

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

In the Matter of)	
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Improving The Wireless Resiliency Cooperative Framework)	PS Docket No. 11-60
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To: Public Safety and Homeland Security Bureau

REPLY COMMENTS OF CTIA

CTIA submits these reply comments in response to the *Public Notice*¹ issued by the Public Safety and Homeland Security Bureau (Bureau) regarding the Wireless Resiliency Cooperative Framework (Wireless Resiliency Framework or Framework).²

I. INTRODUCTION AND SUMMARY.

CTIA commends the Federal Communications Commission for its focus on promoting wireless network disaster and emergency preparedness and rapid and coordinated post-event restoration efforts. CTIA's members share these goals, and in initial comments, CTIA described its members' efforts to ensure that wireless networks remain resilient and to accelerate the timeline for restoration of service. CTIA also embraces the Commission's call for continued assessment of lessons learned, and remains committed to working with the Commission and

¹ *Public Safety and Homeland Security Bureau Seeks Comment on Improving the Wireless Resiliency Cooperative Framework*, DA 19-242 (rel. Apr. 1, 2019) (*Public Notice*).

² 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) (Wireless Resiliency Framework Letter) (submitted for filing by CTIA).

other stakeholders to further enhance the performance of wireless service during the time of consumers' greatest needs.

CTIA notes that, in the timeframe between initial and reply comments, the Bureau issued a report (Hurricane Michael Report) summarizing wireless resiliency and restoration efforts in the face of Hurricane Michael – the first category 5 storm to hit the U.S. mainland since 1992 – and identifying areas that warrant further work.³ In these reply comments, CTIA addresses some of the findings in the Hurricane Michael Report, as well as the record developed in response to the *Public Notice*.

The Hurricane Michael Report identifies areas where additional efforts are needed, and the wireless industry is working vigorously to act on lessons learned from Hurricane Michael. These include, for example, enhancing restoration coordination practices with federal and state officials and identifying how the wireless industry and utility stakeholders can better coordinate to avoid power companies damaging the aerial and underground cabling networks used to provide backhaul service to wireless cell sites – a problem that occurred repeatedly in Bay and Gulf Counties resulting in the loss of restored service. The Hurricane Michael Report also calls for wireless providers to assess the effectiveness of its disaster roaming provisions.⁴ CTIA welcomes the opportunity to work with the Commission on these areas.

With regard to the record developed in initial comments to the *Public Notice*, the proposal by the Rural Wireless Association and NTCA—the Rural Broadband Association to impose nationwide mandatory bilateral roaming testing raises issues that extend beyond the

³ *Report and Recommendations on October 2018 Hurricane Michael's Impact on Communications: Preparation, Effect, and Recovery*, PS Docket No. 18-339, Report and Recommendations (rel. May 9, 2019) (Hurricane Michael Report).

⁴ *Id.* at ¶¶ 53-54.

unique challenges of disaster and emergency response.⁵ CTIA also notes that Telecommunications for the Deaf and Harding of Hearing, Inc. et al. raises important public policy issues regarding consumer readiness and public awareness for the deaf and hard of hearing community that state and local public safety officials should consider.⁶

II. THE WIRELESS INDUSTRY IS APPLYING LESSONS LEARNED FROM PREVIOUS STORMS – INCLUDING HURRICANE MICHAEL – TO FURTHER IMPROVE WIRELESS CONTINUITY AND RESTORATION.

The Hurricane Michael Report provides valuable insight into both where the wireless industry's ongoing restoration activities are enabling service continuity and where more work is needed. In particular, the report demonstrates how investments in pre-event preparation practices and post-event restoration activities contributed to the swift restoration of services in Georgia, Alabama, and most of Florida following Hurricane Michael, where the Bureau concluded communications were only "mildly affected by the hurricane."⁷ The report also summarizes the service disruption that consumers experienced in Florida's Bay and Gulf Counties, where Hurricane Michael made landfall, and it identifies some lessons learned to further improve wireless continuity and restoration that the wireless industry is considering, as discussed below.

Even before the release of the Bureau's staff report, wireless providers were taking stock of their lessons learned during Hurricane Michael, and making preparations to further expedite service restoration in the future. For example, post-Hurricane Michael, wireless providers are improving processes for the pre-staging of temporary network assets and identifying practices

⁵ Comments of NTCA—The Rural Broadband Association and the Rural Wireless Association, PS Docket No. 11-60, at 2-4 (Apr. 29, 2019) (Joint Comments of NTCA and RWA).

⁶ Comments of Telecommunications for the Deaf and Hard of Hearing, Inc. et al., PS Docket No. 11-60, at 7-12 (Apr. 29, 2019) (TDI Comments).

⁷ Hurricane Michael Report at ¶ 2.

with federal and state officials to enhance restoration coordination efforts. These actions will speed access to impacted areas and expedite the deployment of network assets and restoration crews following future storms and other significant events.

