

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

In the Matter of)
)
Location-Based Routing for Wireless 911 Calls) PS Docket No. 18-64

COMMENTS OF APCO INTERNATIONAL

The Association of Public-Safety Communications Officials (APCO) International, Inc.,¹ offers the following comments in response to the Notice of Proposed Rulemaking on Location-Based Routing for Wireless 9-1-1 Calls in the above captioned proceeding.² APCO appreciates the Commission’s continued attention to misrouted wireless 9-1-1 calls and supports the proposal to require location-based routing. Here, APCO offers recommendations for location-based routing requirements and clarification of issues related to Next Generation 9-1-1 (NG9-1-1).

I. The Commission Should Require Location-Based Routing

As the Commission notes, wireless carriers are already providing location-based routing with clear public safety benefits, reducing the occurrence of misrouted wireless 9-1-1 calls and saving valuable time for emergency communications centers (ECCs) and 9-1-1 callers.³ Misrouted 9-1-1 calls introduce delays to emergency response, the potential for critical information to be lost, and an avoidable burden on ECC resources.⁴ Routing 9-1-1 calls based on the device’s location rather than relying solely upon cell sector-based routing can reduce 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 39,000 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 Location-Based Routing for Wireless 911 Calls, PS Docket No. 18-64, *Notice of Proposed Rulemaking*, FCC 22-96 (Dec. 22, 2022) (“NPRM”).

³ *Id.* at paras. 14-15.

⁴ See Comments of APCO International, PS Docket No. 18-64, at 2 (filed July 11, 2022).

occurrence of misroutes and save lives.⁵ APCO agrees with the Commission that relying on voluntary implementation of location-based routing rather than adopting a requirement would “result in inconsistent routing of calls to PSAPs and a higher risk of 911 misroutes for subscribers on CMRS networks that did not support location-based routing.”⁶ Therefore, location-based routing should be required of wireless carriers nationwide. Any exceptions to this requirement, whether for network type or other factors, should be based upon clear evidence of infeasibility.⁷

A. Accuracy Metric

The Commission proposes an accuracy metric of 165 meters at a confidence level of at least 90%.⁸ APCO supports this proposal but remains open to an alternative metric, so long as it strikes an appropriate balance between how often the device’s location will be known quickly and accurately enough to use location-based routing rather than cell-sector based routing, and how effective the use of location-based routing will be at delivering the call to the correct ECC. To illustrate this point with an extreme example, a metric of 1 meter would be so restrictive that location-based routing would hardly be used, but when it is used, it would be very likely to deliver the call to the correct ECC.

⁵ Mark Reddish, New Progress for Getting Wireless 9-1-1 Calls to the Right ECC, TABLETOPX BLOG, Sep. 26, 2019, <https://www.apcointl.org/2019/09/26/new-progress-for-getting-wireless-9-1-1-calls-to-the-right-ecc/> (modeling a Commission estimate of the potential lives saved from improvements in 9-1-1 caller location accuracy to estimate that thousands of lives could be saved by location-based routing annually).

⁶ NPRM at para. 20.

⁷ For example, APCO understands why the Commission proposes to require location-based routing for wireless 9-1-1 calls originating on an IP-network but not for calls originating on circuit-switched, TDM 2G and 3G networks. *See Id.* at para. 27. However, the Commission should explore the number of 9-1-1 calls handled by these other networks and the feasibility of these networks performing location-based routing.

⁸ *Id.* at para. 42.

B. Compliance Timeframe

The Commission proposes to require nationwide CMRS providers to deploy location-based routing within six months from the effective date of the final rules⁹ and to require covered text providers to deploy location-based routing for text-to-911 within 18 months.¹⁰ APCO believes these compliance timelines are acceptable but would support shorter compliance timeframes given that some service providers are already providing location-based routing for voice calls¹¹ and texts.¹² For non-nationwide CMRS providers, APCO would prefer alignment with the nationwide providers' timeframe, rather than granting an additional year for compliance, unless the record demonstrates that additional time is warranted.¹³

C. The Location-Based Routing Requirement Should Not be Triggered by Certain Conditions

The Commission asks whether the location-based routing requirement should be triggered by certain conditions, such as ECCs demonstrating a high occurrence of misroutes,¹⁴ achieving some level of NG9-1-1 implementation,¹⁵ or requesting location-based routing,¹⁶ or other criteria.¹⁷ Given the immediate feasibility of carriers to implement location-based routing, substantial voluntary deployment, and clear public safety benefits, the Commission should not make the requirement conditional. APCO is unaware of costs or technical changes needed by ECCs to receive 9-1-1 calls that have been routed by device location rather than cell sector

⁹ *Id.* at para. 25.

