

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of
Wireless E911 Location Accuracy
Requirements

PS Docket No. 07-114

COMMENTS OF AT&T

William A. Brown
Gary L. Phillips
Lori Fink

AT&T Services, Inc.
1120 20th Street, N.W.
Suite 1000
Washington, D.C. 20036
202.457.3007 - Telephone
202.457.3073 - Facsimile

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TABLE OF CONTENTS

	<u>Page</u>
TABLE OF CONTENTS	i
INTRODUCTION AND SUMMARY	ii
DISCUSSION	1
A. The Roadmap Meets the Commission’s Primary Objectives on Improving Wireless Location Accuracy, Especially Indoor Accuracy	1
1. Making Indoor Location As Widely Available as Technically and Economically Feasible	2
2. Helping CMRS Providers, Public Safety Entities, and the Commission to Monitor Performance and Compliance	3
a. Test Bed	4
b. Live Wireless 911 Call Data	4
c. Location Metrics	5
3. Adopting Rules That Are Technology-neutral, Cost-effective, and Easy to Understand and Administer	7
B. The Roadmap Provides Public Safety with a Vertical Component to Address the Commission’s Z-Axis Concerns for Wireless Indoor Location Accuracy	9
C. The Roadmap Anticipates the Desire for Additional Compliance Reassurance by Recommending that Specific Sections be Codified by the Commission	11
CONCLUSION	12

INTRODUCTION AND SUMMARY

Following the Commission’s lead in this docket,¹ APCO International (APCO), the National Emergency Number Association (NENA), and the four nationwide wireless providers (AT&T Mobility, Sprint, T-Mobile USA, and Verizon Wireless—collectively “Carrier Signatories”) hammered out an agreement that offers a technology-neutral, technology-feasible, and technology-proven roadmap for achieving improved wireless location accuracy—especially indoor location accuracy—for E911 calls. In this agreement (the Roadmap), the Carrier Signatories agree not only to meet the Commission’s proposed 50-meter location-accuracy standard, but also to deliver to PSAPs a dispatchable address—the Commission’s stated ultimate goal for wireless location accuracy.² The Roadmap, which is the result of tough negotiations between APCO and NENA, on the one hand, and the Carrier Signatories, on the other, represents the best way of providing PSAPs and first responders real-time, actionable location information for wireless E911 calls, both indoors and out. After publication of the Roadmap, the Public Safety and Homeland Security Bureau (Bureau) released a Public Notice seeking comment on it.³ AT&T Services, Inc. (AT&T), on behalf of its affiliated companies, files these comments in response.⁴

In the Public Notice, the Bureau asks “whether the Roadmap presents a reasonable alternative, in whole or in part, to the proposals set forth in the *Third*

¹ Wireless E911 Location Accuracy Requirements, PS Docket No. 07-114, *Third Further Notice of Proposed Rulemaking*, FCC 14-13 (rel. Feb. 21, 2014) (Third FNPRM).

² See Third FNPRM at ¶ 50.

³ Public Notice, PS Docket No. 07-114, DA-1680 (Bur. Rel. Nov. 20, 2014).

⁴ In these comments, AT&T will describe aspects of the Roadmap generally as a way of helping readers understand the agreement. Nevertheless, AT&T’s comments are not intended to enlarge or diminish or otherwise alter the terms of that agreement. The Roadmap is the best evidence of the parties’ intent to the agreement.

Further Notice.” We assert that it does. Briefly, the Roadmap is faithful to the Commission’s overarching aims in this docket. First, the Roadmap is the end product of collaboration between public safety and wireless providers. Second, the Roadmap adheres to the Commission’s goal of improved indoor wireless location accuracy—50 meters horizontal and a vertical component. Third, the Roadmap endeavors to fulfill the Commission’s ultimate goal for wireless location accuracy: a dispatchable address (referred to as “dispatchable location” in the Roadmap). And, fourth, the Roadmap meets the Commission’s three stated key objectives for new wireless indoor location accuracy rules; that is, to: (1) make indoor location as widely available as technically and economically feasible, tracking recent improvements in location technology; (2) help CMRS providers, public safety entities, and the Commission to monitor performance and compliance; and (3) adopt rules that are technology-neutral, cost-efficient, and easy to understand and administer.

