insufficient because States vary  
2270 significantly in terms of the duties of care and the  
2271 potential liabilities imposed on 9-1-1 activities. CTIA and  
2272 others believe it is time for a comprehensive effort to  
2273 establish a nationwide, overarching, platform-agnostic  
2274 federal liability standard for Next Generation 9-1-1. A  
2275 failure to do so could hamper the transition to these  
2276 services.

2277       There is a general expectation that robust, reliable e-  
2278 9-1-1 and ultimately NG 9-1-1 services should be available to  
2279 every consumer irrespective of what jurisdiction he or she  
2280 may be in at their time of need. Providers should be covered  
2281 by a similar ubiquitous, reliable, consistent standard for  
2282 liability protection.

2283       The recent commitment by the four national carriers  
2284 along with APCO and NENA to develop and deploy text to 9-1-1  
2285 capabilities highlights the need for federal engagement.  
2286 This voluntary framework will provide near-term emergency  
2287 communications options for wireless subscribers who rely on  
2288 SMS for everyday communications including individuals who are

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2289 deaf, hard of hearing or speech-impaired.

2290 In its recent report to Congress, the FCC specifically  
2291 called for extending liability protection to any entity that  
2292 is providing NG 9-1-1 services on a voluntary basis. The  
2293 industry is working hard to bring this capability to  
2294 consumers. Congress can support this effort by ensuring that  
2295 carriers and others involved in the provision of these  
2296 services are covered by appropriate liability protections.

2297 CTIA and its members look forward to working with the  
2298 committee on these issues and other matters intended to  
2299 promote secure, reliable, emergency communication services.

2300 Thank you for the opportunity to testify today, and I  
2301 look forward to your questions.

2302 [The prepared statement of Mr. Guttman-McCabe follows:]

2303 \*\*\*\*\* INSERT 8 \*\*\*\*\*

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|  
2304           Mr. {Lance.} Thank you very much for your testimony,  
2305 very timely testimony.

2306           Our next witness is Trey Forgety, the Director of  
2307 Government Affairs, the National Emergency Number  
2308 Association. Good afternoon.

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|

2309 ^STATEMENT OF TREY FORGETY

2310 } Mr. {Forgety.} Good afternoon, Representative Lance and  
2311 also Representative Welch and Mr. Vice Chairman Latta.

2312 I will submit my written testimony for the record, but I  
2313 would like to summarize just a little bit and provide a few  
2314 comments on some of the items brought up by the other  
2315 witnesses.

2316 NENA is the only professional organization devoted  
2317 exclusively to 9-1-1. It is our wheelhouse. It is our  
2318 everything. And about 10 years ago, we recognized the acute  
2319 need to start planning for a future that wasn't based on  
2320 technologies that were reaching 100 years of age. The  
2321 telephone has been with us for a very long time now, and for  
2322 the past 45 years it has been the basis of our public  
2323 communications system for reporting emergencies, 9-1-1.

2324 But the way the public communicates is changing very  
2325 rapidly. Already, we have seen consumers shed their  
2326 wirelines in droves. Businesses are now following suit.  
2327 Voice over IP adoption rates are off the charts. Consumers

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2328 are using mobile technologies in ways never before thought  
2329 possible. Voice, text, mobile, voice over IP, all of these  
2330 technologies are coming onto the market and they are being  
2331 adopted quickly by consumers.

2332 Now, the first panel this morning talked quite a bit  
2333 about FirstNet, and FirstNet, I think, is a very important  
2334 technology but neither FirstNet nor 9-1-1 can be looked at by  
2335 themselves. Ultimately, what citizens need is an end-to-end  
2336 system that allows them to report their emergencies to public  
2337 safety officials and receive a response that works, and that  
2338 can happen in our interconnected world only if citizens have  
2339 the ability to push the data that they have--images, videos,  
2340 medical data, location information--only if they can push  
2341 that data directly to the public safety answering points and  
2342 the public safety answering points can push it directly to  
2343 the responders. That is going to take a great deal of  
2344 coordination and it is going to take a great deal of detailed  
2345 work to make sure that we have standards that work across  
2346 platforms, across technologies and so forth.