The Hurricane Michael Report identifies additional areas for improvement. The report finds that a lack of coordination between stakeholders in the wireless industry, on one hand, and the power sector, on the other, led to extensive damage to fiber used for wireless backhaul service and prolonged full restoration of services.⁸ In the aftermath of the storm, wireless providers moved aggressively to reenter the areas hardest hit, and, as the Hurricane Michael Report recognizes, “[i]nitially, the recovery of wireless communications in Florida appeared to be working reasonably well.”⁹ However, a lack of coordination between power sector stakeholders and wireless industry stakeholders resulted in extensive damage to the aerial and underground cabling networks used to provide backhaul service to wireless cell sites. As the report notes, “[t]he Bureau learned of numerous cases in which a wireless provider had restored service to customers only to have that service brought down as third-party crews damaged communications assets while clearing trash or restoring power lines and utility poles.”¹⁰ For instance, the report notes that Uniti Fiber, which provides backhaul services in Bay and Gulf Counties, experienced at least 33 separate fiber cuts during the recovery effort.¹¹

⁸ See *id.* at ¶ 5.

⁹ *Id.* at ¶ 11.

¹⁰ *Id.* at ¶ 5; see also *id.* at ¶ 24 (“For example, there were situations in which, as soon as telecommunications was restored, debris clearance crews unintentionally ripped down newly-installed aerial fibers, or utility companies, in the process of putting up several thousand new utility poles, inadvertently damaged existing underground fiber nearby.”); see also *id.* at ¶ 27 (noting “[u]tility repair crews and debris removal teams clearing roads and municipal areas frequently inflicted” damage to the networks used to provide backhaul service to wireless cell sites).

¹¹ *Id.* at ¶ 31.

To improve restoration activities in the future, the wireless industry is currently pursuing a host of actions to enhance coordination with power companies. For example, wireless industry representatives are actively leading efforts within the Commission's Broadband Deployment Advisory Committee's Disaster and Recovery Working Group to develop a set of recommendations to improve coordination with power companies.¹² Moreover, these coordination issues also can be explored by the Communications Security, Reliability, and Interoperability Council, which recently was re-chartered for another two year term.¹³ In addition to these government-led initiatives, CTIA and wireless providers are separately exploring how the wireless industry can better coordinate with utility stakeholders.¹⁴

The Hurricane Michael Report also raises roaming issues. By way of background, one element of the Framework focuses on disaster roaming arrangements.¹⁵ This element addresses those disaster or emergency incidents in which existing commercial roaming arrangements are not sufficient, and commits signatories to host roaming on their networks to the extent technically feasible and when such arrangements will not adversely affect service to the host carrier's own customers. The record indicates that this commitment has helped maintain wireless service for consumers in the aftermath of numerous recent storms.¹⁶

¹² See Comments of CTIA, PS Docket No. 11-60, at 15 (Apr. 29, 2019) (CTIA Comments).

¹³ FCC, *FCC Announces the Rechartering of the Communications Security, Reliability, and Interoperability Council for a Seventh Two-Year Term and Solicits Nominations for Membership*, Public Notice, DA 19-292 (Apr. 16, 2019).

¹⁴ See CTIA Comments at 14-15.

¹⁵ See Wireless Resiliency Framework Letter.

¹⁶ See, e.g., Letter from Joseph P. Marx, Assistant Vice President, AT&T Services, Inc., to Lisa M. Fowlkes, Chief, Public Safety and Homeland Security Bureau, Federal Communications Commission, PS Docket No. 11- 60, App. at 45 (Nov. 26, 2018) (noting that AT&T granted a request for roaming in the aftermath of Hurricane Michael); CTIA Comments at 11 (noting wireless providers serving Puerto Rico and the U.S. Virgin Islands implemented roaming arrangements following Hurricane Maria).

The Hurricane Michael Report considers the issue of roaming from a different perspective – that of a provider with disrupted service – and suggests a best practice of seeking roaming assistance.¹⁷ This new perspective is being closely reviewed as part of the wireless industry’s continued commitment to furthering resiliency. As this review occurs, it is important to note that roaming is not a panacea for wireless resiliency due to the unique nature of each event and the unique individual characteristics of each network.

The Hurricane Michael Report also cites backhaul diversity in hurricane-prone areas as another element for closer examination by the wireless industry.¹⁸ CTIA agrees that backhaul diversity plays an important role in network planning and notes backhaul is an issue on which wireless providers remain focused.¹⁹ The Commission should continue to recognize the importance of affording wireless providers flexibility in their network design and approach to backhaul.

CTIA and its member companies will continue to work with other stakeholders and the Commission to identify and implement additional flexible and actionable steps to address lessons learned from Hurricane Michael and other significant storms.

III. PROPOSALS TO MANDATE NATIONWIDE BILATERAL ROAMING TESTING UNDERMINE THE FLEXIBILITY THAT IS CENTRAL TO THE FRAMEWORK.