The Roadmap makes indoor location accuracy as widely available as technically and economically feasible by leveraging proven technologies (e.g., Wi-Fi and Bluetooth Low Energy beacons) and a proven process (e.g., computer database to provide ALI). The Roadmap helps 911 stakeholders monitor carrier performance and compliance by using three mechanisms: a technology neutral and nondiscriminatory test bed, live 911 call data, and specific location metrics. And the Roadmap provisions are technology-neutral, cost-effective, and easy to understand and administer. The Roadmap does not prohibit the use of any technology to assist carriers to meet their agreed-upon location-accuracy obligations. In fact, the Roadmap both expands on the technologies available to carriers and assists carriers in deciding which technologies would most effectively meet those obligations. By tying location-accuracy solutions to test-bed performance, the Roadmap achieves cost-efficiencies by making sure that those solutions actually performed as

advertised. And the Roadmap is easy to understand and administer, because it lays out a step-by-step approach to improving wireless indoor location accuracy.

In addition to all that, the Roadmap will provide public safety with the best wireless vertical location accuracy data: dispatchable location. Dispatchable location provides public safety not only with a specific civic address but also with additional location information needed to lead first responders directly to the party calling 911 (*e.g.*, floor, room, suite number). In contrast, the proposed z-axis data coupled with the x-/y-axis data leaves first responders with a considerable horizontal and vertical search ring, especially in urban and dense-urban morphologies.

As part of the Roadmap, the signatories have recommended that specific provisions be codified by the Commission. Given the success of the recent voluntary agreement reached between these same Carrier Signatories and APCO and NENA on Text-to-911, such codification is hardly necessary. But this recommendation will provide reassurance to all 911 stakeholders that progress will continue to be made by wireless providers on improving indoor location accuracy, including the creation of the dispatchable location system and adherence to the new metrics.

We contend that the Roadmap offers the best path forward to improved indoor and outdoor wireless location accuracy. In addition to maintaining the 50-meter horizontal standard proposed by the Commission in the Third FNPRM, the Roadmap goes farther and offers public safety what everyone, including the Commission, admits is the ultimate goal of this docket, a dispatchable location. The creation of the dispatchable location system will move public safety from relying on a unique “one-off” system and towards a system that exploits widely available commercial and residential location-based services. In addition to the obvious benefits to public safety and first responders of having a dispatchable location, the dispatchable location system itself will permit improvements in public safety merely by virtue of the fact that it will grow organically over time, expanding the number of

locations (and by extension, the number of calling parties) from which wireless emergency callers can be most accurately located. The Commission, public safety, and wireless providers will no longer have to chase ever diminishing distance-based location-accuracy benchmarks. Rather, we fully expect that popularity and availability of the technologies underpinning the dispatchable location system will meet the needs of public safety for the foreseeable future without the need of continually revisiting the appropriateness of wireless location-accuracy benchmarks.

For all these reasons, we assert that the Roadmap is a reasonable alternative to the Commission's proposed new location accuracy rules.

DISCUSSION

A. The Roadmap Meets the Commission’s Primary Objectives on Improving Wireless Location Accuracy, Especially Indoor Accuracy.

The Commission’s Location Accuracy Third FNPRM is predicated on the widely held belief that E911 calls are more and more often originating from indoor locations. Because the present wireless location-accuracy standards have an “outdoor-oriented focus,”⁵ the Commission was justifiably concerned that there was a regulatory gap between measuring performance of location technologies outdoor and measuring them indoor.⁶ To span the gap, the Commission proposed that new indoor standards be created, including a vertical component (z-axis), and that they meet certain significantly higher levels of accuracy than are presently applicable to outdoor 911 calls today.⁷ In a nutshell, the Commission sought “to ensure that wireless callers receive the same protection whether they place a call indoors or outdoors.”⁸

In the Third FNPRM, the Commission articulated three key objectives through its proposed new indoor wireless location-accuracy rules:

(1) *make indoor location as widely available as technically and economically feasible, tracking recent improvements in location technology*; (2) *help CMRS providers, public safety entities, and the Commission to monitor performance and compliance*; and (3) *adopt rules that are technology-neutral, cost-efficient, and easy to understand and administer.*⁹

In our view, the Roadmap achieves these key objectives. Indeed, we assert that, when evaluated through the lens of these key objectives, the Roadmap improves on the Commission’s proposals.

