Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
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Wireless E911 Location Accuracy Requirements	)	PS Docket No. 07-114
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Comments of the

National Association of State 911 Administrators

The National Association of State 911 Administrators (NASNA) represents state 911 programs in the field of emergency communications. Established in 1994 as a 501(c)(3) non-profit organization, NASNA is the voice of the states on public policy issues impacting 911. NASNA members believe that state 911 leaders' expertise can assist industry associations, public policymakers, the private sector, and emergency communications professionals at all levels of government as they address complex issues surrounding the evolution of emergency communications.

NASNA's mission is to promote information sharing among those states with programs dedicated to implementing 911 emergency telephone systems; assist other states with resolving issues necessary to accomplish statewide implementation and maintenance; encourage the establishment of a coordination person within each state or province; identify and recommend minimum standards for 911 emergency telephone systems; identify and recommend appropriate legislation or rules concerning the administration of statewide 911 telephone system programs and serve as a knowledge resource for the membership of the Association.

The comments submitted below are based upon a consensus of our membership and their collective experience with the provisioning of 911 services.[1]

III. Proposed Indoor Location Accuracy Requirements

A. Costs and Benefits of Indoor Location Accuracy

Paragraph 30 – …we seek more granular information regarding the percentage of wireless calls placed from indoors and, to the extent available, the percentage of wireless calls to 911 from indoors. We also seek data on the types of indoor environments 911 calls are placed… NASNA agrees that additional data are necessary for an accurate understanding of the environment. It is NASNA's opinion that these

[1] Individual members may provide separate comments to the Commission that agree with, amplify, differ from, or are in addition to the comments offered by NASNA on this matter.

data should come from a neutral third party and not from industry parties with a commercial interest in the outcome.

Is it possible to identify the type of building morphology where current location technologies routinely fail to provide accurate location information? CSRIC III's test bed concept included a methodology that could be adapted for identifying morphologic problems. This concept addresses bias on the collection side by recommending testing through a qualified testing vendor.

Paragraph 31 – We seek comment on whether and how the increase in wireless calls to 911 from indoors has affected the delivery of E911 information and the ability of public safety officials to respond to calls for help. NASNA agrees that it is possible, even likely, that the decline in the delivery of E911 Phase II information with wireless calls is attributable, at least in part, to the increase in the percentage of wireless 911 calls being made from indoors. Nevertheless, we think it is essential to clearly understand whether the phenomenon is truly a degradation in accuracy, a lack of awareness on the part of PSAP personnel that it takes 30 seconds for Phase II location information to become available, or, perhaps, some of both. There is critical information missing: the relationship between latency and location accuracy. Until we collectively have a better understanding of this relationship, we should not be hasty to describe the situation as a failure. Further data gathering and analysis may reveal the solution to be operational rather than technical. On the other hand, it may show the opposite. Our point is that more data are needed.

Has there been a market failure in the provision of E911 information for wireless calls originating indoors? No, there has not been a market failure. None of the major carriers market their products based on the accuracy of location information sent to a PSAP when the user dials 911. 911 location accuracy simply is not a market factor and therefore will not improve without regulatory pressure.

Paragraph 32 – NASNA agrees with the Commission's belief that requiring location information for wireless calls to 911 from indoors will result in significant public interest benefits, most importantly in "promoting safety of life and property." The location information that is ultimately required needs to be realistic and achievable for the providers and meaningful for the PSAPs and first responders in order to have the intended benefit.

Paragraph 33 – We seek comment on the extent to which such improvements would result in tangible benefits with respect to safety of life and property. While NASNA understands that it is standard practice for the federal government to apply a monetary value to a human life for the purpose of cost-benefit analysis, we would support saving the 10,120 people annually even if it cost more than $92 billion to do it. We agree that the Salt Lake City experience is not unique. A faster response time generally results in lives saved, but there is a broader societal issue here. Resources saved in terms of

faster response time helps to contribute to the overall quality of life of a given area. We locate in communities because of schools and low cost of living; why not faster response times?

Paragraph 33 – We seek comment on the reasonableness of our analyses of these studies [the Salt Lake City Study and the Pennsylvania Cardiac Study] *and our underlying assumptions.* The Commission's analysis of these studies seems reasonable.

