

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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

To: The Commission

REPLY COMMENTS OF CTIA

CTIA respectfully submits these reply comments in response to the Commission’s Notice of Inquiry (NOI) on location-based routing (LBR) solutions for wireless 9-1-1 calls in the above-referenced proceeding.¹

I. INTRODUCTION AND SUMMARY.

In response to the NOI, consistent with CTIA’s initial comments, stakeholders throughout the 9-1-1 system agree that prompt routing of wireless 9-1-1 calls to the appropriate Public Safety Answering Point (PSAP) is an essential element of the 9-1-1 system. While the record suggests that the scope of wireless 9-1-1 calls routed to a PSAP without jurisdiction to respond to the call can vary considerably,² the record also confirms that most of the hundreds of millions of annual wireless 9-1-1 calls are routed quickly to the appropriate PSAP. For these reasons, commenters to the Commission’s NOI generally agree the Commission should not require mobile wireless providers to modify the existing wireless 9-1-1 routing system to support

¹ *Location-Based Routing for Wireless 911 Calls*, Notice of Inquiry, PS Docket No. 18-64, FCC 18-32 (rel. Mar. 23, 2018) (NOI).

² While something of misnomer, for purposes of these reply comments and consistent with CTIA’s initial comments in this proceeding and the NOI, a “misroute” is a 9-1-1 call delivered to a PSAP based on the pre-agreed cell-sector-to-PSAP arrangement but outside the PSAP’s jurisdiction. See Comments of CTIA, PS Docket No. 18-64, at 2 n.5 (filed May 7, 2018) (CTIA Comments) (citing NOI at n.1).

LBR in ways that could result in delays for the majority of wireless 9-1-1 calls reaching the appropriate PSAPs today.

As emerging wireless 9-1-1 location technologies and techniques continue to evolve, the record makes clear that LBR solutions would be best considered as an element of the transition to Next Generation 9-1-1 (NG911) systems and capabilities, and not as a near-term solution for the existing 9-1-1 system. Specifically, the record confirms that interim LBR solutions for the existing wireless 9-1-1 routing system would introduce significant technical and operational challenges for wireless providers and PSAPs. For these reasons, consistent with CTIA's initial comments, commenters urge the Commission to encourage PSAPs and 9-1-1 stakeholders to take targeted actions in the near term that can mitigate the challenges of misrouted wireless 9-1-1 calls, such as encouraging additional coordination among PSAPs and by PSAPs with wireless providers.

II. THE RECORD CONFIRMS THAT WIRELESS 9-1-1 CALLS SHOULD BE PROMPTLY DELIVERED TO PSAPS, BUT URGE CAUTION IN PURSUING INTERIM LOCATION-BASED ROUTING SOLUTIONS.

The record makes clear that wireless 9-1-1 calls should be promptly routed to the appropriate PSAP.³ As CTIA explained in initial comments, an LBR approach that delays the routing of wireless 9-1-1 calls as compared to the cell-sector routing framework in use today would result in delay to the majority of wireless 9-1-1 calls that are routed to the jurisdictionally appropriate PSAP.⁴ Comments in the record similarly raise concerns about modifying the current wireless 9-1-1 call routing system in ways that could delay delivery of wireless 9-1-1

³ See, e.g., CTIA Comments at 1-2; Comments of RapidSOS, PS Docket No. 18-64, at 1-2 (filed May 7, 2018); Comments of Association of Public-Safety Communications Officials-International, Inc., PS Docket No. 18-64, at 1-2 (filed May 7, 2018) (APCO Comments).

⁴ CTIA Comments at 5.

calls to a PSAP. The National Emergency Number Association (NENA), for example, suggests that “call delivery delays should be minimized at all points in the call path[.]”⁵ More specifically, the Texas 911 Entities suggest that any solution that would delay the delivery of wireless 9-1-1 calls beyond six seconds “should generally be viewed with appropriately strong skepticism[.]”⁶