⁵ Third FNPRM at ¶ 24.

⁶ *Id.*

⁷ The Commission proposal is: “CMRS providers would be required to provide horizontal location (x- and y-axis) information within 50 meters of the caller for 67 percent of 911 calls placed from indoor environments within two years of the effective date of adoption of rules, and for 80 percent of indoor calls within five years. CMRS providers would be required to provide vertical location (z-axis) information within 3 meters of the caller for 67 percent of indoor 911 calls within three years of the adoption of rules, and for 80 percent of calls within five years.” Third FNPRM at ¶ 3. *See* 47 C.F.R. § 20.18(h).

⁸ Third FNPRM at ¶ 26.

⁹ *Id.* at 39 (emphasis supplied).

1. Making Indoor Location As Widely Available As Technically and Economically Feasible.

The heart of the Roadmap is the proposal to develop the National Emergency Address Database (NEAD) for the purpose of providing PSAPs with the gold-standard of location accuracy: dispatchable location.¹⁰ By itself, this one feature of the Roadmap improves on the Commission’s own proposals by going directly to the ultimate aim of the Wireless E911 Location Accuracy Docket—*i.e.*, providing a dispatchable address—and it does so by leveraging proven technologies and using a proven process to achieve what the Commission referred to as only a long-term goal.¹¹ The proven technologies are those technologies that underpin the almost ubiquitous, commercial and residential location-based services, *i.e.*, Wi-Fi hotspots and Bluetooth Low Energy beacons; the proven process is the use of a central database to provide automatic location information or other similar call-related data.¹² Succinctly, many of the essential elements of providing dispatchable location (*i.e.*, indoor location information) for wireless calls are largely in place, nearly ubiquitous, and well tested. These factors combine to make the dispatchable location solution both technically and economically feasible.

Some vendors and their vendor-sponsored associations have argued that the Roadmap relies on new and untested technologies. In fact, the opposite is true. While Wi-Fi and Bluetooth

¹⁰ In the Roadmap, “Dispatchable location” is defined as “the civic address of the calling party plus additional information such as floor, suite, apartment or similar information that may be needed to adequately identify the location of the calling party.” Roadmap at 4. This is the same level of wireless indoor location-accuracy information described by the Commission when writing of “dispatchable address.” See Third FNPRM at ¶ 50.

¹¹ See Third FNPRM at ¶ 50 (The Commission’s “long-term indoor location objective, which is the delivery of ‘dispatchable address’ information, including the caller’s building address, floor level, and suite/room number.”); at ¶ 117 (“We agree with commenters who assert that public safety would be best served through the delivery of a dispatchable address.”); at ¶ 140 (“We seek comment on how Bluetooth or Wi-Fi-enabled locks, thermostats, smoke detectors, lighted exit signs, security systems and other residential ‘smart building’ technologies could be registered with dispatchable address information and, if so, how it could be achieved.”).

¹² Commercial and residential Wi-Fi locations are practically ubiquitous; low-energy Bluetooth beacons are relatively inexpensive and can quickly be deployed to add to the sources from which a wireless caller’s location can be pinpointed to an actual civic address.

Low Energy beacons are used ubiquitously and have been tested over time, the solutions being hawked by the vendors in this docket are wholly new and untested. Claims of success are not the same as proof of success. The effectiveness of Wi-Fi and Bluetooth technologies are proven every time a wireless device detects a Wi-Fi hot spot or a Bluetooth-enabled device to which it can connect. And for reasons not clear to us, some believe that the marketing claims of vendors about their wireless location-accuracy solutions should be taken as Gospel and on faith, while the rational concerns of the wireless providers—who would have to deploy such solutions at great cost and be held accountable should they prove lacking—are dismissed as foot dragging or, worse, anti-public-safety.¹³

The Roadmap seeks to meet this element of the Commission’s key objectives by leveraging proven technologies that are already widely available. We simply have to connect the dots to harness the power of these devices in the service of public safety.