We also seek comment on whether the time benefit of vertical location, given the spread in horizontal location, is likely to be more, less, or comparable to the estimated gains in the Salt Lake City Study and the Cardiac Study, when moving from basic 911 to enhanced 911 services. Based on the Commission's analysis, it seems reasonable to extrapolate that vertical location information would similarly improve response time. NASNA would prefer to see this assumption validated by empirical data, because there is no question that improvement in response time improves patient outcomes.

Paragraph 34 – We seek comment on the increased value and benefits of providing more accurate location information to certain populations, such as people with disabilities, victims of crime, senior citizens and children. All such groups may have less ability to identify and relate to a 911 call-taker where they are located, especially in an emergency situation. In such circumstances, accurate, automatically-generated location information can be critical to saving lives. We seek comment regarding the value and scope of benefits that improved location accuracy would provide in such circumstances. If more accurate automatic location information is beneficial for the population as a whole, how much more so for the population sub-sets mentioned and for those with certain types of medical emergencies, as noted by Commissioner Rosenworcel. Enhanced 911 was created to improve response times by automatically providing location information to responders independent of whether the caller knew his or her location or could speak. Everyone who calls 911 deserves to be located and to receive timely help.

Paragraph 35 – We understand that implementation of indoor location accuracy will likely impose significant costs on providers. We seek comment generally on the costs of indoor location accuracy requirements. Providers can always pass these costs on to consumers. Providers are in the best position to estimate the depth and breadth of costs related to the Commission's proposed indoor location rules. The key will be educated consumers who would be willing to buy services and products that provide this more robust emergency location capability.

B. Near-Term Indoor E911 Location Accuracy Requirements

Paragraph 38 – We seek comment on how our proposed approach, as well as any potential alternatives – particularly any consensus proposals from industry and public safety stakeholders – might promote these objectives most effectively. NASNA strongly

supports the institutionalization of an ongoing indoor location accuracy test bed for compliance monitoring. The test bed concept promoted in CSRIC III supports this idea. We would ask the Commission to consider expanding the test bed for outdoor location accuracy compliance, as well. Finally, NASNA is not a proponent of allowing providers to implement alternative forms of compliance testing. Nevertheless, if the Commission should decide to allow this, any alternative proposals must be equally rigorous in their testing standards and ensure all consumers receive the same level and quality of service regardless of what company provides their service.

1. Horizontal Location Information

Paragraph 46 – We seek comment on the extent to which mandating a 50-meter accuracy requirement to indoor calls – after a reasonable period of time – would encourage CMRS providers to work with location and device vendors to implement the advances being made in indoor location technology. NASNA believes that the establishment of the Commission's proposed near-term location accuracy requirement combined with a reasonable compliance deadline would motivate the commercial vendors to work diligently to develop the technology and to meet the Commission's requirements. We believe this because the historical record in the earlier wireless E911 docket provides ample evidence of the efficacy of this approach in solving the problem.

Paragraph 48 – Thus, under the first two-year benchmark, up to 33 percent of calls may either have location outside the accuracy threshold or location data that arrives after a delay of more than 30 seconds. Although the Commission did not ask for comment on this point, NASNA would ask the Commission to consider the fact that it is likely that some calls will be received with no location information whatsoever, even after a re-bid and an additional 30 seconds' delay. We want to ensure that calls that are never fixed count against the carrier's compliance percentage.

We seek comment on whether the proposed two-stage reliability thresholds of 67 and 80 percent would be useful to public safety entities. Yes, this will absolutely allow PSAPs to make reasonable estimates of where the caller "probably" is. It is a good starting point, and would be more useful than not having any location information. Technology will continue to advance, so we recommend the Commission plan to revisit this threshold in the future.

We seek comment on whether two-stage approach to adopting reliability requirement would adequately address public safety needs, and seek comment on any alternative approaches. NASNA supports the two-stage approach, though, as we previously suggested, the Commission should reserve the right to revisit it in the future after technology improves; perhaps the compliance timeframe could be escalated. We understand that the providers may be able to present valid, empirical evidence as to why this wouldn't be feasible, and if so, the Commission should, of course, take that evidence into account while still putting a mechanism in place that will guarantee measurable progress toward this important goal.