Moreover, the record suggests that the Communications Security, Reliability and Interoperability Council’s (CSRIC) estimate that wireless 9-1-1 calls are routed to a PSAP within six seconds may actually overestimate the time it takes to route a wireless 9-1-1 call today.⁷ According to LaaSera, routing more often happens in two seconds or less.⁸ T-Mobile similarly notes that CSRIC’s estimate “is a far longer duration than current 911 call routing in T-Mobile’s network.”⁹ Therefore, CSRIC’s recommendation that LBR obtain a location fix in five seconds or less may actually underestimate the delay that such LBR solutions could potentially cause – delay that necessarily would apply to the delivery of *all* wireless 9-1-1 calls.¹⁰

For these reasons, commenters urge caution in considering the adoption of near-term LBR solutions to mitigate potential misroutes within the existing 9-1-1 system. NENA, which would not “oppose an interim method which produces measurably more accurate and reliable

⁵ Comments of National Emergency Number Association, PS Docket No. 18-64, at 3 (filed May 7, 2018) (NENA Comments).

⁶ Comments of Texas 9-1-1 Alliance, the Texas Commission on State Emergency Communications, and the Municipal Emergency Communication Districts Association, PS Docket No. 18-64, at 12-13 (filed May 7, 2018) (Texas 911 Entities Comments); *see also* NOI ¶ 18.

⁷ Communications Security, Reliability and Interoperability Council V, Working Group 1, Evolving 911 Services, Final Report – Task 2: 911 Location-Based Routing, at 8 (Sept. 2016) (observing the time it typically takes to route the voice portion of a 9-1-1 call after the caller presses send under current routing mechanisms).

⁸ Comments of LaaSera Critical Communications, PS Docket No. 18-64, at 4 (filed May 7, 2018) (stating CSRIC’s figure is “likely more generous than in reality” and that routing is “much more frequently in the ‘or less’ category, more often happening in 2 seconds or less”).

⁹ Comments of T-Mobile USA, Inc., PS Docket No. 18-64, at 9 (filed May 7, 2018) (T-Mobile Comments).

¹⁰ *See supra* note 4 and accompanying text.

call routing,” nevertheless urges restraint in adopting any stopgap solutions “to ensure that such interim solutions do not incur delays in the development and implementation of longer-term and perhaps better routing solutions.”¹¹ Specifically, Comtech raises concerns about the implementation of LBR solutions, suggesting that any change in the Commission’s rules to enable LBR should ensure that PSAPs are not overrun with new types of location information delivered in unfamiliar ways and without appropriate verification.¹² Other commenters flag steps that should also be taken before integrating new LBR solutions and technologies into the existing 9-1-1 system. For instance, the Association of Public-Safety Communications Officials International (APCO) and ESRI each identify the need for standardization in any new solutions,¹³ whereas NextNav urges the testing and validation of all LBR solutions in an independent test bed prior to deployment.¹⁴

For these reasons and consistent with CTIA’s initial comments, the record confirms that the Commission should not require wireless providers to modify the existing wireless 9-1-1 call routing system to support LBR solutions, particularly as PSAPs transition to NG911 which can more likely take advantage of LBR solutions.¹⁵ Indeed, as explained further below, other effective alternatives may exist to mitigate 9-1-1 call misroutes in the near term. Specifically, stakeholders should work cooperatively to consider implementing LBR in conjunction with

¹¹ NENA Comments at 3-4.

¹² Comments of Comtech Telecommunications, Inc., PS Docket No. 18-64, at 7-8 (filed May 7, 2018).

¹³ APCO Comments at 4-5 (discussing “implementation of standards or practices for location-based routing”); Comments of ESRI, Inc., PS Docket No. 18-64, at 7-8 (filed May 7, 2018) (ESRI Comments) (emphasizing the need for “a common national schema to use as a standard for the PSAP community”).

¹⁴ Comments of NextNav, LLC, PS Docket No. 18-64, at 5 (filed May 7, 2018).

¹⁵ *See, e.g.*, T-Mobile Comments at 5-6 (“NG911, which is designed for location-based call routing, and the emerging low-latency/high-accuracy location methods necessary to enable such routing, are both becoming available at roughly the same point in time—making the best course of action clear.”); *see also* NENA Comments at 5 (urging caution so that interim solutions do not delay implementation of NG911 native LBR).