2. Helping CMRS Providers, Public Safety Entities, and the Commission to Monitor Performance and Compliance.

The Roadmap provides a three-legged stool of provisions to facilitate monitoring performance and compliance. First, the Roadmap commits the Carrier Signatories to support a test bed to facilitate testing of 911 location technologies that could be used to provide location information for both indoor and outdoor 911 calls and to analyze them in relation to the 50-meter location-accuracy benchmark—the same 50-meter benchmark set by the Commission in the Third FNPRM. Second, the Roadmap obligates the Carrier Signatories to collect on a monthly basis and provide on a quarterly basis data for all *live* wireless 911 calls for six geographic areas that correspond to the ATIS-ESIF-recommended geographic test regions. Third, the Roadmap provides for specific location-accuracy metrics. Whether these metrics are met will be determined by using the carrier-provided 911 call data and the results of the test-bed analysis of the carrier’s position source method (*i.e.*, wireless location solution, like OTDOA) used to

¹³ The untested claims of vendors should be viewed skeptically precisely because these technology vendors are not held accountable by regulators or others for any deficiencies in their “solutions.”

deliver the automatic location information (ALI) for the 911 call. Together, these three elements—test bed, live call data, and metrics—create the tools to monitor performance and compliance.

a. Test Bed

Briefly, the Roadmap envisions the creation of a test bed managed by a non-governmental entity, which will be operated in a technology neutral and non-discriminatory manner, to allow anyone to demonstrate the performance of their wireless location technologies and to have their technologies characterized with respect to how they perform in relation to the 50-meter location-accuracy benchmark.¹⁴ The test bed will be “consistent with” the elements recommended by the CSRIC III Working Group and with the work undertaken by the ATIS-established ESIF.¹⁵ Unlike the unproven claims of vendors placed in the record in this docket, the test bed will allow all wireless 911 stakeholders to see how various proposed wireless location solutions actually perform. Moreover, the test bed will allow the test bed administrator to characterize that performance in relation to the 50-meter accuracy standard, which will provide an appropriate mechanism for evaluating a carrier’s compliance (see below).

b. Live Wireless 911 Call Data

In addition to using drive testing data for outdoor locations, the Carrier Signatories have committed to collect *live* 911 call data and to provide that data on a quarterly basis for six geographic areas.¹⁶ That data will be sorted by the position source method (*e.g.*, A-GPS, GLONASS, OTDOA) used to provide the location data to PSAPs for 911 calls. As explained below in more detail (*see c. Location Metrics*), the position source method plays a role in determining whether a Signatory Carrier is meeting the performance benchmark.¹⁷

¹⁴ Roadmap at 3.

¹⁵ *Id.*

¹⁶ *Id.* at 8.

¹⁷ *See id.* at 8.

The importance of using live 911 data cannot be overstated. It will give public safety insight into actual carrier performance and compliance using real 911 calls that drive testing alone simply cannot. And using data from the six ATIS-ESIF-recommended geographic test regions will hold the chosen location technologies' performance to the highest standards.¹⁸ If the chosen location technologies can perform well in those areas, then all stakeholders will be assured that those technologies are performing equally well in their own areas.

c. Location Metrics

The Carrier Signatories have committed to achieving explicit and increasing indoor-outdoor performance benchmarks over a six-year period, starting within two years of the effective date of the Roadmap.¹⁹ The Roadmap contemplates using the carrier's "heightened location-accuracy technologies"²⁰ and the carrier-provided live 911-call data for the six geographic areas to calculate whether the carrier is meeting the agreed-upon benchmarks. For example, to use the simple hypothetical of the Roadmap, if OTDOA provides a caller's location within 50 meters 60 percent of the time based on available test data, then 60 percent of the 911 calls delivered with the OTDOA position source could be used to support the agreed-upon metrics.²¹ Similar calculations for other position source methods would also be included in the mix (*e.g.*, crowd-sourced location technology) to determine whether, given all the 911 call data,

¹⁸ The Roadmap expressly addresses the concerns of some that using these six geographical regions would allow a carrier to rig the game by beefing up its network in these areas. *See* Roadmap at 8-9 ("Each carrier will ensure that its location technology deployment is consistent between the geographic areas designated for reporting and coverage areas outside these areas, so that empirical test results in the test bed regions are reflective of performance achievable from a particular location technology under similar environmental conditions in mature deployment in other outdoor locations where 9-1-1 calls are made.").