Paragraph 50 – In addition to our proposed 50-meter accuracy requirement, should we consider adopting an alternative indoor location requirement that CMRS providers can satisfy by delivering a caller's building address and floor information? If any of the carriers can actually deliver building address and floor information, then this level of location accuracy should be required of all carriers. It would be far superior to receiving a latitude/longitude and an uncertainty factor. Although not within the FCC's purview, we muse that, in a perfect world, perhaps the model building codes maintained by the International Code Council (ICC) should require beacon locator technology to be included, where necessary and appropriate, in building design.

Paragraph 51 – We propose that the combined 50-meter accuracy and 67- and 80-percent reliability requirements comprise the sole ring for testing indoor location accuracy. We seek comment on this proposal. NASNA supports this proposal as being more elegantly simple and straightforward than the alternative.

Paragraph 53 – We think that a uniform indoor accuracy requirement, independent from any existing outdoor location requirements, acknowledges that indoor environments are distinct from outdoor environments. In the Indoor Location Test Bed Report, CSRIC recommended that the Commission treat indoor location accuracy separately from outdoor location accuracy due to differences in testing and technologies. We seek comment on this analysis and our proposed approach. NASNA participated in the CSRIC work group that developed this report and can state that public safety and the vendor participants were in agreement on this point. Therefore, NASNA supports having separate accuracy requirements for indoor and outdoor 911 calls for now. As technology improves, the Commission's long-term goals should be a simplified accuracy requirement that applies to all calls regardless of location origin.

Paragraph 54 – We seek comment on whether there has been a market failure in the provision of E911 information and, if not, whether the market could be relied upon to address indoor location issues on its own, and within a reasonable period of time. There is not a single major carrier that uses E911 location accuracy as a significant factor in its marketing strategy. There simply is no market pressure for improving E911 information accuracy, and as such the market cannot be relied upon to address this issue on its own. In part, this is due to a disconnect between what the market, i.e., consumers, believes to be the case and what actually is the case. The public assume smart phones really are "smart." The market cannot exert pressure for change without consumers first having an accurate understanding of the current limitations of 911 location.

Could voluntary commitments, in conjunction with Commission monitoring of indoor location accuracy developments and actual performance, be sufficient and effective in satisfying the public safety objectives of this proceeding? We invite comment on the potential for voluntary commitments and other consensus-based proposals to address these issues. Voluntary commitments are, by their nature, more difficult to enforce and

less likely to result in universal adoption or consistent compliance. Rules, having the force of law, are more effective.

Paragraph 55 – In light of recent developments in wireless technology and usage trends, we believe it is critical to address the gap in our existing E911 regulatory framework regarding indoor location accuracy as quickly as possible. Accordingly, we propose a two-stage implementation timeframe from the effective date of an order adopting indoor E911 location accuracy requirements and seek comment on whether such a timeframe would be technically feasible and economically reasonable. NASNA shares the Commission's viewpoint about the criticality of the need to address the gap in the regulatory framework regarding indoor wireless E911 location accuracy. The timeframe that the Commission has proposed appears to us to be aggressive, but not unreasonably so. This should have the positive effect of motivating the industry to make measurable progress to improve public safety.

Paragraph 57 – We seek comment on whether a two-year timeframe is sufficient for CMRS providers to satisfy the horizontal (x- and y-axis) component of the indoor location accuracy requirement discussed above for 67 percent of indoor 911 calls. NASNA thinks the Commission should trust the work of CSRIC and proceed under the assumption that the proposed timeframe is sufficient. The experience from the original wireless proceeding supports the importance of establishing firm timeframes in combination with clear accuracy requirements precisely because, as the Commission has said, it will provides the regulatory certainty necessary for parties to dedicate resources to improving location accuracy technology.

Paragraph 60 – We also seek comment on alternatives to using the effective date of rules as the trigger for the timeline to comply with proposed indoor location accuracy requirements. For example…should we consider initiating the compliance timeline only after the test bed administrator certifies that a technology has met the proposed accuracy standards in the test bed? …[w]ould linkage of the timeline to technology certification reduce the incentive to invest in technological development or create incentives to delay testing in the test bed? NASNA strongly advocates against a regulatory approach that would link the compliance timeline with test-bed certification of the technology. In our opinion, this would reduce the incentive for carriers to work expeditiously with location technology vendors to develop the necessary technology. The process the Commission has set forth in this *Third Further Notice* will result in the development of a variety of competitive technology options in the shortest amount of time with the greatest public safety benefits. The Commission should not be deterred by any arguments to the contrary.

