



FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON

OFFICE OF  
THE CHAIRMAN

August 10, 2018

The Honorable Catherine Cortez Masto  
United States Senate  
B40A Dirksen Senate Office Building  
Washington, D.C. 20510

Dear Senator Cortez Masto:

Thank you for your letter regarding the tragic events that took place in Las Vegas on October 1, 2017. I agree with you that network resiliency is critical during any emergency, and I look forward to working with you to improve the Wireless Network Resiliency Cooperative Framework that the Commission adopted in December 2016.

As you know, the Commission worked closely with the wireless industry to develop the Framework, a five-pronged approach to improve wireless resiliency and provider transparency in order to enhance coordination during emergencies. Carriers that have agreed to follow the Framework will (1) provide for reasonable roaming when technically feasible, (2) foster mutual aid, (3) develop best practices and establish contact databases with local government public safety officials, (4) develop and provide a Consumer Readiness Checklist, and (5) provide service and restoration status data through the Commission's Disaster Information Reporting System.

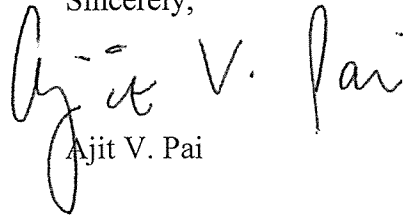
To date, seven carriers—AT&T Mobility, GCI, Southern Linc, Sprint, T-Mobile, U.S. Cellular, and Verizon Wireless—have signed onto the Framework. Additionally, CTIA and the Competitive Carriers Association also support the Framework. We continue to promote awareness of and participation in the Framework, including by leveraging our participation in federal public safety working groups.

I believe that the Framework has been useful, but there always is room for improvement. The Bureau recently sought comment on the overall efficacy of, and ways to further facilitate improvements to, the Framework. Bureau staff has been working with the industry to determine the full extent of the Framework's use. I hope that this outreach process will yield new data sets to collect in order for Bureau staff to better monitor the effectiveness of the Framework in a structured, systematic way. The more we know about how the Framework is functioning, the more insight we will have into whether adjustments are necessary to improve network resiliency.

You also asked that the Commission examine the performance of wireless networks during and immediately after the October event. Per your request, the Public Safety & Homeland Security Bureau has collected data from carriers and local public safety authorities and is finalizing its review. I expect that we will be able to provide your office with our findings and recommendations in the near term.

Please let me know if I can be of any further assistance.

Sincerely,

A handwritten signature in black ink that reads "Ajit V. Pai". The signature is fluid and cursive, with the first name "Ajit" being the most prominent part.

Ajit V. Pai



FEDERAL COMMUNICATIONS COMMISSION  
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August 10, 2018

The Honorable Dean Heller  
United States Senate  
324 Hart Senate Office Building  
Washington, D.C. 20510

Dear Senator Dean Heller:

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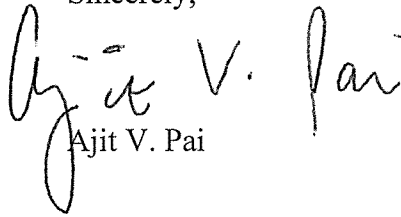
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Page 2—The Honorable Dean Heller

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Ajit V. Pai



March 1, 2018

The Honorable Ajit Pai  
Chairman  
Federal Communications Commission  
445 12<sup>th</sup> Street SW  
Washington, D.C. 20554

Dear Chairman Pai,

On October 1, 2017, during the tragic shooting at the Route 91 Harvest Festival in Las Vegas, countless 911 calls flooded in to our emergency management agencies. Those responsible for handling these calls and those who responded to the scene acted with incredible courage and, in the aftermath of the shooting, we had the privilege of visiting the Clark County Fire Department and meeting with those on the front lines. Concerns were raised, however, about the resiliency of our wireless networks and reported gaps in connectivity as networks struggled to handle the high volume of calls.

In December of 2017, the Government Accountability Office (GAO) released a report that found the number of wireless network outages increased from 189 to 1,079 between 2009 and 2016. Many of these outages were due to “physical incidents” such as natural disasters. The same GAO study noted that the Federal Communications Commission (FCC) has taken steps since 2013 to improve the resiliency of wireless networks, including proposals regarding how individual wireless carriers’ networks performed during emergency events. While the FCC ultimately did not adopt a rulemaking related to this issue, the FCC instead engaged with wireless carriers on an industry-led initiative to improve network resiliency.