¹⁹ Roadmap at 8.

²⁰ *Heightened location accuracy technologies* are wireless 911 "calls with location fixes for A-GNSS (GPS and/or GLONASS), dispatchable location, and the proportion of calls from any other technology or hybrid of technologies capable of accuracy performance of 50 meters using a blended composite of indoor and outdoor based on available data from a test bed and/or drive test performance." Roadmap at 8.

²¹ *Id.* at 8.

the Signatory Carrier is meeting the applicable benchmark (*e.g.* 50 percent of all wireless 911 calls within three years of the effective date of the Roadmap).

Some criticize the Roadmap's use of heightened location accuracy technologies. This is odd as those technologies include only those solutions that will have been proven to perform—and only to the extent that they perform—at the 50-meter level in an open, transparent, technology-neutral test bed under real-world conditions and verified with truly representative, live 911 call data. Consequently, the criticism would appear to be self-defeating, because if the critics' own wireless location-accuracy solutions cannot meet this test, then why should the Commission or public safety be in favor of relying on their solutions in lieu of others that have passed this test-bed process?

Some critics have complained that the metrics of the Roadmap do not compare favorably with the Commission's proposed new rules (*e.g.*, 40 % of all wireless 911 calls within two years (Roadmap)²² *versus* 67 % of 911 calls placed from indoor environments within two years of the effective date of adoption of rules (Third FNPRM)²³). This criticism is unfair, especially in view of the failings of the critics own wireless location solution technologies.

First, this criticism assumes, without a shred of real evidence in the record, that the wireless location solutions being promoted by vendors could actually meet the Commission's aspirational goal.²⁴ Second, it ignores the reality of having to deploy new untested technologies in carrier networks, get agreement on industry standards for chip sets and other devices, and introduce new handsets in the market (along with the time it takes to propagate those handsets among the carriers' subscribers)—all of which is necessary to make these vendors' yet untested new technologies work (if they can). In short, reaching the Third FNPRM goal of 67 percent of 911 calls placed from indoor environments within two years is not realistic given these hurdles.

²² *Id.*

²³ Third FNPRM at ¶ 3.

²⁴ To date, CSRIC testing of these proposed solutions demonstrates only their failure to achieve the Commission's proposed accuracy benchmarks.

Third, the criticism ignores the benefits of dispatchable location. Even today, carriers are providing and expanding the delivery of dispatchable location through consumer and enterprise sources, such as 3G microcells and small cells. And when the NEAD is up and running, the quality of a dispatchable location 911 call will be far superior to the “within 50 meter/3 meter” benchmark of the proposed rule. And whereas both the Third FNPRM and the Roadmap ultimately call for 50-meter accuracy for 80 percent of all wireless 911 calls, only the Roadmap will provide an address that will take first responders to the emergency caller’s front door. In sum, the carriers are not standing still and waiting for some future date to improve indoor location accuracy, it has already begun. And when the terms of the Roadmap are fully implemented, we expect the results to be much more useful to public safety and first responders than the Commission’s proposed rules.

These same critics also complain that the Roadmap offers no support for the millions of wireless subscribers using 3G and 4G phones. Yet, the opposite is true. Today, many, if not most, of these phones already have Wi-Fi capabilities, and Bluetooth low energy technology is also being quickly adopted as a standard feature of such devices. Because this technology exists in these devices, all that remains to exploit them is to enable these features to operate with 911 and to modify the network to deliver information from these features over the control plane, just as is contemplated by the parties to the Roadmap. In contrast, however, almost none of the 3G and 4G phones today can support the z-axis proposal of the proposed new rule using the critics’ positioning technologies.²⁵

3. Adopting Rules that are Technology-neutral, Cost-efficient, and Easy to Understand and Administer.

The Roadmap is built on a technology-neutral approach. All wireless 911 stakeholders—providers, vendors, *etc.*—are free to participate in the test-bed process to demonstrate the real-world capabilities of their location-accuracy solution technologies and to have their solutions

²⁵ These same 3G and 4G phones, however, will, by in large, be able to allow the delivery of a dispatchable location by means of the NEAD.

characterized in relation to the new wireless location-accuracy performance benchmark of 50 meters. Moreover, the Roadmap neither prohibits nor deters a wireless provider from deploying whatever technology it deems most appropriate to help it meet the benchmark standard.