2347 I think we have laid a very firm foundation for that.  
2348 We have seen just recently the FCC's CSRIC, Communications,

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2349 Security, Reliability and Interoperability Council, is  
2350 working on and will soon finalize a report on new location  
2351 technologies that will make it easier than ever to locate  
2352 people who call 9-1-1, to locate responders who use FirstNet  
2353 to communicate. We have got to remember, in a mobile and  
2354 interconnected world, those are one and the same technologies  
2355 and both the public and first responders should have access  
2356 to advanced location technologies. But getting there is not  
2357 going to be easy ultimately. 9-1-1 has been a success in  
2358 part because it has been so reliable. It has been a great  
2359 experiment of States and localities basically working from  
2360 the ground up.

2361 Now, there are things that Congress can do, and I think  
2362 Representative Eshoo put it well earlier as did Chairman  
2363 Walden. There are policy changes that can be made that will  
2364 help to move the ball forward, and I think the important  
2365 thing to remember about that is, there are easy policy  
2366 changes that require little or no new money to get good  
2367 outcomes at the State and local level. One simple thing that  
2368 Congress can do is to level the playing field. Right now, we  
2369 have about half a dozen different federal agencies that

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2370 supply grant funding for public safety, everything from  
2371 police, fire, EMS and so forth, but in nearly all of those  
2372 instances, 9-1-1 is not included in the definition of public  
2373 safety. Now, it is true, of course, that 9-1-1 in many  
2374 places is part of one of these other services but typically  
2375 those other services want to focus on their core issues. If  
2376 it law enforcement, it is guns and badges on the street. If  
2377 it is fire, it is engines and firefighters. We need to level  
2378 that playing field so that 9-1-1 is mentioned specifically in  
2379 public safety grant programs so that they can compete for  
2380 those federal funds on an equal basis with the other public  
2381 safety professionals.

2382         And I will close with this. The last piece is  
2383 cybersecurity and network resilience, and those are two  
2384 fundamentally important issues for 9-1-1, and Next Generation  
2385 9-1-1 will have tremendous benefits in this regard in terms  
2386 of improving reliability, resiliency, redundancy, path  
2387 diversity. Already we have standards work done in the areas  
2388 of encryption and authentication, role-based access models,  
2389 all of which can be leveraged by FirstNet to drive down the  
2390 cost of implementation for both systems, and I think that is

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2391 a key important point is, this ecosystem, if it works right,  
2392 if it works together, it can save the public a lot of money,  
2393 a lot of lives and a lot of property.

2394 And I thank you for your time, and I welcome your  
2395 questions.

2396 [The prepared statement of Mr. Forgety follows:]

2397 \*\*\*\*\* INSERT 9 \*\*\*\*\*

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2398           |  
              Mr. {Lance.} Thank you very much for your testimony.

2399           I have several questions, and I appreciate all of your  
2400 being here to be with us today.

2401           Mr. Turetsky, I have a question related to the district  
2402 I serve. One of the counties in the district I serve,  
2403 Somerset County, New Jersey, spent a considerable sum of  
2404 money in attempting to comply with the FCC's narrow banding  
2405 order, and the county successfully moved about half of its  
2406 communication equipment into the T band spectrum before the  
2407 January 1st deadline. Now, due to legislation that Congress  
2408 passed last year that created FirstNet, it is going to have  
2409 to vacate that spectrum in order for the T band to be  
2410 auctioned and to upgrade its equipment yet again. I have  
2411 recently written the FCC on the matter, and I am hoping that  
2412 you might be able to provide some insight into what  
2413 assistance might be available to Somerset County to help it  
2414 comply with the directives. We have significant concerns  
2415 with how to pay for the necessary upgrades, given the fact  
2416 that the county in good faith tried to do what was  
2417 appropriate at the time, and I would appreciate any comments

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2418 you might have regarding that and I hope to work with the FCC  
2419 on this issue.

2420 Mr. {Turetsky.} We look forward to working with you on  
2421 this, Congressman. To my understanding, Somerset County  
2422 responded to the narrow banding requirements just as it  
2423 should. After it began to respond, Congress passed a law,  
2424 say you mentioned, which changed the treatment of spectrum in  
2425 that band and required that it be given up. The FCC promptly  
2426 issued a blanket waiver so that jurisdictions like Somerset  
2427 County would not need to continue to spend money on narrow  
2428 banding anymore, given that they had to give that up.

