



PUBLIC NOTICE

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PUBLIC SAFETY AND HOMELAND SECURITY BUREAU SEEKS COMMENT ON IMPROVING WIRELESS NETWORK RESILIENCY TO PROMOTE COORDINATION THROUGH BACKHAUL PROVIDERS

PS Docket No. 11-60

Comment Date: January 9, 2019

Reply Date: January 24, 2019

This Public Notice is the first in a series that solicits input on the efficacy of the Wireless Resiliency Cooperative Framework (Framework). The Framework is a voluntary wireless industry commitment to promote resilient wireless communications and situational awareness during disasters.¹

The Federal Communications Commission (Commission) has taken several steps to re-examine the Framework for purposes of restoring communications during and following disasters. On June 13, 2018, the Public Safety and Homeland Security Bureau (Bureau) issued a public notice seeking comment on both the challenges of wireless carriers to obtain real-time information from backhaul providers about the status of network restoration efforts, as well as the lack of coordination on restoration efforts among backhaul providers and wireless carriers.² On November 1, 2018, the Disaster Response and Recovery Working Group of the Broadband Deployment Advisory Committee (BDAC) was tasked with developing best practices for coordination among wireless providers, backhaul providers, and power companies during and after a disaster.³ And on November 6, 2018, the Bureau issued letters to each of the signatories of the Framework, asking them to provide post-disaster action reports for the 2017 and 2018 hurricane seasons as part of the comprehensive investigation of the Framework.⁴

This Public Notice continues the Commission's line of inquiry into the Framework's effectiveness and builds upon the record we have received following the 2017 and 2018 Atlantic

¹ Wireless Resiliency Cooperative Framework, <https://www.fcc.gov/wireless-resiliency-cooperative-framework> (last visited Nov. 1, 2018). See also *Improving the Resiliency of Mobile Wireless Communications Networks; Reliability and Continuity of Communications Networks, Including Broadband Technologies*, PS Docket Nos. 11-60, 13-239, Order, 31 FCC Rcd 13745 (2016).

² See *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, Public Notice at 2 (rel. June 13, 2018) (Framework Effectiveness Public Notice). For purposes of this Public Notice, the term "backhaul providers" includes the provision of both wireline and wireless backhaul services to mobile wireless carriers.

³ See Chairman Pai Announces Members of BDAC [Broadband Deployment Advisory Committee] Disaster Response and Recovery Working Group, *Panel to Develop Best Practices for Responding Before, During and After a Disaster* (rel. Nov. 1, 2018).

⁴ See FCC Launches Re-Examination of Wireless Resiliency Framework in Light of Recent Hurricanes, *Agency Sends Letters to Framework Signatories Asking Them to Provide Post-Disaster Action Reports* (rel. Nov. 6, 2018).

hurricane seasons.⁵ By this Public Notice, the Bureau now seeks comment on how to ensure that wireless carriers and backhaul providers better coordinate with each other, as well as with other stakeholders, both before and during an emergency event, and as part of post-event restoration efforts. In this regard, the Bureau seeks a deeper understanding of the extent to which the Framework currently addresses issues associated with backhaul support for wireless service in such natural disasters. We seek input from the public on these questions to better inform our understanding, as well as potential recommendations to the Commission on proposals that could help facilitate restoration of service after outages.

A. Best Practices and Restoration Challenges

1. What are the existing practices of backhaul providers to prevent outages in their networks (e.g., redundancy)?
2. What steps do backhaul providers take in preparation for natural disasters to ensure resiliency and timely service restoration? To what extent do backhaul providers face unique challenges in maintaining or restoring network integrity during major hurricanes, as well as during lesser, storm-related events?
3. During the past two hurricane seasons, to what extent have backhaul providers experienced outages or degradation of facilities that affected communications network service and restoration efforts, and how were these addressed for each event? What type of outage tracking was done?
4. What particular lessons learned from prior events would be mutually beneficial to both backhaul providers and wireless service providers in preparation for and in response to future events?

B. Coordination and Information-Sharing

1. How do backhaul providers coordinate with their customers before, during, and after a natural disaster? For example, what restoration information is shared with wireless providers and how? Is such information provided in a uniform format and frequency? Is real-time restoration information provided and if not, why not? What challenges exist in providing this restoration information and how were these challenges addressed?
2. Similarly, what steps do wireless providers take to coordinate with backhaul providers in the wake of a disaster?
3. What restoration information is shared with local responders and other on-the-ground actors, including Federal Emergency Management Agency (FEMA) and how?
4. Are there confidential, proprietary, security, or other concerns that would not support sharing of operational information between backhaul and wireless service providers? If so, how might these concerns be surmounted?

⁵ See *Public Safety and Homeland Security Bureau Seeks Comment on Response Efforts Undertaken During 2017 Hurricane Season*, PS Docket No. 17-344, Public Notice, 32 FCC Rcd 10245 (2017) (Hurricane Public Notice).