Paragraph 61 – We seek comment on whether the Commission should consider reevaluating the compliance timeline at some interim point to evaluate the status of testing of location technology. NASNA supports the Commission retaining the right to re-evaluate deadlines at a future date. Since we have already advocated for the

timeline being triggered by the adoption of rules, we don't see this as an "alternative," but a sensible, pragmatic means for the Commission to keep its regulations aligned with technological reality and the public interest. Empirical evidence not available now will be available in the future, and when it is the Commission should consider it and adjust as necessary.

Paragraph 64 – Would the proposed near-term requirements have an adverse impact on current and future requirements work that could also serve to achieve meeting a long-term accuracy requirement? The Commission's proposed requirements are an important step toward the location accuracy that will be necessary to take full advantage of NG911 technologies. The proposed requirements should not be viewed as delaying more advanced technologies, but as accelerating their development.

2. Vertical Location Information

Paragraph 77 Timeframe – We seek comment on whether this [that CMRS providers must deliver z-axis information for 67 percent of calls within a three-year timeframe and for 80 percent of calls within a five-year timeframe] would afford a sufficient implementation period. NASNA supports the proposed timeframe for delivering z-axis location information. We think it is sufficient and that early adopters among the PSAPs will be ready.

Paragraph 80 – We seek comment on the timeframe in which a significant fraction of PSAPs would be capable of receiving and processing z-axis information, and how that should impact the timeframe in which a z-axis requirement could reasonably be imposed on CMRS providers, or whether PSAPs are ready to accept z-axis information today. The PSAPs most likely to benefit from z-axis location information are those with many multi-story buildings in their service areas. Some of these PSAPs are likely ready to accept z-axis data today, because they already have CAD technology capable of displaying floor-level information. Adoption rates will be higher in areas where the information is most useful to a PSAP in locating a caller, and lower in areas where the information is less useful. The estimated timeframe for PSAP adoption should not be used as the basis for establishing a timeframe for CMRS providers to deliver the information.

3. Implementation Issues

   a. Compliance Testing for Indoor Location Accuracy Requirements

Paragraph 85 – We seek comment on the practical effect of this safe harbor. What factual showing would be necessary to overcome the presumption of compliance? If a compliance issue arises that overcomes the presumption, should we afford the provider an opportunity to resolve the issue before considering initiation of enforcement action? If the provider can demonstrate that it is using best efforts to meet the accuracy requirements, but is prevented from doing so by circumstances beyond its control, should we limit the scope of potential enforcement activity? We seek comment on these issues. NASNA agrees with the concept of a carrier being required to demonstrate

compliance with the test bed rather than having to test in every location it serves. However, there will certainly be cases of noncompliance, just as there are today. NASNA is concerned that any safe harbor provision not hinder or prevent a state or local jurisdiction from taking effective action to resolve a problem with any carrier that does not meet the location accuracy requirements. When a state or local jurisdiction brings evidence of non-compliance to the Commission's attention, a compliance review mechanism needs to be in place regardless of previous successful certification in the test bed. It makes sense that the provider should be given an opportunity to resolve the issue before any enforcement action is taken. The compliance review process should include all parties: the Commission, the provider and the state or local jurisdiction that raised the issue. If the provider is able to demonstrate to the FCC that its failure to meet the accuracy requirements is due to circumstances beyond its control, the party that brought the complaint to the Commission's attention needs to be fully informed, if not persuaded. The process needs to be simple, direct and sensitive to the limited budgets of the public safety parties.

(i) Test Bed Methodology

Paragraph 87 – We also seek comment on which aspects of the testing process – administrative, technical, and operational – should be set forth in our rules and which are better left to the discretion of the test bed administrator. Administrative requirements should be set forth in rules to ensure sufficient reliability, accountability, and transparency of the process, but technical and operational considerations should be left to the test bed administrator.