2429 We have a notice outstanding where we are seeking  
2430 comment on what the costs are going to be on moving from the  
2431 T band to other bands and all related questions about what  
2432 band may be a suitable place to move. As that comes in, we  
2433 will continue to work with all of the stakeholders including  
2434 Somerset County on these issues. The FCC, of course, doesn't  
2435 have a budget to pay for this. That is not one of the things  
2436 that Congress has given us.

2437 Mr. {Lance.} Are there a lot of counties in that  
2438 situation?

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2439 Mr. {Turetsky.} There were a number who were midstream,  
2440 which is why we issued a blanket waiver.

2441 Mr. {Lance.} Thank you. What impresses me is, no good  
2442 deed goes unpunished, and we want to move forward in an  
2443 appropriate way and we hope that the county can recoup some  
2444 of its financial losses in that regard.

2445 On a previous panel, to you as well, Mr. Turetsky, we  
2446 heard from interested stakeholders with respect to FirstNet.  
2447 Your bureau is charged with public safety issues, the  
2448 Commission. We have heard that the FCC has informally halted  
2449 all equipment authorizations related to band 14 devices while  
2450 FirstNet determines what its network architecture will look  
2451 like. Given that FirstNet has no authority to determine the  
2452 emissions criteria for FCC equipment authorization, when in  
2453 your judgment will authorizations resume?

2454 Mr. {Turetsky.} We issued a Notice of Proposed  
2455 Rulemaking in the last few days that asks questions about  
2456 those very subjects. When the record is complete, we will  
2457 move expeditiously to authorize equipment for that band.

2458 Mr. {Lance.} Thank you. Is it possible for you to give  
2459 us a time frame as to when that might be?

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2460 Mr. {Turetsky.} It just went out for public comment. I  
2461 don't know if it has actually been published in the Federal  
2462 Register but it is public now. It was issued by the FCC. So  
2463 when the comment period closes, we will move as expeditiously  
2464 as we can.

2465 Mr. {Lance.} Is the comment period, is that 45 days or  
2466 90 days?

2467 Mr. {Turetsky.} I have to check. It is somewhere in  
2468 the 45-day range. I will get back to you on exactly what it  
2469 is.

2470 Mr. {Lance.} Thank you for answering the question.

2471 Mr. Guttman-McCabe, your industry has agreed to  
2472 implement a text to 9-1-1 capability despite the short  
2473 messaging service's perhaps inadequacy to do the task. What  
2474 real-world limitations will those seeking emergency service  
2475 face when using SMS to 9-1-1?

2476 Mr. {Guttman-McCabe.} Thank you, Mr. Congressman. I  
2477 think first of all out of the gate, whether it is NENA or the  
2478 FCC, I think the message that would come from the industry or  
2479 public safety officials is at every opportunity if you can  
2480 dial 9-1-1, you know, it is sort of a last resort. The

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2481 networks weren't designed--the SMS networks, the testing  
2482 networks were not designed to really be real time, and for  
2483 those who have sent a text and it has not been delivered in a  
2484 timely manner, you understand what we are talking about.  
2485 What we are trying to do is put a band-aid here until we get  
2486 to Next Generation 9-1-1, and our four largest carriers  
2487 realized working with NENA and APCO and Mr. Turetsky and the  
2488 Commission that we could do something that could be  
2489 beneficial in the short term.

2490 But there are a number of hiccups. It involves the  
2491 delay. It is a store-and-forward technology. It is designed  
2492 in essence to move into the network and then get delivered.  
2493 It doesn't have the same location-based service capabilities  
2494 that a call, you know, the wireless 9-1-1 calls were  
2495 engineered for. So it really is a stopgap. It is designed  
2496 to help some of the communities that rely on SMS, you know,  
2497 the hard of hearing or those with difficulties, and it s  
2498 something we committed to. As I said, we hope that Congress  
2499 will help us and step up with some form of liability  
2500 protection because, you know, this is a service that we have  
2501 committed to voluntarily but this is not perfect, and we

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2502 obviously didn't want to let the perfect be the enemy of the  
2503 good but as we move to Next Generation 9-1-1, it would be  
2504 helpful to have Congress help implement some form of  
2505 liability protection.

