

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

In the Matter of)	
)	
Wireless E911 Location Accuracy Requirements)	PS Docket No. 07-114
)	
Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems)	CC Docket No. 94-102
)	
Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling)	
)	
911 Requirements for IP-Enabled Service Providers)	WC Docket No. 05-196

**COMMENTS OF THE
TELECOMMUNICATIONS INDUSTRY ASSOCIATION**

The Telecommunications Industry Association (“TIA”) hereby submits comments in response to the Notice of Proposed Rulemaking (“NPRM”) released on June 1, 2007 in the above-captioned proceeding.¹

I. INTRODUCTION

TIA is the leading trade association for the information and communications technology (“ICT”) industry, with 600 member companies that manufacture or supply the products and services used in global communications across all technology platforms. TIA represents its members on the full range of public policy issues affecting the ICT industry, co-owns NXTcomm – the new industry venue that will feature the business and technology of communications, information and entertainment – and is fully accredited

¹ In the Matter of Wireless E911 Location Accuracy Requirements, Notice of Proposed Rulemaking, PS Docket Nos. 07-114, 94-102, 05-196, FCC 07-108 (rel. June 1, 2007)(“NPRM”).

by the American National Standards Institute (“ANSI”) to produce industry consensus standards.

The NPRM seeks comment on several issues relating to enhanced 911 (“E911”) location accuracy and reliability requirements. TIA strongly supports the Commission’s continuing commitment to ensuring that wireless and VoIP E911 services meet the needs of the American people. TIA remains committed to working with public safety, the Commission, wireless carriers, and vendors on this effort to improve location accuracy.

While there have been recent improvements in location technologies, there is not a near-term, implementable, technically feasible solution to meet the current accuracy requirements at every Public Safety Access Point (“PSAP”) uniformly across the country for rural, suburban, urban, indoor, and outdoor locations. For the reasons discussed below, the Commission should (1) decline to mandate a specific technology or technological standard, but rather provide industry with sufficient time to develop appropriate solutions for meeting the emergency response needs of consumers and public safety authorities; (2) not subject interconnected Voice over Internet Protocol (“VoIP”) providers to the same location accuracy standards applicable to Commercial Mobile Radio Services (“CMRS”); and (3) create an advisory committee working group representing all stakeholders to address and identify methods to optimize E911 location accuracy and testing.

II. COMPLIANCE WITH THE EXISTING ACCURACY STANDARD AT THE PSAP LEVEL IS NOT TECHNICALLY FEASIBLE IN EVERY ENVIRONMENT.

The Commission’s tentative conclusion would require wireless licensees to satisfy wireless location standards “at a geographic level defined by the coverage area of each

respective local [PSAP].”² While PSAP level testing is certainly an admirable goal, all commenters addressing the issue acknowledge that it is not technically feasible to comply with existing FCC accuracy standards at the PSAP level in every environment.

The use of PSAP geographic coverage areas as part of an accuracy requirement ignores the fact that the size, shape, and topology of existing PSAPs vary widely at this time. The ability to obtain accurate location information can be affected by numerous factors outside the carrier’s control, including, but not limited to: whether the handset is inside a building, weather, topography, and the number of towers available. If one or more of these factors comes into play, the accuracy of the solution can begin to vary widely.

Moreover, unlike in the fixed wireline world, the physics of radio frequency (“RF”) propagation do not allow for the uniform accuracy result desired by the Commission in every environment. The environmental factors that may lead to difficulty in proposing a single requirement for both accuracy and confidence level are generally categorized as urban, suburban, rural, indoors, and outdoors. The vagaries of RF propagation in these different environments preclude a one-size-fits-all location accuracy requirement that can simply combine the best of both worlds (network-based triangulation methods with GPS chips).³

Public safety representatives have also acknowledged the limitations of the available technology. In a letter responding to the Association of Public-Safety

² NPRM at ¶ 1.

³ See, e.g., In the Matter of Revision of the Commission’s Rules to Ensure Compatibility with Enhanced E911 Emergency Calling Systems, Third Report and Order, 14 FCC Rcd. 17388, 17391 at ¶ 6 (September 15, 1999) (“While it does not appear that any single network-based or handset based location technology is perfect in all situations or for all wireless transmission technologies, both network and handset-based solutions may provide location information by 2001 that meets or exceeds our accuracy requirements. Each type of solution has its advantages and limitations.”).

Communications Official's ("APCO") demand for PSAP level testing, the National Association of State 911 Administrators ("NASNA") stated:

[U]nfortunately wireless location accuracy is currently limited by the available technology. There is no silver bullet for the provision of Phase II service. Each solution has its limitations – whether that Achilles Heel is inside structures, rural areas or something else. Since technology is the limitation, and not the actions (or inactions) of the wireless carriers, what is to be gained by measuring compliance at the PSAP level?⁴

Thus, prior to deciding whether to implement any new accuracy requirement, the Commission must work with industry to better understand the conditions where a location fix will perform well and those in which it will not. Due to the previously mentioned variables, the capabilities of location technologies cannot be subject to a one-size-fits-all regime. Indeed, E911 location accuracy will not be improved – and in fact consumer public safety may be harmed – if the Commission rushes to regulate without a full record and simply adopts a requirement that cannot be met. As other commenters have noted, doing so, would put the cart far before the horse.