Resiliency of these networks during a crisis can literally be a matter of life and death. Because of the seriousness of this matter, we asked FirstNet, the National Telecommunication & Information Administration (NTIA), and the National Institutes of Standards and Technology (NIST) to work with our local responders to identify and document how 911 and first responder networks performed during the shooting in Las Vegas.

These organizations reported that “an unknown number of calls could not connect with 911 call centers” due to high volume.<sup>[1]</sup> Because none of these organizations regulates commercial networks, they were unable to gather data related to the performance of these networks during the shooting. It was their recommendation that we contact the FCC to further examine these questions. To that end, we are requesting the following:

- That the FCC work with local responders and wireless providers who serve southern Nevada to gather and analyze data on the performance of wireless networks during and

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<sup>[1]</sup> See attached.

immediately after the shooting on October 1, 2017, and that you respond to this letter with any relevant findings including any recommendations for improvement.

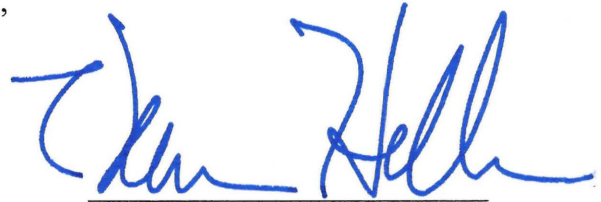
- That the FCC explain how, in the absence of a rule to “disclose how individual wireless carriers’ networks performed during emergency events,” it has worked with industry to improve the resilience of wireless networks and any progress made since 2013 by the FCC in this regard.
- That the FCC explain the effectiveness of the industry initiative - the Wireless Network Resiliency Cooperative Framework – and the FCC’s plans to oversee and spread best practices and other information that is gathered from its use.

Whether it is damage to physical infrastructure or a sudden surge in volume, emergencies can test the resiliency of our communications networks when they are needed most. It is critical that during these times, and with more and more individuals going completely wireless, that our networks operate without outages and gaps in connectivity. This can impact the ability of our brave emergency personnel to respond effectively and save lives. With so much at stake, we appreciate your cooperation and look forward to your response.

Sincerely,



Catherine Cortez Masto  
United States Senator



Dean Heller  
United States Senator

CC:

The Honorable Mignon Clyburn, Commissioner  
The Honorable Michael O’Rielly, Commissioner  
The Honorable Brendan Carr, Commissioner  
The Honorable Jessica Rosenworcel, Commissioner

JAN 24 2018

The Honorable Catherine Cortez Masto  
United States Senate  
Washington, DC 20510

Dear Senator Cortez Masto:

Thank you for your letter dated October 26, 2017, regarding the tragic events that took place in Las Vegas on October 1, 2017. As you requested, Department of Commerce officials from the First Responder Network Authority (FirstNet), the National Telecommunications and Information Administration (NTIA), and the National Institute for Standards and Technology (NIST) reached out to Clark County fire and law enforcement leadership to gather their perspectives on the performance of first responder and 911 networks. Representatives from the Federal Communications Commission (FCC), the Department of Homeland Security and the Department of Transportation's National Highway Traffic Safety Administration also took part in these information gathering sessions. Through these sessions, we were able to better understand how 911 and first responder communications resources were affected by the high volume of distressed victims, and how public safety personnel used both public safety specific networks and the commercial systems in the area.

With the information these officials provided us, we understand that the land mobile radio (LMR) systems that the first responders were using worked as designed and allowed for effective voice communication between users and talk groups. We also learned that Clark County 911 networks were overwhelmed by call volume. An unknown number of calls could not connect with 911 call centers and these call centers were unable to initiate calls back to such callers in many instances.

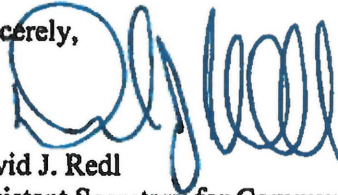
We understand that the commercial networks used by Clark County were heavily affected by the high volume of users who were trying to access them. Unfortunately our organizations do not have the ability to gather or analyze data and specifics related to commercial networks. We recommend that you reach out to the FCC for information related to how commercial networks dealt with this event given that it regulates commercial networks.

