

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

In the Matter of)
)
Public Safety and Homeland Security Bureau) PS Docket No. 21-479
Seeks Comment on Petition for Rulemaking)
Filed by the National Association of State 911)
Administrators)

COMMENTS OF APCO INTERNATIONAL

The Association of Public-Safety Communications Officials, International (APCO),¹ files these comments in response to the Public Safety and Homeland Security Bureau’s Public Notice² regarding the Petition for Rulemaking; Alternatively, Petition for Notice of Inquiry³ filed by the National Association of State 9-1-1 Administrators to facilitate the transition to Next Generation 9-1-1 (NG9-1-1). Here, APCO describes the need for Commission action to facilitate NG9-1-1 and recommends issues to address through an NPRM and NOI.

I. Commission Action Is Needed to Facilitate the Deployment of NG9-1-1

APCO supports Commission action to facilitate NG9-1-1. A member of the public should be able to seek emergency response using broadband-based multimedia, and ECCs should be able to receive, process, and share appropriate information with responders in the field and with other ECCs in a secure and fully interoperable fashion. Unfortunately, after years of effort and hundreds of millions of dollars spent by state, regional, and local authorities, no part of the

¹ Founded in 1935, APCO is the nation’s oldest and largest organization of public safety communications professionals. APCO is a non-profit association with over 36,000 members, primarily consisting of state and local government employees who manage and operate public safety communications systems – including 9-1-1 Emergency Communications Centers (ECCs), emergency operations centers, radio networks, and information technology – for law enforcement, fire, emergency medical, and other public safety agencies.

² Public Safety and Homeland Security Bureau Seeks Comment on Petition for Rulemaking Filed by the National Association of State 911 Administrators, PS Docket No. 21-479, *Public Notice*, DA 21-1607 (rel. Dec. 20, 2021).

³ Petition for Rulemaking; Alternatively, Petition for Notice of Inquiry, CC Docket No. 94-102, PS Docket Nos. 18-64, 18-261, 11-153, and 10-255 (filed Oct. 19, 2021).

country can be described as having achieved this vision of NG9-1-1 with end-to-end broadband communications for ECCs. We'd be doing a disservice to the public and the nation's dedicated public safety communications professionals to claim that NG9-1-1 has been successfully deployed in any state, let alone several states.

The progress toward NG9-1-1 should not be evaluated by simply tracking reports of ESInet deployments. First, having a functioning ESInet in place does not mean NG9-1-1 has been fully deployed. ESInets can provide some advanced capabilities but do not provide the end-to-end capabilities needed for ECCs to achieve the full vision for NG9-1-1. Further, even without a functioning ESInet in place, some "next generation" capabilities such as real-time text (RTT) can be achieved, and some ECCs have begun using over the top solutions for capabilities like video-to-911.

Second, the reality for public safety professionals is that, despite their best efforts, ESInet deployments have suffered widespread problems: ESInets unable to deliver multimedia or reliably deliver voice calls; ESInets unable to interoperate with ECC call handling equipment; and ESInets unable to interoperate with other ESInets to transfer calls and data.⁴ Worse, these problems are often accompanied by significant cost and timeline overruns that go far beyond what might be downplayed as typical of major technology implementations. Leadership at the national level is needed to bring attention to these challenges and work toward solutions.

The Commission can help. As discussed below, several "next generation" capabilities should be advanced through Commission action.

II. The Commission Should Proceed with a Notice of Proposed Rulemaking to Require Interoperability and Location-Based Routing

⁴ Interoperability, not mere "interconnection," is what is required for NG9-1-1.

One of the challenges in facilitating NG9-1-1 has been disagreement over what NG9-1-1 is and how it should be achieved. The vision for NG9-1-1, as defined by the public safety community and expressed in federal legislative proposals,⁵ is an interoperable, secure system for emergency communications end-to-end. The Commission should adopt this vision and take a correspondingly comprehensive view of the opportunities for reasonable regulations to advance public safety.

