

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Reliability and Continuity of Communications)	PS Docket No. 11-60
Networks, Including Broadband Technologies)	
)	

REPLY COMMENTS OF CTIA

CTIA submits these reply comments in response to the *Public Notice* issued by the Public Safety and Homeland Security Bureau (“Bureau”) regarding the effectiveness of the Wireless Network Resiliency Cooperative Framework (“Wireless Cooperative Framework” or “Framework”).¹

The record demonstrates that the Wireless Cooperative Framework enhanced the ability of consumers to access wireless services that proved critical during the historic 2017 hurricane season. Further, the record confirms that steps taken pursuant to the Wireless Cooperative Framework, and the flexibility afforded by the Framework, contributed to the resiliency and restoration of mobile wireless networks in 2017. Looking ahead to the 2018 hurricane season and beyond, commenters note that the wireless industry continues to take additional steps consistent with the Wireless Cooperative Framework to further bolster resiliency and preparedness.

Given the overall success of the Wireless Cooperative Framework in 2017, the Federal Communications Commission (“Commission”) should continue its flexible, outcome-based approach to assessing the effectiveness of the Wireless Cooperative Framework. The record

¹ *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*, Public Notice, DA 18-614 (rel. Jun. 13, 2018) (*Public Notice*).

identifies several concerns with any approach that would employ numerical performance-based metrics, including that such an approach could serve as a disincentive for wireless providers to cooperate or participate in the various prongs of the Framework, harming rather than promoting network resiliency. Additional concerns include the difficulty in developing a metric that could measure the effectiveness of the Framework given that each event significant enough to trigger certain prongs of the Framework will present its own unique set of circumstances. Indeed, the challenge of establishing an objective numerical metric to measure wireless network resiliency and reliability was a key reason the Commission supported the Framework’s flexible, outcome-based approach and terminated its underlying docket. Tellingly, no commenter proposed a numerical metric in response to the *Public Notice*. The record also notes the ongoing work by the Alliance for Telecommunications Industry Solutions (“ATIS”) to develop a PSAP contact information database and the Framework signatories’ ongoing commitment to “provide relevant up-to-date contact information for” such a database.²

In light of this record, the Bureau should continue to take a flexible, outcome-based approach to assessing wireless resiliency efforts, including the use and effectiveness of the Wireless Cooperative Framework, rather than develop rigid numerical metrics. Such an approach will enable wireless providers to continue extensive efforts to respond to unique emergency events, while providing the Commission with an appropriate basis to evaluate the effectiveness of the Framework.

² See The Alliance for Telecommunications Industry Solutions Comments, PS Docket No. 11-60, at 3 (Jul. 16, 2018); see CTIA Comments, PS Docket No. 11-60, at 13 (Jul. 16, 2018).

I. THE RECORD CONFIRMS THAT THE WIRELESS COOPERATIVE FRAMEWORK ENHANCED WIRELESS RESILIENCY DURING THE 2017 HURRICANE SEASON.

Comments in response to the *Public Notice* reflect that the resiliency of wireless networks enhanced the ability of consumers to access wireless services that played a critical role in improving safety and enhancing coordination during the historic 2017 hurricane season.³

Importantly, the record evidence demonstrates that the Wireless Cooperative Framework helped to enhance wireless resiliency in a number of ways. First, commenters report that steps taken pursuant to the Framework helped enhance coordination and improved the continuity of service for consumers. For example, AT&T notes that “disaster-based roaming arrangements, coupled with existing roaming arrangements,” allowed consumers to access data, voice, and text services even if their provider’s network was unavailable.⁴ T-Mobile similarly notes that, as the Commission has recognized, several wireless providers implemented mutual aid arrangements following Hurricanes Irma and Maria.⁵ Notably, as explained below, no commenter in the record identified gaps in the Framework that could be addressed through numerical performance-based metrics.

Commenters also credit the Framework’s flexibility with enabling wireless providers to develop innovative ways to restore service and connect consumers during critical times of need. For example, AT&T reports that the Framework’s flexibility allowed it to deploy flying cells on

³ See, e.g., T-Mobile Comments, PS Docket No. 11-60, at 5 (Jul. 16, 2018) (“Indeed, despite the uniquely powerful 2017 hurricane season, wireless service in many severely-affected areas was either minimally affected or restored to pre-hurricane levels within days. Carriers, for the most part, demonstrated their exceptional ability to pool resources and work cooperatively under very challenging circumstances.”) (citations omitted); CTIA Comments at 7-8 (providing examples of how consumers were able to rely upon wireless services during the 2017 hurricane season).