2506 Mr. {Lance.} Thank you very much for your answer.

2507 The Chair recognizes Mr. Welch for 5 minutes.

2508 Mr. {Welch.} Thank you very much.

2509 You know, Vermont has been a leader on the enhanced 9-1-  
2510 1 and it has been helpful. Just a couple of stories. One  
2511 person sent in a one-word text ``suicide'' and they were able  
2512 to figure out what the address was, and this person was  
2513 actually in the process of following through, and we are all  
2514 glad to say was saved. But then another one, and this would  
2515 be a lot more common, I think. A women was getting beaten up  
2516 by a drunk husband, and getting on the phone is not an option  
2517 at that point, but she was able to text, and the police  
2518 responded and took care of the situation. So I really  
2519 applaud you all for that effort.

2520 Mr. Turetsky, do you want to add anything that you  
2521 weren't able to say in response to questions from Mr. Lance?

2522 Mr. {Turetsky.} No, Congressman, I think you have

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2523 highlighted the importance of text to 9-1-1. There are at  
2524 least three circumstances where it is vital, and I agree with  
2525 Mr. McCabe that in general, the right course would be to make  
2526 a voice call. The three circumstances where text to 9-1-1 is  
2527 essential are, one, for the hearing impaired and the speech  
2528 impaired, and number two, where as a matter of safety making  
2529 a call is impossible, and you have given an illustration of  
2530 that, and number three, sometimes in situations of network  
2531 congestion, a text is more likely to go through and actually  
2532 more reliable than a phone call would be.

2533           The other aspect of this is, it also provides an  
2534 opportunity for the call takers or text takers, as it is, to  
2535 open up multiple texts at one time and prioritize so that  
2536 they can go to the fourth one in the queue and they see that  
2537 is the lifesaving emergency. So we think it is very, very  
2538 important, and Vermont has been a real leader in testing  
2539 this.

2540           Mr. {Welch.} Well, good. Thank you all for your work  
2541 on this, and I yield back, Mr. Chairman.

2542           Mr. {Lance.} Thank you very much. We now recognize the  
2543 vice chair of the subcommittee, Mr. Latta from Ohio.

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2544 Mr. {Latta.} Thank you very much, and thank you very  
2545 much to our panel for being here.

2546 Mr. Guttman-McCabe, if I could ask, we are talking about  
2547 the fees associated with e-911, and I am particularly  
2548 interested, what is happening with these fees and are they  
2549 going to where they are supposed to be going at all times?

2550 Mr. {Guttman-McCabe.} Thank you, Congressman. I guess  
2551 the short answer, and then I will continue after that is,  
2552 unfortunately, no. They are not always going where we hope  
2553 they would. Congress stepped up several years and tasked the  
2554 FCC with putting together a report back to Congress on the  
2555 status of their rating of e-911 funds, and we have worked  
2556 with NENA and APCO in the past and for years to try to really  
2557 shine a light on this, and in the most recent report that  
2558 came right around the end of the year to Congress, seven  
2559 States had raided the funds, and we continue to see that, and  
2560 we think in an environment where there is such reliability on  
2561 being able to connect with public safety through your  
2562 wireless devices, it really does trouble us that there are  
2563 States that continue to raid the funds. I am sure there are  
2564 legitimate reasons. You know, some of them are as simple s

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2565 budget shortfalls. But I don't think any of them rise to the  
2566 level of being acceptable when you balance it versus, you  
2567 know, the needs of the public safety, the PSAP community.

2568 Mr. {Welch.} Let me just follow up. Is there any idea  
2569 how much that is in those States that has been diverted?

2570 Mr. {Forgety.} If I could answer, Congressman, I can  
2571 give you one example in particular to just give you an idea  
2572 of the scope and scale of the problem. A few years ago, the  
2573 State of Arizona actually diverted over \$50 million from  
2574 their State 9-1-1 fund alone. We saw, I believe in the State  
2575 of New York, I recently saw reports that over \$150 million  
2576 had been diverted over the course of some period of time. In  
2577 some States, 9-1-1 fees are statutorily protected. They are  
2578 not subject to appropriations for other purposes. In other  
2579 States, they aren't protected, and in some cases, what may be  
2580 called a 9-1-1 fee may actually go directly to the State's  
2581 general fund and then be subject to primary appropriation  
2582 from the get-go, so it may never 9-1-1 in the first place.

2583 Mr. {Latta.} Well, Mr. Forgety, since you got the mike  
2584 right now, let me ask you a follow-up and another question to  
2585 you then. As your testimony indicates, our Nation's 9-1-1

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2586 call centers are not considered public safety under the  
2587 definition in federal law. How will that impact your ability  
2588 to participate in FirstNet?