While the feedback cited in the preceding section directly addresses the issues raised in the *Public Notice*, certain positions put forward in the record do not fit within the context of this

¹⁷ Hurricane Michael Report at ¶¶ 23, 54.

¹⁸ *Id.* at ¶ 52.

¹⁹ See, e.g., Letter from Steve Sharkey, Vice President, T-Mobile USA, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket No. 18-339 (discussing T-Mobile’s approach to backhaul in the Florida Panhandle, which includes the use of multiple backhaul providers and a significant number of portable assets pre-positioned throughout the region and available for use as needed).

examination of the Framework. For instance, in a joint filing, the Rural Wireless Association (RWA) and NTCA—the Rural Broadband Association (NTCA) propose a mandatory nationwide bilateral roaming testing regime.²⁰ However, an obligation for nationwide wireless providers to engage all wireless providers with overlapping coverage areas in bilateral roaming testing would run counter to the Commission’s flexible approach to resiliency and restoration, which allows providers to adapt to the unique and variable nature of each storm.²¹

Further, while all wireless providers vigorously compete on reliability to attract new subscribers under normal conditions, the Framework facilitates a cooperative and collaborative approach in the event of disasters and emergencies. As demonstrated by disaster roaming arrangements and mutual aid efforts that wireless providers have taken during recent storm events, the Framework encourages wireless providers to put aside their competitive differences in order to offer opportunities for consumers in areas affected by an emergency to utilize wireless services. In this context, CTIA encourages RWA’s and NTCA’s member companies to join this collaborative effort and commit to support the Framework’s principles.

²⁰ Comments of NTCA—The Rural Broadband Association and the Rural Wireless Association, PS Docket No. 11-60, at 2-4 (Apr. 29, 2019).

²¹ Moreover, the Commission should incent all wireless providers – including wireless provider-member companies of RWA and NTCA – to invest in service continuity and restoration efforts, rather than rely upon a roaming mandate that could undermine incentives for providers to enhance their network resiliency practices. As then-Commissioner Ajit Pai found in his statement to the *Mobile Resiliency Order*, the Commission’s policies should “focus on encouraging carriers to continue to invest in strengthening *their* networks.” Statement of Commissioner Ajit Pai, FCC 16-173 (Dec. 20, 2016) (*emphasis added*).

IV. COMMENTS ADDRESSING CONSUMER READINESS AND PUBLIC AWARENESS FOR THE DEAF AND HARD OF HEARING COMMUNITY RAISE IMPORTANT ISSUES FOR STATE AND LOCAL PUBLIC SAFETY OFFICIALS.

Telecommunications for the Deaf and Harding of Hearing, Inc. et al. (TDI) raises important public policy issues surrounding consumer readiness and public awareness of service and restoration status for members of the deaf and hard of hearing community. As but one example, TDI raises a number of issues related to the accessibility of Wireless Emergency Alerts (WEA).²² These proposals largely address the content of WEA messages and associated public-facing disaster information that should be considered by state and local public safety officials.

Recognizing the importance of WEA, especially to the deaf and hard of hearing community, wireless providers have supported accessibility features from the outset and continue to enhance WEA's features to address the needs of people with disabilities. For example, the WEA system was designed and implemented with unique vibrating and audio capabilities that are built-into WEA-capable wireless devices. These capabilities can help to ensure people who are deaf and hard of hearing are aware of a WEA message. Further, wireless providers have supported the continuous enhancement of WEA to address the needs of people with disabilities. Today, for example, state and local alert originators can embed "clickable" links within a WEA message to direct consumers, including people with disabilities, to accessible emergency information on their websites.²³

Notably, the WEA ecosystem involves a number of different stakeholders, including federal, state, and local public safety officials who are responsible for initiating and controlling

²² TDI Comments at 7-12.

²³ See Comments of CTIA, PS Docket Nos. 15-91 & 15-94, at 2-4 (May 29, 2018) (discussing the importance of clickable links within a WEA message and the wireless industry's efforts to enhance the WEA system to support features such as these).

the content of WEA messages. Some issues raised by TDI – such as requiring the dissemination of WEA messages with embedded URL addresses – fall within the exclusive control of state and local alert originators. Further, there are significant differences between WEA messages and proprietary, opt-in message services that local public safety officials may also use as part of their emergency alerting toolkit. Because only state and local alert originators have control over the content of a message in both WEA and proprietary, opt-in messages, issues such as the posting of educational videos in American Sign Language and with captions would be more appropriately addressed through collaborations with state and local public safety officials.

V. CONCLUSION.

CTIA shares the Commission's commitment towards ensuring wireless services are available to consumers when they need it most. The Hurricane Michael Report provides insight into both where the wireless industry's ongoing initiatives are improving resiliency, as well as where more work is needed. For those areas in which more work is needed, CTIA is committed to continuing to work collaboratively with the Commission and other stakeholders to advance policies and practices to further enhance wireless network resiliency.

Respectfully submitted,

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