¹⁰ *Id.* at para. 33.

¹¹ *Id.* at para. 12.

¹² *Id.* at para. 31.

¹³ *Id.* at para. 26 (proposing a compliance timeline of 18 months for non-nationwide service providers).

¹⁴ *Id.* at para. 24.

¹⁵ *Id.* at para. 22.

¹⁶ *Id.* at para. 21.

¹⁷ *Id.* at para. 23.

location. As the Commission explains, AT&T “provides location-based routing to virtually all PSAPs on its network and asserts that it can do so without action by the PSAP.”¹⁸

D. The Commission Should Revise its Definition of Location-Based Routing

The Commission seeks comment on proposed definitions of “location-based routing” and “device-based location information.”¹⁹ While APCO does not disagree with the assumption that ESI-nets may be a potential delivery point for 9-1-1 calls, a simpler approach that does not reference ESI-nets could avoid unintentional limitations.²⁰ For similar reasons, avoiding a definition that relies on the term “device-based location information”²¹ could be beneficial. APCO suggests that “location-based routing” be defined as:

The use of location information with an uncertainty of no more than 165 meters and 90% confidence to deliver 9-1-1 calls and texts to point(s) designated by the authorized local or state entity to receive wireless 9-1-1 calls and texts, or to an appropriate local emergency authority.

II. The Commission’s Approach to NG9-1-1 Should Align with Public Safety’s Vision

One of the challenges in facilitating NG9-1-1 has been confusion about what NG9-1-1 is and how it should be achieved. APCO has previously encouraged the Commission to adopt the public safety community’s vision for NG9-1-1 and take a correspondingly comprehensive view of the opportunities for reasonable regulations to advance public safety.²² The NPRM references NG9-1-1 without defining it and introduces confusion for the instant proposals, as well as the broader vision for entities working to achieve NG9-1-1. The NPRM’s explanation of what the

¹⁸ *Id.* at para. 21.

¹⁹ *Id.* at para. 34.

²⁰ Additional information about the current state of ESI-net capabilities is provided below.

²¹ NPRM at para. 34.

²² *See* Comments of APCO International, PS Docket No. 21-479 (Jan. 19, 2022) (“APCO NG9-1-1 Petition Comments”).

term “NG911-capable” means offers no clarity because the item essentially uses this term to refer to ECCs that are capable of supporting the provision of NG9-1-1,²³ which is tautological. Several aspects of the NPRM demonstrate why providing a clearer understanding of NG9-1-1 that aligns with public safety’s vision will be helpful.²⁴

A. The Commission Should Adopt the Public Safety Community’s Definition of NG9-1-1

NG9-1-1 – as defined by the public safety community with support from a variety of stakeholders²⁵ – means an IP-based system that:

- (A) ensures interoperability;
- (B) is secure;
- (C) employs commonly accepted standards;
- (D) enables emergency communications centers to receive, process, and analyze all types of 9–1–1 requests for emergency assistance;
- (E) acquires and integrates additional information useful to handling 9–1–1 requests for emergency assistance; and
- (F) supports sharing information related to 9–1–1 requests for emergency assistance among emergency communications centers and emergency response providers.²⁶

Employing this comprehensive definition is essential for ensuring that any Commission actions to facilitate NG9-1-1 (as correctly defined) avoid misconceptions about how it will be

²³ NPRM at para. 3 n.5 (“In this *Notice of Proposed Rulemaking*, we use ‘NG911-capable’ to refer to PSAPs or jurisdictions that have implemented IP-based network and software components that are capable of supporting the provision of NG911, including but not limited to an Emergency Services Internet Protocol Network (ESInet).”).

²⁴ Should the Commission opt to defer adoption of a definition of NG9-1-1 that aligns with public safety’s vision, APCO submits that referencing NG9-1-1 in this item might not be necessary, given that the proposed rules themselves lack any reference to “NG9-1-1.”