As the Commission is well-aware, ECCs continue to face significant interoperability challenges for both legacy and IP-based communications.⁶ This is not a technology problem, as is evident from consumers' experience with broadband technology. Consumers can freely share multimedia without concern that their choice of device or broadband service provider will result in interoperability problems. ECCs attempting to implement comparable broadband-based technologies do not enjoy similar flexibility. Instead, proprietary solutions force ECCs to operate in silos or pay for costly, customized integrations. 9-1-1 professionals and the public they serve require and deserve better.

The public safety community has also reached consensus on how “interoperability” should be defined for purposes of NG9-1-1: ECCs should be able to receive 9-1-1 requests for emergency assistance and related data, then process and share the requests with other ECCs and responders in the field without the need for proprietary interfaces, and regardless of jurisdiction,

⁵ See, e.g., A bill to provide funding for the deployment of Next Generation 9-1-1, S. 2754, 117th Cong. (2021) (hereinafter “Next Generation 9-1-1 Act”) available at <https://www.congress.gov/bill/117th-congress/senate-bill/2754/text?q=%7B%22search%22%3A%5B%22S2754%22%2C%22S2754%22%5D%7D&r=1&s=3>; Build Back Better Act, Subtitle K, H.R. 5376, 117th Cong. (2021) available at <https://www.congress.gov/bill/117th-congress/house-bill/5376/text?q=%7B%22search%22%3A%5B%22build+back+better+act%22%2C%22build%22%2C%22back%22%2C%22better%22%2C%22act%22%5D%7D&r=1&s=1>.

⁶ See Communications Security, Reliability, and Interoperability Council VII, *Report on the Current State of Interoperability in the Nation's 911 Systems* (Mar. 17, 2020) available at <https://www.fcc.gov/about-fcc/advisory-committees/communications-security-reliability-and-interoperability-council-vii>.

equipment, device, software, or service provider.⁷ The Commission should adopt interoperability requirements to support this vision. In particular, the Commission should require originating service providers and 9-1-1 service providers to enable the seamless transfer of 9-1-1 calls and related data. Interoperability should be a baseline feature of their services and not result in additional costs for the public safety community.

The Commission should also require wireless service providers to support location-based routing.⁸ Modern devices are capable of deriving location estimates quickly enough to improve routing for a substantial portion of 9-1-1 calls.⁹ By routing 9-1-1 calls based on the device's location rather than relying solely upon cell sector-based routing, thousands of lives could be saved annually¹⁰ and ECCs could avoid the time-consuming process of transferring calls to the appropriate ECC. Location-based routing can be implemented by the carriers without imposing additional costs on ECCs and without having an ESInet in place. The technology is proven, and ECC boundaries are readily available.¹¹ Thus, requiring carriers to implement location-based routing is a modest change that would result in a significant improvement for public safety.

III. The Commission Should Gather Additional Information Through a Notice of Inquiry

Much has changed since the Commission delivered a report to Congress on a framework for NG9-1-1, which included a review of regulatory impediments.¹² Whereas the need for

⁷ See Next Generation 9-1-1 Act at § 4(8).

⁸ See Location-Based Routing for Wireless 911 Calls, PS Docket No. 18-64, *Notice of Inquiry*, FCC 18-32 (rel. Mar. 23, 2018) available at <https://ecfsapi.fcc.gov/file/032340656916/FCC-18-32A1.pdf>.

⁹ See, e.g., Letter from Paul Margie, Counsel, Apple, Inc., to Marlene Dortch, Secretary, FCC, PS Docket Nos. 18-64, 18-261, 11-153, 10-255 (Sept. 24, 2019) available at <https://ecfsapi.fcc.gov/file/1092477344058/Apple%20PSHSB%20ex%20parte%202019-09-24.pdf>.

¹⁰ Mark Reddish, *New Progress for Getting Wireless 9-1-1 Calls to the Right ECC*, TABLETOPX BLOG, Sept. 26, 2019, <https://www.apcointl.org/2019/09/26/new-progress-for-getting-wireless-9-1-1-calls-to-the-right-ecc/>.

¹¹ While carriers can obtain ECC service areas from several sources, ECCs should be allowed to designate a preferred source such as a state- or agency-managed GIS shapefile for carriers to use for location-based routing.