III. THE COMMISSION SHOULD PROVIDE INDUSTRY WITH THE CONTINUED FLEXIBILITY TO DEVELOP DIFFERENT TECHNOLOGIES FOR DETERMINING AUTOMATIC LOCATION.

TIA strongly opposes the imposition of regulations that would require a specific location technology or technological standard. Rather, TIA urges the Commission to ensure that its approach to VoIP E911 service remains both technology-neutral and pro-innovation. TIA firmly believes that, if the Commission imposes a mandatory location technology, it will impede the development and deployment of the most technologically effective E911 location technology solution(s).

⁴ Letter to Chairman Martin, from Steve Marzolf, President, National Association of State 9-1-1 Administrators, CC Docket 94-102, at 1 (September 19, 2005)("NASNA Letter").

While the Commission's intent here is laudable, its current approach is rushed and misguided. It has become increasingly true that regulation cannot keep pace with today's advances in technology – and that excessive regulation (such as technology mandates) merely stifles technological innovation. Industry, not the government, is in the best position to proffer cutting-edge solutions for meeting the emergency response needs of consumers and public safety authorities. For example, the Commission originally mandated tower-based automatic location information, but before the new mandate was implemented, the industry developed a new technology (i.e., GPS), making the FCC's requirement obsolete.⁵

TIA urges the Commission to continue to provide industry with sufficient time and flexibility to develop appropriate location technology solutions to address the critical needs of public safety. When it comes to public safety, American consumers deserve thoroughly vetted and tested solutions. Such solutions may not be the first-to-market; rather, they are the ones that rise to the top through standards setting and market processes. Accordingly, the Commission must adopt a free market and open standards process that will best ensure that consumers receive the most effective E911 capabilities in an expeditious manner, while also permitting the continued evolution of such capabilities.

IV. SHOULD THE COMMISSION DECIDE TO ISSUE A NEW ACCURACY STANDARD, IT MUST PROVIDE INDUSTRY WITH ADEQUATE TIME TO DEVELOP AND IMPLEMENT NEW TECHNOLOGIES.

Should the Commission nonetheless decide to adopt its tentative conclusion and establish a new accuracy standard requiring compliance at the PSAP level, this choice

⁵ See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, 14 FCC Rcd 17388 (1999).

would have very broad consequences for the entire wireless industry. Once the new standard is adopted, all carriers would be out of compliance with FCC rules. Wireless carriers and vendors would be forced to develop and implement appropriate solutions, prepare open standards, test and validate various approaches, as well as deploy network and/or handset products for all rural, suburban, urban, and indoor locations, thus presenting many technical and monetary challenges.

Interestingly, both the FCC and APCO have acknowledged that mandating reliability testing at the PSAP level may present challenges to wireless carriers and vendors, and that the Commission must provide industry with sufficient time to comply with any new regulations.⁶ A majority of the Commissioners have also acknowledged this fact. Commissioner Adelstein described the adoption of the PSAP level requirements as “premature” and potentially disruptive.⁷ Commissioner McDowell warned that “we must walk before we can run” as “many wireless carriers are not generally capable of measuring and testing location accuracy at the PSAP level” – and thus expressed his belief that the Commission did not intend to “preemptively impose a geographic mandate.”⁸ Finally, Commissioner Copps mentioned the “need to get a handle – a better handle than we presently have – on the precise capabilities and limitations of today’s emergency calling technologies.”⁹ These statements reflect a desire to get the facts and the outcome correct, prior to imposing an unnecessary mandate that will do little more than subject every carrier to potential enforcement action.

⁶ NPRM at ¶ 6 (noting that “measuring location accuracy at the PSAP level may present challenges to both carriers and technology providers”); The Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling, CC Docket No. 94-102, at 5 (Oct. 6, 2004)(“we recognize the potential differences of requiring that accuracy be measured within the service area of each of the estimated 6,000 PSAPs throughout the country”).

⁷ NPRM, Concurring Statement of Commissioner Jonathan S. Adelstein.

⁸ NPRM, Statement of Commissioner Robert M. McDowell.

⁹ NPRM, Statement of Commissioner Michael J. Copps.

Accordingly, if the FCC decides to adopt a new accuracy requirement, TIA urges the Commission to defer implementation of the new requirement until it has the opportunity to develop and review a full record of all possible problems and solutions.

V. THE COMMISSION SHOULD NOT SUBJECT INTERCONNECTED VOIP PROVIDERS TO THE SAME LOCATION ACCURACY STANDARDS APPLICABLE TO CMRS.