²⁵ Efforts to establish a federal grant program to achieve NG9-1-1 as the public safety community defines it have received strong support from a variety of stakeholders. *See* Letter from George Kelemen, Exec. Dir., Industry Council for Emergency Response Technologies, Inc., to Senate Commerce Committee (Oct. 23, 2022) (supporting the NG9-1-1 provisions included in the Spectrum Innovation Act of 2022) available at <https://www.theindustrycouncil.org/post/icert-letter-to-senate-commerce-committee-urges-action-on-critical-ng911-funding>; Press Release, House Energy and Commerce Committee, Bipartisan E&C Leaders Urge Senate to Pass the Spectrum Innovation Act (Sep. 30, 2022); Press Release, FCC Office of the Chairwoman, Chairwoman Rosenworcel Statement on Congressional Action to Advance Funding for Next-Gen 911 (June 15, 2022) available at <https://www.fcc.gov/document/chair-rosenworcel-statement-ng911-supply-chain-fund-funding>.

²⁶ *See* Spectrum Innovation Act of 2022, H.R. 7624, 117th Cong. § 301 (2022). Under this definition, NG9-1-1 has not been deployed anywhere in the United States.

implemented and the capabilities it will provide, and the associated risk that misconceptions will unnecessarily shift costs and responsibilities to ECCs and 9-1-1 authorities.

One of the persistent misconceptions that seems to be reflected in the NPRM is that achieving NG9-1-1 consists only of deploying ESInets. As APCO has explained, having an ESInet in place does not mean NG9-1-1 has been fully deployed.²⁷ Furthermore, 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.

Of particular relevance to the NPRM, ESInets may or may not be capable of performing location-based routing after receiving the call from a wireless service provider. Thus, the NPRM's consideration of "NG9-1-1 capabilities" and ESInets as factors for the location-based routing requirements raises concerns. The Commission can and should adopt location-based routing requirements without considering "NG9-1-1" progress or ESInet deployment. Wireless service providers perform routing functions before passing a 9-1-1 call or text to a 9-1-1 network – regardless of whether the 9-1-1 network is legacy or IP-based – and even if such networks are able to perform an additional routing function, carriers should remain responsible for first engaging in location-based routing.

B. The Commission Should Evaluate the Potential Risks for ECCs Associated with Requiring Service Providers to Deliver Information in an IP-Based Format

The Commission proposes to require service providers to deliver 9-1-1 calls, texts, and associated routing information in an IP-based format to "NG911-capable" ECCs that request it.²⁸

²⁷ APCO NG9-1-1 Petition Comments at 2.

²⁸ NPRM. at para. 46.

While the delivery of voice and texts (and eventually multimedia and other data) in IP format will be important to achieving public safety’s vision for NG9-1-1, APCO cautions the Commission against adopting such a rule prematurely or with misconceptions about NG9-1-1.

As APCO has previously commented, one of the most impactful steps the Commission can take to facilitate the eventual deployment of NG9-1-1 would be to explore the need for rules requiring originating service providers and 9-1-1 service providers to enable the interoperable transfer of 9-1-1 calls and related data.²⁹ This would be an appropriate follow-up to findings by the Communications, Security, Reliability, and Interoperability Council VII that ECCs face significant interoperability challenges.³⁰ The Commission must fully consider whether requiring originating service providers to deliver in an IP-based format will be helpful for solving interoperability problems among ECCs or whether, given the current environment of proprietary solutions and substantial interoperability challenges, this risks making the situation worse by further entrenching the problems.³¹ Addressing interoperability for ECCs is a natural correlate, and potentially a prerequisite to Commission action to require the delivery of IP-based 9-1-1 calls, texts, and, eventually, multimedia and data.

²⁹ APCO NG9-1-1 Petition Comments at 3-4. 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, equipment, device, software, or service provider. *See* Spectrum Innovation Act of 2022, H.R. 7624, 117th Cong. § 301 (2022).

³⁰ *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/advisorycommittees/communications-security-reliability-and-interoperability-council-vii>.

³¹ APCO previously suggested that the Commission initiate an NPRM to adopt interoperability requirements that support public safety’s vision for NG9-1-1. APCO NG9-1-1 Petition Comments at 2-4. This would likely be a more effective approach for evaluating ECCs’ needs for delivery of information in an IP format than relying upon the location-based routing-oriented NPRM at issue in this proceeding. Location-based routing is not dependent on whether voice and text are delivered in an IP format. Therefore, the record developed here might not examine the potential risks for ECCs associated with requiring service providers to deliver information in an IP-based format.

Respectfully submitted,

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