5. Are there gaps in existing best practices or the coordination support⁶ that could be addressed to facilitate the exchange of backhaul restoration information? To what extent do backhaul providers have sufficient situational awareness of the communications network and access to or knowledge of key stakeholder contact information to meaningfully participate in coordination efforts with federal, state, and local emergency response agencies and power companies for purposes of facilitating emergency response, network restoration, and continuity of operations? If backhaul providers lack sufficient levels of this situational awareness, how could such deficiencies be addressed?
6. Do wireless providers switch backhaul providers during a disaster to avoid outages and, if not, would switching be feasible in the future to help promote continuity of operations? What work-arounds are relied upon by wireless providers to address outages until backhaul facilities are restored? What are the challenges with these work-arounds?
7. What can the Bureau do to promote further situational awareness and coordination between wireless carriers, backhaul providers and other stakeholders?

C. Expanding the Scope of the Framework

1. To what extent could principles described in the Framework be expanded to incorporate backhaul providers? To what extent would formal inclusion of backhaul providers into the Framework improve overall communications response and restoration efforts in times of disaster?
2. If the Framework were modified to include backhaul providers, could all backhaul providers be treated the same? If not, what is, or how could the definition of backhaul provider for purposes of the Framework be defined to distinguish between different classes of backhaul providers?
3. Could backhaul providers propose their own cooperative framework? If so, what are the most critical elements to a backhaul providers-specific framework?
4. What other solutions are in place or could be established – other than or in addition to a cooperative framework –to promote a clear understanding of coordinated responsibilities to facilitate mutual aid and swift restoration of communications service after a disaster?

⁶ For example, under the Department of Homeland Security, FEMA’s Emergency Support Function #2 (ESF #2) supports and coordinates federal actions to assist industry in restoring the communications infrastructure. *See* Emergency Support Function #2 - Communications Annex (June 2016), https://www.fema.gov/media-library-data/1473679033823-d7c256b645e9a67cbf09d3c08217962f/ESF_2_Communications_FINAL.pdf. In cases of emergency, the National Coordination Center for Communications (NCC), leads emergency communications response and recovery efforts under ESF #2 of the National Response Framework. *See* National Coordination Center for Communications, <https://www.dhs.gov/cisa/national-coordinating-center-communications>. In response to the Framework Effectiveness Public Notice, parties indicated that the NCC ESF#2 serves to provide backhaul restoration information to stakeholders upon request in stages with near-term and long-term plans. Specifically, they indicate that the NCC coordinates daily calls with providers and other relevant stakeholders to facilitate restoration status and updates on ongoing recovery efforts. *See, e.g.*, Comments of AT&T, PS Docket No. 11-60, at 10-11 (filed July 16, 2018) (hereinafter all comments, reply comments, and *ex parte* filings refer to those filed in PS Docket No. 11-60, unless otherwise noted); Comments of Verizon at 4-5 (filed July 16, 2018); Reply Comments of American Cable Association at 4-5 (filed July 31, 2018); Ex Parte Letter from Jamie Tan, Director, Federal Regulatory, AT&T to Marlene Dortch, Secretary, FCC (filed Sept. 12, 2018), Ex Parte Letter from Robert G. Morse, Assistant General Counsel, Federal Regulatory and Legal Affairs, Verizon to Marlene Dortch, Secretary, FCC (filed Aug. 31, 2018); Ex Parte Letter from Jeanne Stockman, Senior Counsel, CenturyLink, to Marlene Dortch, Secretary, FCC, (filed Sept. 11, 2018). The Communications Information Sharing Analysis Center (COMM ISAC) is also named as a resource for carrier contact and situational awareness information, while extensive Service Level Agreements between backhaul providers and their carrier customers address other information sharing and escalation processes for restoration. *See, e.g.*, Comments of The Alliance for Telecommunications Industry Solutions at 3-4 (filed July 16, 2018).

Procedural Matters

Interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the FCC's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 CFR 24121 (1998).

Commenting parties may file comments in response to this Notice in PS Docket No. 11-60.

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://apps.fcc.gov/ecfs/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing.
- Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the FCC's Secretary, Office of the Secretary, Federal Communications Commission.
- All hand-delivered or messenger-delivered paper filings for the FCC's Secretary must be delivered to FCC Headquarters at 445 12th Street, SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington, DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (tty).

Parties wishing to file materials with a claim of confidentiality should follow the procedures set forth in Section 0.459 of the Commission's rules. Casual claims of confidentiality are not accepted. Confidential submissions may not be filed via ECFS but rather should be filed with the Secretary's Office following the procedures set forth in 47 CFR § 0.459. Redacted versions of confidential submissions may be filed via ECFS. Parties are advised that the FCC looks with disfavor on claims of confidentiality for entire documents. When a claim of confidentiality is made, a public, redacted version of the document should also be filed.

The proceeding this Notice initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.⁷ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing

⁷ 47 CFR §§ 1.1200 *et seq.*

oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

For further information, contact Robert Finley, Attorney, Cybersecurity and Communications Reliability Division, Public Safety and Homeland Security Bureau, (202) 418-7835, robert.finley@fcc.gov

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