TIA commends the Commission's goal of promoting the deployment of effective E911 services for VoIP offerings. However, prior to imposing any new requirement, TIA urges the Commission to ensure that its actions do not hinder the very innovation that can bring valuable technological E911 advancements to the market. The wireless industry has recently begun to develop wireless VoIP systems and consumers are beginning to use wireless VoIP products as part of their true seamless mobility. However, if the Commission imposes heightened autolocation requirements on these new and emerging services, it will likely stop these services in their tracks. As the Commission acknowledged in its *Vonage Order*, "[t]he significant costs and operational complexities associated with modifying or procuring systems to track, record and process geographic location information as a necessary aspect of the service would substantially reduce the benefits of using the Internet to provide the service, and potentially inhibit its deployment and continued availability to consumers."¹⁰

Because a VoIP customer can make a call at any location where a broadband Internet connection is available, a VoIP provider is not typically capable of identifying the actual geographic location of its wireless customer at the time the customer makes a call. In fact, for many VoIP users it is the decoupling of geography from the communications capability that makes the service valuable. As long as broadband

¹⁰ See *In the Matter of Vonage Holdings Corporation*, 19 FCC Rcd 22404, at ¶ 37 (2004) ("Vonage Order").

Internet connectivity is available, VoIP users can travel worldwide and use the same dialing number to place and receive calls. As a result, not only is geography irrelevant to VoIP users, but VoIP providers have no technically feasible means of accurately verifying the physical location of a caller. As the Commission previously noted, “[t]he record demonstrates that there currently are no solutions that allow a provider of portable VoIP services to determine the location of an end user absent the end user affirmatively telling the service provider where he or she is.”¹¹

Thus, if the FCC decides to impose similar location accuracy standards on interconnected VoIP providers that are applicable to CMRS services, the Commission would be forced to regulate the entity providing the broadband Internet connection (i.e. restaurants, coffee shops, hotels, municipalities, etc.). In the *Vonage Order*, the Commission was reluctant to hinder the growth of VoIP services. This rationale should extend to the VoIP E911 context as well.¹²

For the foregoing reasons, TIA respectfully urges the Commission to take a more holistic approach to VoIP E911 that does not merely cut-and-paste rules designed for CMRS services to interconnected VoIP services. Rather, the Commission should continue to support the VoIP industry in its success and not constrain innovation as the industry endeavors aggressively to provide effective E911 services. In order to achieve these important goals, the Commission must refrain from imposing additional E911

¹¹ See IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers, WC Docket Nos. 04-36, 05-196, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245, 10257-58 ¶ 25 & n. 81 (2005).

¹² See *Vonage Order* at ¶ 37. (The FCC “cannot, and will not, risk eliminating or hampering this innovative advanced service that facilitates additional consumer choice, spurs technological development and growth of broadband infrastructure, and promotes continued development and use of the Internet.”).

obligations on VoIP providers, and instead embark upon a path that actually supports innovative E911 solutions.

VI. TIA SUPPORTS THE CREATION OF AN ADVISORY COMMITTEE WORKING GROUP REPRESENTING ALL STAKEHOLDERS TO ADDRESS AND IDENTIFY METHODS TO OPTIMIZE E911 LOCATION ACCURACY AND TESTING.

Rather than adopt a PSAP level requirement that cannot be achieved in the foreseeable future, TIA agrees with the commenters who support the creation of an advisory committee working group charged with creating solutions to the issues raised in the NPRM. The advisory committee working group would consist of all stakeholders (carriers, vendors, public safety, etc.) and would engage in a consensual process along the lines of the Commercial Mobile Service Alert Advisory Committee (“CMSAAC”).

This type of forum, with all stakeholders working together to accomplish a common goal, can best ensure that wireless E911 location accuracy improves as expeditiously as possible. Further, it would enable a complete discussion of the critical issues raised by this proceeding, derived from the expertise of a wide range of participants. Simply put, improving wireless location accuracy in certain environments is a complex undertaking that can best be achieved by combining the resources and knowledge of all parties that will be directly affected by the outcome of this proceeding.

VII. CONCLUSION

While TIA strongly supports the Commission’s goal to improve location accuracy, it fully opposes the imposition of a specific technology or technological standard. Such action by the Commission, despite its laudable intentions, will harm the very innovation necessary to develop the most effective E911 solutions. Should the Commission nonetheless decide to adopt a new accuracy standard, it must provide

industry with sufficient time to develop solutions for the very different environments (i.e rural, urban, suburban, indoors, and outdoors). For technical reasons, TIA believes that it is premature to require interconnected VoIP services to meet CMRS E911 location standards. Finally, TIA suggests that the Commission work with all stakeholders, in a CMSAAC-like process, to establish standardized approaches for accuracy measurement and to develop more advanced location technologies.

Respectfully Submitted,

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August 20, 2007