2589 Mr. {Forgety.} Congressman, I think that is a key issue  
2590 for 9-1-1. As the FirstNet board was initially formulated,  
2591 there is not a distinct 9-1-1 community representative on  
2592 that board, and I think adding a 9-1-1 representative would  
2593 be an excellent move for FirstNet. We have been invited to  
2594 participate in the Public Safety Advisory Committee,  
2595 although, again, I would point out that while there are  
2596 representatives, I believe it is police, fire, sheriff and  
2597 EMS, to the executive committee, there is not a 9-1-1  
2598 representative. So I think just making certain that 9-1-1  
2599 has a seat at the table from the very beginning would be very  
2600 beneficial to make sure that the two systems work together  
2601 the way they should.

2602 Mr. {Latta.} Okay. Let me follow up with one last  
2603 question to you, if I may. You know, given the financial  
2604 situation around the country, what is a realistic timeline  
2605 for the text to 9-1-1 capabilities to be deployed in the  
2606 PSAPs?

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2607           Mr. {Forgety.} That is a very complicated question  
2608 because every State is in a different posture. For example,  
2609 Mr. Welch's State is already way ahead. They have a near-  
2610 Next Generation 9-1-1 system already deployed. My home State  
2611 of Tennessee is deploying some baseline capabilities. They  
2612 will be ready to take text probably within a year or so of  
2613 the carrier deployment deadline. Other States are hanging  
2614 back and probably won't be prepared for 2 to 3 years at the  
2615 very earliest.

2616           Now, the text proposal that we entered into with Mr.  
2617 Guttman-McCabe's members leaves open an option which is a TTY  
2618 conversion option. That is an old technology primarily used  
2619 now to support the deaf and hard-of-hearing communities'  
2620 access to 9-1-1. That technology will make it possible for  
2621 every PSAP today to take text if they are ready, willing and  
2622 able. Under Justice Department regulations promulgated  
2623 pursuant to the Americans with Disabilities Act, every PSAP  
2624 must have TTY capability at every position. So they can do  
2625 it today if they have the training, if they have the  
2626 experience, circuit capacity and so forth. There are all  
2627 those sorts of issues but it is going to be a few years

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2628 before we have it nationwide.

2629 Mr. {Latta.} Thank you.

2630 And just briefly, Ms. Kniowski, if I may, you mentioned  
2631 in your testimony about a need out there for credentialing  
2632 for folks who are out there in the field. Do any States  
2633 issue credentials right now to reporters or linemen or  
2634 anything like that?

2635 Ms. {Kniowski.} Not that I am aware of, but we do  
2636 request it, and one of the reasons is, we have to get to our  
2637 transmitters, we have to get to our towers, we have to have  
2638 gasoline trucks come in and fill out tanks so we can stay on  
2639 the air and get the information to the community in need.

2640 Mr. {Latta.} Thank you very much, Mr. Chairman, and I  
2641 yield back.

2642 Mr. {Lance.} Thank you, Mr. Latta. The Chair  
2643 recognizes the ranking member, Congresswoman Eshoo of  
2644 California.

2645 Ms. {Eshoo.} Thank you, Mr. Chairman. It is nice to  
2646 see you in the chair.

2647 Mr. {Lance.} Thank you.

2648 Ms. {Eshoo.} Thank you to the witnesses, and it really

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2649 is a huge thanks because we have been working on the whole  
2650 issue of e-911 for a long, long time now. I was a young  
2651 woman when I started out on this venture, and I just thought  
2652 that the entire Congress would come along because I made the  
2653 most plausible case about what we needed to do, and most  
2654 frankly, it took some time for the issue to mature, and I  
2655 said many times, it matured during one of the great crises in  
2656 our country when we were attacked, and that is when, you  
2657 know, minds started opening up about what we could do, what  
2658 we should do, and how to structure it, so I want to thank all  
2659 of you for the roles that you have played in it. They have  
2660 been significant and they are very important.

2661 First I think to each one of you. As you know, last  
2662 year's derecho storms severely disrupted 9-1-1-related  
2663 communications, particularly in parts of northern Virginia.  
2664 Would a NextGen 9-1-1 environment provide call centers with  
2665 greater reliability and resiliency during a natural disaster?  
2666 Just very quickly.