⁴ AT&T Comments, PS Docket No. 11-60, at 4-5 (Jul. 16, 2018).

⁵ T-Mobile Comments at 7 (citing U.S. Government Accountability Office, GAO-18-198, Telecommunications: FCC Should Improve Monitoring of Industry Efforts to Strengthen Wireless Network Resiliency, at 24 (2017) <https://www.gao.gov/assets/690/688927.pdf>.)

wings to provide services in Puerto Rico.⁶ AT&T further notes that providers were also able to utilize balloons for both the provision of service and the surveying of infrastructure for damage following the storms.⁷ According to AT&T, a “rigid approach to disaster response may have prevented or delayed” providers from incorporating these cutting-edge technologies into their relief efforts.⁸

Conversely, the record does not support the use of numerical performance-based metrics to assess the effectiveness of the Framework. As CTIA indicated in its initial comments, the adoption of numerical performance-based metrics could serve as a disincentive for wireless providers to cooperate or participate in the various prongs of the Framework.⁹ T-Mobile notes other unintended consequences of such reporting metrics, including the potential of such an information collection to distract wireless providers “at a time when providers’ resources are stretched most thin.”¹⁰ Recognizing the success of the Framework, AT&T urges the Commission to consider how to maximize the benefits of the Framework rather than “redesigning a well-functioning tool.”¹¹

Moreover, no commenter puts forward a numerical performance-based metric that could be used to measure the effectiveness of the Framework.¹² As T-Mobile and Verizon observe, the

⁶ AT&T Comments at 5. *See also* CTIA Comments at 12-13 (noting that Verizon recently announced that it also is testing a drone solution that can provide LTE service in the event of a natural disaster).

⁷ AT&T Comments at 5.

⁸ *Id.*

⁹ CTIA Comments at 17.

¹⁰ T-Mobile Comments at 8.

¹¹ AT&T Comments at 6.

¹² The National Association of State 911 Administrators (“NASNA”) is the only commenter to support the use of a metric. However, even NASNA does not suggest a metric that could be used. *See* NASNA Comments, PS Docket No. 11-60, at 1 (Jul. 16, 2018) (“NASNA suggests simply requiring the signatories to report based on metrics to which the Commission and the providers have agreed.”).

use of a numerical performance-based metric may result in an inaccurate representation of the extent of participation under and effectiveness of the Framework.¹³ Such an inaccurate representation could result in the adoption of flawed policies in the future that stymie, rather than promote, wireless network resiliency. Moreover, T-Mobile and Verizon further note that the challenge of identifying an appropriate metric played a large part in the Commission's initial support of the Framework's flexible, outcome-based approach and termination of the underlying docket.¹⁴

T-Mobile further suggests that the FCC already has data directly relevant to assess the success of the Framework.¹⁵ According to T-Mobile, the Commission's complaint process and its ability to seek comment from *all* affected stakeholders provides the Commission with the tools necessary for tracing the effectiveness of the Framework in improving network resiliency.¹⁶ Thus, there is no need to create another vehicle for tracking issues with the Framework.¹⁷

In light of this record, the Bureau should eschew any rigid approaches for measuring the Framework's use and effectiveness. The Framework is designed to keep consumers connected

¹³ T-Mobile Comments at 6 ("Carriers should not be compelled to orient their precious recovery resources around static metrics which may not be properly tailored to capture the impact of a particular event on an individual carrier."); Verizon Comments at 2 ("the framework's effectiveness cannot be reduced to a simple formula.").

¹⁴ T-Mobile Comments at 6 ("The Commission previously recognized this problem – particularly the difficulty in identifying static metrics – when it opted to rely on the Framework in lieu of mandatory regulations."); Verizon Comments, PS Docket No. 11-60, at 2 (Jul. 16, 2018) ("The Commission supported the framework's flexible, results-based approach in large part because of the challenges of establishing straightforward and objectives numerical metrics to measure wireless network reliability."); *see also* AT&T Comments at 4 ("The Framework is another prime example of how the Commission has supported a voluntary, flexible, and industry-led approach for disaster recovery.").

¹⁵ T-Mobile Comments at 3.