Paragraph 88 – We seek comment on whether… the test bed could provide reliable information about how location technologies perform in different circumstances, without necessitating ubiquitous testing in real-world environments…[w]e seek comment on whether these morphologies are sufficiently representative and inclusive of the variety of indoor environments in which wireless 911 calls are made, or whether there are different environments that should be included. The ATIS-0500013 standard used in CSRIC WG3 should be the starting standard for the institutionalized test bed being proposed; we trust the standard-making process. Representative sampling is done in research projects all the time, and certainly no one would argue that the WG3 test bed was not a success. Thus, NASNA does not see a need for ubiquitous testing in real-world environments. That said, we do believe there still needs to be some level of real-world testing to compare with the test bed results and adjust the test bed if needed.

Paragraph 89 – We propose to measure latency "from the time the user presses SEND after dialing 9-1-1, to the time the location fix appears at the [location information center]." This seems reasonable.

Paragraph 91 – For purposes of assessing yield, we propose that CMRS providers should satisfy the 67 and 80 percent reliability requirements for each individual indoor location morphology (dense urban, urban, suburban, and rural) in the test bed, and based upon

the specific type of location technology that the provider intends to deploy in real-world areas represented by that particular morphology. We believe this approach is consistent with our proposal that providers must satisfy the location accuracy requirement at the PSAP- or county-level. We seek comment on this approach. NASNA supports this in principle, but would want to ensure that the Commission will check the results of this method by comparing it with real-world test result at some point in the not-too-distant future.

Paragraph 92 – We seek comment on whether the foregoing metrics are sufficient for assessing each performance requirement and our proposed indoor location requirements as a whole. NASNA believes the proposed metrics should be sufficient, but if the experience at the PSAP level indicates the performance requirements aren't being met, then the Commission needs to provide a mechanism for state and local governments to challenge a provider's assertions of compliance and trigger a compliance resolution process.

Paragraph 93 – We seek comment on our proposal to require testing of the indoor location technology to be used as it will actually be deployed in CMRS provider's network. Moreover, we seek comment on the feasibility of establishing a test bed that addresses our concerns that any compliance test bed provide a close simulation of real-world indoor calling scenarios. We agree with the Commission's proposal to require the testing of the location technology as it will actually be deployed in the provider's network, and believe that it is feasible to establish a test bed that addresses the Commission's concerns; it is a proven method. As we have stated previously, we do think the test bed results need to be re-evaluated at some point based on real-world results.

Paragraph 95 Test Bed Administration – We seek comment on these views and on whether there are any other such administration issues that we should consider. NASNA agrees with the Commission's assessment of the WG3.

(ii) Alternative Testing Methods

Paragraph 99 – What is the feasibility of allowing CMRS providers to develop such an alternative mechanism for testing indoor location accuracy? For example, how should the Commission determine whether CMRS providers choosing to forego the test bed have demonstrated that their methodology and testing procedures are at least equivalent to the rigor and standards used in the test bed approach discussed above? Should we require providers electing to use an alternative testing approach to file their proposed approach with the Commission in advance, in order to allow us to review their proposed methodology? What further requirements, if any, are appropriate and necessary to ensure that a provider using an alternative testing approach is satisfying our accuracy requirements? Finally, should the Commission leave it to the industry to determine whether and how to establish any jointly used program in order to save costs? NASNA's preference is that carriers not be allowed to develop alternative mechanisms

for testing indoor location accuracy, but that all be required adhere to a single independently administered test bed. We think it would be extremely challenging for the Commission to evaluate whether CMRS providers choosing to forego the test bed have or have not used a methodology that is equivalent to the independently-administered test bed, and to assess whether the accuracy requirements are being met or not. The Commission should not leave it to the industry to determine for itself whether and how to establish a joint testing program. The Commission should maintain oversight control.

(iii) Test Frequency

Paragraph 100 – We seek comment regarding the extent to which CMRS providers should be required to re-test the accuracy of their indoor location technologies. For example, as CMRS providers make material upgrades to their networks and handsets to incorporate new or updated system and location technologies… NASNA agrees with the concept of establishing a threshold to require re-testing whenever there has been a significant change to the network technology, the handset technology, the service area, or the morphology of the service area of the carrier. Re-testing should also be triggered if there are any new technologies deployed in the service area that may affect location accuracy.

Alternatively, should we require periodic re-testing, regardless of whether a provider has made any significant updates to its network? NASNA is a proponent of periodic retesting and does not see this as necessarily being an alternative to the above.