2667 Mr. {Turetsky.} Yes, it would, Congresswoman. It  
2668 provides many more routes to get calls to a 9-1-1 call  
2669 center, and it reduces the points of failure that would

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2670 obstruct that.

2671 Ms. {Eshoo.} Great. Ms. Kniowski?

2672 Ms. {Kniowski.} I am sorry. Could you repeat the  
2673 question?

2674 Ms. {Eshoo.} Sure. I was asking if NextGen 9-1-1  
2675 environment would provide call centers with greater  
2676 reliability and resiliency during a natural disaster, and I  
2677 used northern Virginia as an example of what happened.

2678 Ms. {Kniowski.} Yes, and we are in support of that and  
2679 anything that can help the community and communicate with the  
2680 community and the community communicate back we are in  
2681 support of.

2682 Mr. {Guttman-McCabe.} Yes, Congresswoman. That is  
2683 certainly an expectation.

2684 Ms. {Eshoo.} Great. Mr. Forgety?

2685 Mr. {Forgety.} The answer to your question is yes, it  
2686 can, and at a much lower cost than can be done today.

2687 Ms. {Eshoo.} I like that. That sounds very good.

2688 It is my understanding while I have you, Mr. Forgety,  
2689 that NENA has worked closely with the four largest wireless  
2690 carriers to reach a voluntary agreement to make text to 9-1-1

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2691 service available. I really applaud this. It is very  
2692 exciting. It is important, very important effort. Do you  
2693 intend to pursue a similar process or an agreement with rural  
2694 and regional and smaller carriers so that these services can  
2695 be made available to all consumers?

2696 Mr. {Forgety.} Thank you for the question,  
2697 Congresswoman, and thank you for your leadership as the Chair  
2698 of the NextGen 9-1-1 Caucus. It has been very effective and  
2699 helpful. The answer to your question is emphatically yes.  
2700 NENA has already engaged with representatives from small and  
2701 rural carriers and we will be continuing to do that with an  
2702 eye toward crafting some form of agreement that aligns well  
2703 with the FCC's Notice of Proposed Rulemaking but also with  
2704 the unique needs of that carrier community.

2705 Ms. {Eshoo.} That is terrific. Thank you very, very  
2706 much for your leadership and what you are doing across the  
2707 board but also on this last issue.

2708 Now, last month the FCC issued a detailed roadmap to  
2709 Congress on how best to advance and deploy Next Generation 9-  
2710 1-1 across our country. One recommendation is to ensure  
2711 appropriate liability protection for entities supporting or

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2712 providing these services. From any one of you, maybe Mr.  
2713 Guttman-McCabe, because you discussed this idea extensively  
2714 in your testimony, do you agree that Congressional action is  
2715 necessary?

2716 Mr. {Guttman-McCabe.} We do, Congresswoman.

2717 Ms. {Eshoo.} I don't know if this was touched on while  
2718 I was out.

2719 Mr. {Guttman-McCabe.} I managed to take an opportunity  
2720 to slide it in there in an earlier answer, but I won't miss  
2721 an opportunity to bring it up again. You know, the original  
2722 protections came about literally in the 1970s, 1980s and  
2723 1990s, and they were based obviously at that time on the  
2724 telephone system, and so when you look at the State statutes  
2725 and the Net 9-1-1 Act extended at the federal level those  
2726 protections that existed in the States to wireless and VoIP.  
2727 The problem is, a significant number of States either don't  
2728 have protection or have protection that specifically is  
2729 identified for telephone or voice-provided services. I mean,  
2730 there are a lot of qualifiers, a lot of adjectives or  
2731 descriptive adjectives in the existing State-based  
2732 legislation that causes concern and so whether it is the

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2733 current voluntary text to 9-1-1 effort or the future Next  
2734 Generation 9-1-1, there really is significant desire for  
2735 Congress to step up here and provide the same type of  
2736 liability protection that they have done in the past.

2737 Ms. {Eshoo.} Thank you to each one of you for what you  
2738 are doing and for being instructive to us today.

2739 Thank you, Mr. Chairman. Yield back.

2740 Mr. {Lance.} Thank you very much, Congresswoman, and  
2741 our thanks to the entire panel for your expertise, very  
2742 cogent answers and the hearing now stands adjourned. Thank  
2743 you.

2744 [Whereupon, at 1:09 p.m., the subcommittee was  
2745 adjourned.]