PSAPs' transition to NG911, since determining which PSAP receives a 9-1-1 call in a particular area is a policy decision that is best made by the affected PSAPs.¹⁶

III. THE RECORD SUPPORTS COMMISSION EFFORTS TO ENCOURAGE PSAPS AND OTHER STAKEHOLDERS TO TAKE TARGETED STEPS TO MITIGATE WIRELESS 9-1-1 MISROUTES IN THE NEAR TERM.

As an initial matter, the record demonstrates that the percentage of misroutes can vary considerably among sectors and PSAPs.¹⁷ The variance among sectors and PSAPs underscore the need for a targeted approach. For this reason, rather than adopting LBR solutions in the near-term, the record supports the exploration of other targeted 9-1-1 misroute mitigation solutions that can be rapidly and efficiently implemented in the near term where necessary.

In its initial comments, CTIA urged the Commission to draw attention to ways that stakeholders can help mitigate misrouted wireless 9-1-1 calls today.¹⁸ Specifically, PSAPs should have the technologies, capabilities, and procedures to respond to any 9-1-1 call, regardless of whether such calls originate within a given PSAP's jurisdiction.¹⁹

Other commenters also suggest that the Commission should encourage PSAPs to pursue targeted steps in the near-term. Commenters note that PSAPs should have basic tools, including shared maps and call-transfer capabilities, to mitigate any issues related to wireless 9-1-1 calls originating from areas outside of, but adjacent to the PSAP's jurisdiction.²⁰ As APCO explains,

¹⁶ See Comments of Verizon, PS Docket No. 18-64, at 3 (filed May 7, 2018) (Verizon Comments).

¹⁷ Texas 911 Entities Comments at 2; *see also* NENA Comments at 2-3 (noting variance in misroutes among sectors); Comments of Boulder Regional Emergency Telephone Service Authority, PS Docket No. 18-64, at 9-10 (filed May 7, 2018) (BRETSA Comments) (same); Comments of West Safety Services, WT Docket No. 18-64, at 5 (filed May 7, 2018) (same).

¹⁸ CTIA Comments at 7.

¹⁹ *Id.* at 7-8.

²⁰ *See, e.g.*, ESRI Comments at 7-8 ("the FCC ... should provide a tool to PSAPs that would let them contribute their service area information to a national layer"); Verizon Comments at 6-7 (emphasizing that PSAPs also have a role in solving the issue of misroutes).

“[t]he problems created by misrouted 9-1-1 calls are made worse by the fact that – despite the sophistication of modern communications technology – even basic call transfers (regardless of the reason to transfer a call) are not necessarily possible.”²¹

Further, as wireless providers operate their wireless 9-1-1 call routing systems consistent with PSAP direction, the record confirms that PSAPs can work directly with wireless providers to identify and mitigate any potential concerns with the existing wireless 9-1-1 routing capabilities, including evaluating cell site routing determinations among PSAPs.²² Instead of broadly considering new approaches, such as LBR, that could cause delays to the majority of wireless 9-1-1 calls, which are appropriately routed to PSAPs today, the record confirms that the Commission should encourage stakeholders to work together to mitigate challenges resulting from wireless 9-1-1 calls originating from areas outside of, but adjacent to a PSAP’s jurisdiction.

IV. CONCLUSION.

CTIA appreciates the Commission’s efforts to ensure that wireless 9-1-1 calls are promptly routed to the appropriate PSAP. As the record demonstrates that most wireless 9-1-1 calls are quickly routed to the appropriate PSAP today, the Commission should view LBR solutions as part of the long-term transition to NG911 systems and capabilities. In addition, the Commission should encourage PSAPs to take near-term steps to mitigate challenges resulting from wireless 9-1-1 calls originating from areas outside of, but adjacent to a PSAP’s jurisdiction. Doing so will maintain the benefits of the current wireless 9-1-1 system, while advancing and incentivizing the transition to NG911.

²¹ APCO Comments at 2 (“There are still instances where PSAPs have to manually call each other to convey the information about an emergency.”).

²² See BRETSA Comments at 8-11 (“These sites can then be evaluated over time ... for remedial action, starting with the sites which are responsible for the largest number of Phase I Misroutes.”); *see also* Verizon Comments at 6-7 (the FCC should “encourage all stakeholders—wireless service providers, 911/NG911 service providers, and PSAPs alike—to work cooperatively to improve the existing system of cell sector-based routing”).

Respectfully submitted,

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June 28, 2018