¹⁶ *Id.*

¹⁷ *Id.*

when emergencies occur and expedite service restoration when networks go down. A rigid approach for assessing the Framework would not further these goals.

II. THE COMMISSION SHOULD CONTINUE TO TAKE A FLEXIBLE, OUTCOME-BASED APPROACH TO ASSESSING THE EFFECTIVENESS OF THE WIRELESS COOPERATIVE FRAMEWORK.

The record overwhelmingly supports a continuation of the Commission’s outcome-based approach to assessing the effectiveness of resiliency efforts and the Framework itself. As AT&T and Verizon observe, the Commission consistently has recognized the importance of flexibility in recovery and network resiliency.¹⁸ In particular, AT&T cites to a number of recent examples in which the Commission “invoked a light regulatory touch” to facilitate and expedite coordination and service restoration following a disaster.¹⁹ Verizon notes that the Commission previously endorsed the Framework’s flexible, “results-based approach” over numerical metrics and that “the result has been improved industry performance during disasters.”²⁰

T-Mobile similarly endorses a flexible, outcome-based approach. T-Mobile notes that the FCC’s approach following the 2017 hurricane season was “ideal.”²¹ In particular, T-Mobile praised the Commission for: (1) allowing wireless providers flexibility in managing their network restoration activities; (2) being responsive and adaptable to imminent needs as providers worked to restore services; and (3) gathering public input regarding efforts to inform future disaster response once the tumult of the hurricane season had concluded.²²

As CTIA noted in its comments, this flexibility should be applied in any efforts by the

¹⁸ AT&T Comments at 3-4; Verizon Comments at 1.

¹⁹ AT&T Comments at 3-4.

²⁰ Verizon Comments at 1.

²¹ T-Mobile Comments at 6.

²² *Id.*

Commission to encourage other stakeholders across the communications ecosystem to voluntarily implement those elements of the Framework that are relevant to their facilities.²³

Similarly, while Hughes Network Systems, LLC suggests that the Commission promote satellite backhaul for wireless networks, those decisions are best left to the discretion of wireless providers, as they are best positioned to determine how to ensure redundant and resilient systems.²⁴

III. THE WIRELESS INDUSTRY STANDS BY ITS COMMITMENT TO PROVIDE RELEVANT UP-TO-DATE CONTACT INFORMATION FOR A CARRIER/PUBLIC SAFETY ANSWERING POINT CONTACT DATABASE.

As part of the Framework, wireless providers committed to providing “relevant up-to-date contact information for a carrier/PSAP contact database, subject to an agreement by all participating entities that such data be kept confidential.”²⁵ In its comments, ATIS notes that work “continues on the development of a PSAP contact information database.”²⁶ The signatories to the Framework are working with ATIS and stand ready to work in partnership with the public safety community to make the database a reality.

IV. CONCLUSION.

The record in this proceeding and the performance of wireless networks during the historic 2017 hurricane season confirm that wireless providers are committed now more than

²³ CTIA Comments at 18.

²⁴ See Hughes Network Systems, LLC Comments, PS Docket No. 11-60, at 5 (Jul. 16, 2018).

²⁵ Letter from Joan Marsh, AT&T Services, Inc.; Charles McKee, Sprint; Grant Spellmeyer, U.S. Cellular; Scott Bergmann, CTIA; Steve Sharkey, T-Mobile USA; and William H. Johnson, Verizon, to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket Nos. 11-60 & 13-239 (Apr. 27, 2016).

²⁶ ATIS Comments at 3. ATIS also notes that its “NRSC has developed, in conjunction with the Association of Public Safety Communications Officials (APCO), the National Association of State 911 Administrators (NASNA), and the National Emergency Number Association (NENA) a deliverable entitled *Service Providers: Outage Reporting Structure and Potential Types of 9-1-1 Outages*, which provides recommendations for standardized content and delivery which will help reduce confusion associated with notifications independent of the service provider type. Additional efforts will include Best Practices for collecting, managing, and utilizing PSAP and carrier contact information to ensure timely delivery of outage-related information.” See *id.*

ever to deploying and maintaining robust and resilient wireless services and networks that millions of consumers rely upon during storms, natural disasters, and other wide-spread emergencies. In light of this record, the Bureau should continue to take a flexible, outcome-based approach to assessing the effectiveness of the Wireless Cooperative Framework.

Respectfully submitted,

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