¹² Public Safety and Homeland Security Bureau, Legal and Regulatory Framework for NG911 Services Report to Congress (Feb. 27, 2013) available at <https://www.fcc.gov/document/legal-and-regulatory-framework-ng911-services-report-congress>.

interoperability requirements and location-based routing are well-understood problems that could be solved through Commission action, there are likely additional opportunities for facilitating NG9-1-1 that the Commission should explore further before proceeding to a rulemaking. These opportunities may include issues such as 9-1-1 call and data prioritization. The Commission should seek information on the extent to which service providers prioritize 9-1-1 communications and the feasibility of prioritizing new types of communication such as 9-1-1 calls delivered over Wi-Fi or using 5G and other broadband applications.

The Commission should also consider whether clarification is needed that 9-1-1 service providers are responsible for the acts and omissions of their agents and subcontractors with regard to the direct or indirect provision of 9-1-1 services. The Commission's rules require covered 9-1-1 service providers to take reasonable measures to provide reliable 9-1-1 service with respect to circuit diversity, central office backup power, and diverse network monitoring.¹³ If there is doubt as to whether the rule extends to the variety of entities that provide critical 9-1-1 functionalities through complex subcontracts or other indirect arrangements, APCO would support clarification to ensure that service providers are responsible for the act of their agents and subcontractors with regard to their direct or indirect provision of 9-1-1 services.

With regard to establishing cost demarcation points, the Commission should gather additional information to understand the nature of the problem(s) facing ECCs. A detailed record of the current state of demarcation points and cost recovery mechanisms in states, and how they impact costs, quality of service, etc. for ECCs, will assist the Commission with adopting an appropriate solution.

¹³ 47 C.F.R. § 9.19(b).

Fundamentally, the Commission should avoid shifting responsibilities from service providers onto ECCs and 9-1-1 authorities and look for opportunities for natural extensions of existing rules that could facilitate NG9-1-1 capabilities. For example, service providers subject to the text-to-911 rules are responsible for routing text messages to an ECC.¹⁴ Text control centers (TCCs) used to support SMS-based text-to-911 may be used to support RTT communications, enabling wireless service providers to route emergency RTT communications to a TCC gateway, which would route the 9-1-1 RTT call to the appropriate ECC.¹⁵ RTT is IP-based voice and data. And the Commission tentatively concluded that service providers using RTT should support the ability to transfer RTT calls,¹⁶ and noted that the standard for RTT makes use of the same transport used for most VoIP and video calls.¹⁷ Thus, taken together, the Commission already has rules in place that assign responsibility to originating service providers for routing IP-based multimedia communications to ECCs.

APCO is not suggesting that building upon the RTT requirements is the preferred approach. But these capabilities and the allocation of responsibility to originating service providers demonstrate that the Commission and other stakeholders should keep an open mind on how to achieve NG9-1-1 rather than accept assumptions or adhere to a technical vision that could unnecessarily shift costs to ECCs and 9-1-1 authorities.

¹⁴ “No later than December 31, 2014, all covered text providers must have the capability to route a 911 text message to a PSAP.” 47 C.F.R. § 9.10(q)(10)(i).

¹⁵ See Transition from TTY to Real-Time Text Technology, Petition for Rulemaking to Update the Commission’s Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology, CG Docket No. 16-145, GN Docket No. 15-178, *Report and Order and Further Notice of Proposed Rulemaking*, FCC 16-169 at para. 43, n.174 (rel. Dec. 16, 2016) (“RTT Order”).

¹⁶ Transition from TTY to Real-Time Text Technology, Petition for Rulemaking to Update the Commission’s Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology, CG Docket No. 16-145, GN Docket No. 15-178, *Notice of Proposed Rulemaking* (rel. April 29, 2016) (tentatively concluding that certain features, including the ability to transfer calls, were necessary to ensure RTT is effective and accessible for persons with disabilities).

¹⁷ See RTT Order at para. 30, n.123.

Finally, NG9-1-1 must interoperate with commercial networks and the public safety broadband networks used by first responders. The Commission should explore opportunities for innovation and economies of scale that leverage the technologies that support those networks. More importantly, without NG9-1-1, the nation will not fully realize the benefits of its investment in broadband communications for consumers and first responders. The Commission should therefore move quickly to fulfill its role for facilitating the transition to NG9-1-1.

Respectfully submitted,

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