(iv) Confidentiality of Test Results

Paragraph 101 – Should these restrictions [from the WG3 test bed regime] *be carried forward to the proposed indoor location accuracy test regime? Or should some or all test data also be made available to the Commission, or to requesting PSAPs and other 911 authorities?* Detailed test data should be made available to the Commission in full. In addition, detailed test data should also be made available to national organizations that exist for the advancement of 911, such as NENA and NASNA, as well as any state or local 911 authority that requests it. The Commission should require non-disclosure agreements to be signed.

…should this data also be available, at least to some extent, to the public? Summary test data should be made available to the public. An informed public may create a market incentive for carriers to improve compliance beyond minimum standards.

Can and should the Commission's location accuracy requirements and enforcement of compliance therewith preempt any state or local determinations to the contrary, absent agreements between CMRS providers and PSAPs for more stringent requirements? We are not clear about the Commission's intent with this question. Is the Commission suggesting that PSAPs could negotiate with CMRS providers for more stringent location information? NASNA thinks it would be a disaster to have different wireless location

accuracy standards depending on jurisdiction. Location accuracy requirements should be left to the FCC.

b. Applicability of Indoor Location Accuracy Requirements

Paragraph 107 – We also seek comment on whether we should establish any exceptions for smaller wireless providers and, if so, why. NASNA believes all wireless providers should be held to the same requirement.

Paragraph 108 – We anticipate that the z-axis requirement should be applied co-extensively, in the same geographic areas, with any x- and y-axis indoor requirements. In the alternative, we seek comment on whether we should apply the z-axis requirement to only a subset of those environments where we apply the horizontal indoor location requirement, or otherwise apply the z-axis requirement in a manner that is independent from the application of horizontal indoor location requirements. The z-axis requirement should apply in all environments. Even rural areas have multi-level buildings. For the sake of simplicity, the z-axis requirements should apply to the same environments as the x-and y-axis requirements.

c. County/PSAP-Level Measurements; Enforcement Tied to PSAP Readiness

Paragraph 110 – …We propose to … require CMRS providers to satisfy the proposed indoor location accuracy requirements on a PSAP-level or county-level basis. We seek comment on this proposal. NASNA supports the Commission's proposal. It maintains consistency with existing regulations.

e. Waiver Process

Paragraph 115 – We seek comment on whether we should adopt a specific waiver process for CMRS providers who seek relief from our indoor location accuracy requirements. NASNA would support an objective process for granting waivers as long as waivers were for short-term deadline extensions and not extended delays in implementation. As with the Commission's other waiver provisions, providers should be required to demonstrate sufficient cause to justify the granting of relief.

C. Long-Term Indoor E911 Location Accuracy Requirements

Paragraph 117 – In developing a framework for E911 location accuracy, we seek comment on how any potential near-term requirements would operate in a NG911 environment, as well as how these requirements could facilitate the Commission's long-term location accuracy objectives. Location technology for wireless carriers will remain unchanged in NG911. What is different in NG911 is how that location information is used by the network; but up until the point that the location information is delivered to the network, the technology is the same. Improving location accuracy in E911 can only serve to improve location accuracy in NG911.

The proposed requirements for horizontal location within 50 meters and z-axis information within 3 meters could still result in building misidentification, and are

insufficiently granular to provide room or apartment-level location. While this is true, the proposed requirements are still a step in the right direction. We should not allow the pursuit of perfection to prevent us from making incremental improvements.

Paragraph 118 – Over the long term, we seek comment on how to formulate requirements that would require sufficiently granular location information to provide PSAPs with "dispatchable" address information, which would include a building address as well as specific floor and suite/room number information for indoor calls. In the current environment, location information from wireless calls is delivered to the PSAP in x- and y-coordinates. Geographic Information System (GIS) software is then required at the PSAP to convert this to a civic address. This could be changed by moving the GIS software further back in the delivery process. Latitude and longitude data could be converted to a civic address at the Mobile Positioning Center (MPC), then delivered through a shell ALI record to the PSAP in the same way that VoIP calls are. In a NG911 environment, that conversion to a civic address could occur after the lat/long are delivered to the NG911 network.