The congestion Clark County's first responders experienced highlights the need for prioritized and preemptive services, which FirstNet intends to offer. By offering priority and preemption to subscribers, FirstNet will provide mission critical data services that will empower public safety. This dedicated service will strengthen communication capabilities in the field and provide our first responders with the tools they can rely on when tragic events take place like the one in Las Vegas. The performance of Clark County's 911 networks also demonstrates the importance of a nationwide effort to upgrade call centers and other 911 network facilities to Next Generation 911 (NG 911). NG911 promises to integrate state-of-the-art network design to facilitate 911 calls being transferred and rerouted when individual 911 call centers are inundated

with high call volumes or experience technical problems such as power outages in major disasters.

We appreciate the dedication that Chief Cassell and his entire department have shown in the wake of this tragedy and in their regular interactions with our team as we attempted to gather information on this event. FirstNet, NTIA and NIST stand ready to support public safety across the country. We thank you for your leadership on issues critical to public safety and first responders. We will strive to make their jobs safer by providing them with the best tools possible.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Redl', with a large, stylized initial 'D'.

David J. Redl  
Assistant Secretary for Communications and  
Information and NTIA Administrator

A handwritten signature in blue ink, appearing to read 'W. Copan', with a large, stylized initial 'W'.

Walter G. Copan  
Under Secretary of Commerce for Standards  
and Technology and NIST Director

A handwritten signature in blue ink, appearing to read 'M. Poth', with a large, stylized initial 'M'.

Michael Poth  
Chief Executive Officer  
FirstNet



# United States Senate

WASHINGTON, DC 20510

October 26, 2017

Mr. Michael Poth  
CEO  
FirstNet  
12201 Sunrise Valley Drive  
Mail Stop 243  
Reston, Virginia 20192

Mr. Glenn Reynolds  
Chief of Staff  
National Telecommunications &  
Information Administration (NTIA)  
U.S. Department of Commerce  
1401 Constitution Ave., N.W.  
Washington, D.C. 20230

Dr. Walter Copan  
Senate Confirmed Under Secretary of  
Commerce for Standards and  
Technology and Director, the National  
Institute for Standards and Technology  
(NIST)  
100 Bureau Dr., Stop 1070  
Gaithersburg, MD 20899-1070

Dr. Kent Rochford  
Acting Under Secretary of Commerce  
for Standards and Technology and  
Acting Director, National Institute and  
for Standards and Technology (NIST)  
100 Bureau Dr., Stop 1070  
Gaithersburg, MD 20899-1070

Dear Mr. Poth, Mr. Reynolds, Dr. Copan, and Dr. Rochford,

In the wake of the senseless act of mass violence in Las Vegas on October 1, 2017, we could not be prouder of the individuals at our emergency management agencies who responded to those in dire need. In visiting with the Clark County Fire Department and hearing from those who responded immediately to the calls for help, we have heard about concerns with inundated networks and gaps in connectivity that hindered the ability of personnel to respond as effectively as possible.

In reaction to those concerns, we are reaching out to you to help holistically look at the technological performance and reliability of our 911 and first responder networks. We are requesting that you take action immediately to review the emergency response capabilities, especially the function of the 911 networks in the minutes and hours immediately following the initial attack.

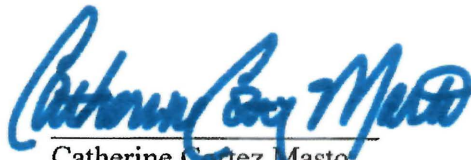
Obviously, we are all aware that through FirstNet, we are expecting an improved network for our first responders, and Next Generation 911 will help manage those calls for help. As we move ahead with these evolutions, it is imperative that we learn from these kind of emergency examples and work to ensure that we have addressed any glitches or performance issues needed to obtain the best overall network upon the full implementation of these advancements in technology.

With that in mind, we ask that you initiate a federal team to work with our local Clark County responders to document and analyze the data and specifics related to how the 911 and first responder networks were able to respond for our emergency personnel. We want to ensure that we can expedite lessons learned and improve responses to these type of incidents because it can literally save lives.

While this request is directed to your three entities, we recognize other federal agencies may be able to benefit from, or contribute to, a review of the situation. Given that, we defer to you if contacts from the Department of Homeland Security or the Federal Communications Commission, for example, should be engaged to complete this case study. It is our intent to ensure we learn any best practices, any technical background, or any general information that will enable us to have a reliable first responder network for Nevada and the entire country in emergency situations.

We look forward to hearing from you how we can all work together to improve our emergency systems. Thank you to Jeff Johnson, or others, who may have already started this process, for considering this request, and for all you are doing to make the jobs of our first responders a little easier.

Sincerely,



Catherine Cortez Masto  
United States Senator



Dean Heller  
United States Senator