But the Roadmap seeks to go beyond the 50-meter benchmark standard by providing PSAPs with a dispatchable location from the NEAD, which, instead of being a 50-meter radius calculation, would give first responders “an actual door to kick down.” This addition of the NEAD doesn’t make the Roadmap less technology-neutral; rather it makes the Roadmap more technology-neutral by enlarging the universe of technologies that can be deployed to improve wireless location data. With the addition of the NEAD, wireless providers can now choose from an array of technologies that generally fall into two distinct categories: (1) outside-based technologies (*e.g.*, OTDOS, A-GPS, RF fingerprinting, network beacons, satellite-based positioning), and (2) inside-based technologies (*e.g.*, Wi-Fi hot spots and Bluetooth Low Energy beacons).

It cannot be denied that both the test bed and the NEAD involve costs. But it is common knowledge that new location-accuracy rules were going generate significant costs regardless of the path chosen to improve wireless location accuracy. Moreover, with respect to the costs associated with developing and operating the test bed, it should be noted that the Commission was already contemplating deployment of a test-bed mechanism to evaluate performance and compliance. The real cost efficiencies of the Roadmap are derived from allowing wireless providers to choose from among *proven* wireless location-accuracy solutions that have been appropriately tested in the test bed under real-world conditions “in an open, transparent, and competitively neutral manner.”²⁶ Were the Commission to simply impose new wireless indoor location-accuracy benchmarks on providers absent the confidence provided by such a test-bed mechanism, the costs associated with any such scheme could soar wildly out of control. Unverified claims of vendors placed in the record of this docket are not proof that their solutions

²⁶ Roadmap at 3.

can perform as advertised. Requiring wireless providers to meet new location-accuracy benchmarks based on these unverified claims would be the height of cost inefficiency, because wireless providers would be compelled to deploy these untested solutions across their networks at considerable cost and incur additional mounting costs of having to retool or replace them when they failed to allow wireless providers to meet the wireless location-accuracy benchmarks. The test-bed mechanism, which provides real-world, nondiscriminatory, and independently administered testing of these proposed vendor solutions, coupled with the progressive benchmark standards, which uses the blended calculation of 911 call data, gives wireless providers the best chance of meeting the new indoor/outdoor wireless location-accuracy benchmarks in a cost-effective manner.

While the Roadmap has many parts—most of which are aimed at guaranteeing that the Carrier Signatories continue to make steady progress on improving wireless location accuracy from the get-go—it is easy to understand and administer. The steps that the Carrier Signatories have committed to are clearly set forth in the Roadmap, along with any additional steps that might need to be taken if certain predicate steps are missed or prove unworkable, and the process for determining performance and compliance are equally well established.

B. The Roadmap Provides Public Safety with a Vertical Component to Address the Commission’s Z-Axis Concerns for Wireless Indoor Location Accuracy.

In the Third FNPRM, the Commission expressed its concern for a vertical component for any new indoor location-accuracy standard.²⁷ Typically, the vertical component is expressed in terms of a z-axis fix. Indeed, the Commission’s proposed vertical component rule was based on a three-meter benchmark.²⁸ Many commenters, including AT&T, noted that there were no wireless location-accuracy solutions that have been shown to meet this three-meter z-axis benchmark and that the Commission ought not to impose the standard ahead of multiple, commercially available,

²⁷ Third FNPRM at ¶ 65 (“Vertical location information on a caller’s floor height would substantially benefit first responders trying to locate callers in multi-story buildings.”).