1. Leveraging Indoor Network Access Technologies

Paragraph 123 – Could existing information fields be used to display additional address information, like floor and apartment number? Yes. E911 location databases and call-handling software products have a field that is used in wireline calls to identify apartment numbers. This field could be used to display this information.

2. Differentiating Between Indoor and Outdoor Calls

Paragraph 126 – We also seek comment on whether identifying a wireless 911 call as originating indoors versus outdoors, by itself, would be useful information to public safety entities. Yes, of course. Anything that helps specify the exact location of a caller is helpful.

3. Leveraging Commercial Location-Based Services, Emerging Technologies, and other Sources of Location Information

Paragraph 135 – …what technical and operational challenges, if any, do PSAPs face in receiving location accuracy information from LBS services? If the LBS data are converted to lat/long or a civic address, NASNA does not know why it would cause any issues.

IV. IMPROVING THE DELIVERY OF PHASE II LOCATION INFORMATION

A. Confidence and Uncertainty Data

Paragraph 155 – We seek to develop a better understanding of why C/U data is not always utilized by PSAPs. What are the problems PSAPs have encountered with its use? How could C/U data be provided in a more helpful fashion? Most 911 dispatchers come from a non-

technical background, and find these terms confusing. NASNA does not believe there is a change from the carrier side that would make C/U data more useful. CAD and GIS product vendors should do more to make this information available to PSAP personnel in ways that are more user-friendly and easy to understand.

Paragraph 156 – Is it important that all CMRS providers subject to Commission's E911 requirements use the same confidence level when calculating C/U data? Yes. Lack of a consistent standard for confidence level when calculating C/U would render the information meaningless.

If a standard confidence level is desirable across Phase II data, is 90 percent the correct level? Why or why not? NASNA would support this, because it is something non-technical people would understand: "There is a 90% chance that the caller is within this circle."

… should the Commission nevertheless still require CMRS providers to use the same confidence level? Yes. Please.

Paragraph 158 – Is there any reason why the format of C/U requirements should differ for indoor versus outdoor calls? No. Changing the requirements for outdoor vs. indoor calls would complicate its display at the PSAP.

C. Identifying the Type of Technology Used to Deliver the E911 Location Fix

Paragraph 161 – …we seek comment on whether to require CMRS providers to identify the technology used to determine a location fix and to provide this information to PSAPs that have the capability to receive this information. Breaking down what kind of location technology was used to determine a caller's location would not be useful to a 911 dispatcher and would complicate things unnecessarily.

E. Monitoring E911 Phase II Call Tracking Data

Paragraph 169 – We seek comment on whether the Commission should require providers to periodically report E911 Phase II call tracking information, similar to the call data provided in conjunction with the recently held E911 Location Accuracy Workshop. Would such a requirement help promote the delivery of Phase II E911 information? Yes, they should and yes, it would.

We seek comment regarding the scope of information required in the reports. What information should be provided in Phase II call tracking reports? At a minimum, it would be most helpful to NASNA and its constituents if the Commission were to require a breakdown of how many calls are delivered as Phase I vs. Phase II.

How frequently should providers be required to report Phase II E911 call tracking data? An annual reporting requirement seems adequate.

F. Monitoring and Facilitating Resolution of E911 Compliance Concerns

Paragraph 171 – We seek comment on whether we should establish a separate process by which PSAPs or state 911 administrators could file an informal complaint specific to the provision of a CMRS provider's E911 service, and if so, how the complaint procedure should

be structured in light of our existing informal complaint process. Yes, there should be a streamlined method for state and local governments to file complaints concerning 911 location data accuracy. The resolution process should be timely, because the longer it takes for problems with 911 location data accuracy to be resolved, the longer the public is unnecessarily put at risk.

Paragraph 172 – We seek comment on additional measures the Commission could take to help facilitate discussion and the swift resolution of public safety concerns… Many 911 officials, particularly at the local level, are not familiar with the FCC and can easily get lost in the process. One of the most important things the FCC could do would be to keep state and local officials informed of the status of their complaint and what they can expect in terms of a response.

G. Periodic Outdoor Compliance Testing and Reporting

Paragraph 181 Reporting Requirements and Confidentiality Safeguards. …should the confidentiality safeguards in this regard mirror those that we might adopt in relation to the indoor location accuracy compliance testing requirement? Yes.

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Respectfully submitted,

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