



December 13, 2018

BY ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *Public Safety and Homeland Security Bureau Seeks Comment on the Effectiveness of the Wireless Network Resiliency Cooperative Framework and for the Study on Public Access to 911 Services during Emergencies*, PS Docket No. 11-60.

Dear Ms. Dortch:

On December 13, 2018, Jennifer A. Manner, Senior Vice President, Regulatory Affairs and Tony Bardo, Assistant Vice President, Government Sales, of Hughes Network Systems, LLC ("Hughes") met to discuss the above-referenced proceeding with Michael Caiafa, Robert Finley, Renee Roland, Jerome Stanshine, Julia Tu, and Brenda Villanueva, all of the Public Safety and Homeland Security Bureau.

In the meeting the parties discussed the attached talking points, which discuss the importance of physical path diversity for ensuring continued connectivity and the need for resilient satellite services to support terrestrial networks in times of emergency. The talking points were distributed to the attendees.

Pursuant to the Commission's rules, this notice is being filed in the above-referenced docket for inclusion in the public record. Please contact me should you have any questions.

Respectfully submitted,

/s/ Jennifer A. Manner
Jennifer A. Manner
Senior Vice President, Regulatory Affairs
Hughes Network Systems, LLC
(301) 428-5893

Attachment

cc Michael Caiafa
Robert Finley
Renee Roland
Jerome Stanshine
Julia Tu
Brenda Villanueva



UTILIZING SATELLITE PATH DIVERSITY INCREASES PUBLIC ACCESS TO 9-1-1 SERVICES DURING EMERGENCIES

December 2018

- Hughes Network Systems, LLC (“Hughes”), a U.S. company, is the largest provider of satellite broadband services in the United States and globally, serving more than 1.3 million subscribers. The service provides complete coverage of Puerto Rico and the U.S. Virgin Islands, at Federal Communications Commission (“FCC”)-defined broadband speeds of 25/3 Mbps for residential users, and 55/5 Mbps for enterprise users.

Hurricane Michael, the 2017 Hurricanes, and prior disasters, have demonstrated the critical importance of ensuring the availability of satellite networks to support terrestrial networks during times of crisis.

- While the Wireless Network Resiliency Cooperative Framework (“Framework”) provides for many restitutive measures to assist consumers when their primary networks have been damaged by disasters, such as roaming and mutual aid, the Framework provides little incentive for operators to deploy truly path diverse networks that are more resilient in the face of storms and other disasters, and which prevent outages in the first instance.
- Utilizing satellite services for path diversity with terrestrial services would eliminate the risk of a “single point of failure” for a PSAP, as they provide wireless connectivity that is not routed in terrestrially wired infrastructure. These networks are not susceptible to the same disaster damage as their terrestrial counterparts, because the primary repeaters are onboard the spacecraft and not part of the ground infrastructure.
- Once installed, the satellite router will integrate with the existing equipment to handle all current and new network traffic in the event of a primary network outage. Advances in satellite technology enable seamless transitions between the primary and backup services; so, should the primary terrestrial network fail during a call, there is minimal to no interruption while the call is re-routed to the backup satellite network.

Local Governments and community organizations have already recognized the need for physical path diversity to ensure continuity of connectivity during emergency situations and are proceeding with unilateral initiatives that should receive wider support from the FCC.

- Some states¹ and localities² have opted to upgrade their 9-1-1 services ahead of any allocation of dedicated federal funding, and in doing so have elected to include satellite-backed resiliency to their network design. However, many local and state governments are

¹ Such as Massachusetts.

² Such as Ark-Tex, along the Arkansas-Texas border.



waiting for federal financial support before making critical, overdue upgrades to their emergency networks.³

- The record in the FCC proceeding on Puerto Rico and the U.S. Virgin Island’s emergency disbursement of universal service funding demonstrates that Puerto Rico-based organizations, given their experience with the recent hurricane recovery period, value satellite-based broadband services as a means of ensuring communication resiliency during emergency situations.⁴ These organizations know from first-hand experience that satellite broadband was the only reliable service available in the wake of the hurricanes and have asked the FCC to ensure that it is included in any funding effort.⁵

³ See e.g. Tony Bardo, “Will Congress Set the Tone for NG9-1-1?” 9-1-1-magazine.com (June 6, 2016), *available at*: <http://www.9-1-1magazine.com/Bardo-Will-Congress-Set-Tone-for-NG911>

⁴ See e.g. *Liga de Cooperativas Comments*; see also *Comments of the Puerto Rico Manufacturers Association, WC Docket No. 18-143 (Jul. 3, 2018) (“PRMA Comments”)*; see also *Casa Pueblo, WC Docket No. 18-143 et. al (Jul. 5, 2018) (“Casa Pueblo Comments”)*.

⁵ *Ibid.*