²⁸ Id. at ¶ 3.

proven solutions.²⁹ Moreover, these commenters pointed out that vendor solutions discussed in the Third FNPRM would still require deployment across carrier networks and the propagation of new hand-held devices with standardized chip sets and interfaces, which would, in all likelihood, take considerably longer than five years to allow carriers to meet the proposed benchmark levels, even if the solutions were available when the rules were adopted. Commenters also noted that, even if there were such solutions available, a z-axis measurement with a radius of three meters was still unsatisfactory given a 50-meter horizontal search radius in urban and dense-urban morphologies and was largely unnecessary in suburban and rural morphologies.³⁰ Nothing has changed since those comments were filed.

Some opponents of the Roadmap complain that it lacks a z-axis component. This is simply untrue. First, and most importantly, the proposed dispatchable location solution of the Roadmap, which provides a civic address with additional information, such as floor, suite, apartment or and the like, offers a better vertical component than the three-meter z-axis proposal. Assuming for the sake of argument that a wireless location-accuracy solution could actually provide a z-axis fix within the proposed three-meter benchmark, first responders would still have to contend with a considerable horizontal search ring involving multiple floors, especially in urban and dense-urban morphologies, where presumably a z-axis fix would do the most good. In contrast, a dispatchable location (that provides such information as floor, suite, apartment, and the like) would direct the first responders to the emergency caller's front door. Said another way, not only does the Roadmap address the vertical component issue head-on, it provides a better vertical component than does the Commission's proposed three-meter z-axis rule.

Second, even though the Carrier Signatories remain skeptical of the incremental value of providing public safety with z-axis data (especially in light of the proposed dispatchable location solution), they have agreed in the Roadmap to explore on a specific timeline the possible benefits

²⁹ See CTIA at 4-7; Qualcomm at 9-15; Sprint at 6-7 and 13-15; T-Mobile at 15-18; and Verizon at 12-14.

³⁰ See AT&T at 10-12; and T-Mobile at 11-12.

of z-axis data based on uncompensated barometric pressure.³¹ It may be that the agreed-upon study of uncompensated barometric pressure data will prove that this sort of z-axis data will be of value to public safety. Then again, it may not. Regardless, the z-axis data contemplated by the Commission’s proposed wireless location-accuracy rule would not be provided any more quickly than or be as accurate as the Roadmap’s dispatchable location from the NEAD.

C. The Roadmap Anticipates the Desire for Additional Compliance Reassurance by Recommending that Specific Sections be Codified by the Commission.

As part of the Roadmap, the parties agreed to recommend to the Commission that specific sections be codified to provide additional reassurance that the Carrier Signatories would comply with the agreement.³² We propose that the Commission draft rules consistent with the Carrier Signatories’ intent behind recommending that the following Roadmap provisions be codified:

- Section 2(a): the definition of dispatchable location;
- Section 2(f)(i), (ii), and (iii): the schedule for handset design and development;
- Section 2(g): network design and development;
- Section 2(h): end-to-end functionality;
- Section 3(c): the introduction of new devices; and
- Section 4(a), (b), (c): metrics for assessing performance.

In view of the success of the voluntary NENA-APCO-Carrier Agreement for SMS Text-to-911,³³ it is clearly unnecessary that this agreement be codified. Yet, the Carrier Signatories understood and agreed that recommending codification of these above-referenced provisions of the Roadmap would provide additional “collateral” to other 911 stakeholders—especially those not actively participating in the negotiations—of the carriers’ dedication to improving wireless

³¹ Roadmap at 10.

³² *Id.* at 13.

³³ Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications; Framework for Next Generation 911 Deployment, PS Docket Nos. 11-153, 10-255, *Report and Order*, 28 FCC Rcd 7556 at ¶ 6 (2013).

location accuracy, including indoor location accuracy. Criticisms from some quarters that the Roadmap is merely a voluntary agreement and lacks regulatory teeth ignore the success of the Text-to-911 voluntary agreement and the willingness of the Carrier Signatories to recommend that the Commission codify these provisions.

CONCLUSION

AT&T respectfully requests that the Commission consider these comments in its deliberations on this matter.

AT&T

By: /s/ William A. Brown

William A. Brown
Gary L. Phillips
Lori Fink

AT&T Services, Inc.
1120 20th Street, N.W.
Suite 1000
Washington, D.C. 20036
202.457.3007 - Telephone
202.457.3073 - Facsimile
William.Aubrey.Brown@att.com

Attorneys for AT&T

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