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 NSIGHTTEL WIRELESS, LLC SECTION III.b

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Summary of Comments

Carriers have proven themselves to be up to the challenge of meeting the location capability requirements which currently exist. However, Nsighttel does support the adoption of a single location standard which would apply to both handset-based and system-based wireless networks. Because the handset-based standard is the more accurate of the two that is the standard which should be adopted. System-based carriers should be afforded a reasonable time, at least one year, to come into compliance with the more stringent standard.

Carriers should be required to conduct real world location compliance testing, rather than being allowed to rely upon theoretical studies. The results of Carrier location compliance testing should be provided only on a going forward basis and only to the PSAP given the critical nature of the information contained within such studies. In building compliance testing must not be required unless the carrier has affirmatively stated that it will serve a particular building.

Roamers are entitled to receive E-911 location services on "capable" systems. However, CDMA carriers cannot and do not handle GSM traffic and GSM carriers cannot and do not handle CDMA traffic. VOIP services should comply with wireline 911 location standards if the VOIP service is wireline in nature and with wireless E-911 location standards if the VOIP service is wireless in nature.

COMMENTS OF NSIGHTTEL WIRELESS, LLC[1]

Nsighttel Wireless, LLC (Nsighttel),[2] by its attorney, hereby files comments regarding the captioned rulemaking proceeding. *Notice of Proposed Rulemaking* (*NPRM*), 22 FCC Rcd. 10609; 72 Fed. Reg. 33948 (June 20, 2007). Based upon its long experience as a facilities-based provider of mobile telecommunications services, Nsighttel requests that the Commission consider the instant minor refinements to its tentative conclusions. In support whereof, the following is respectfully submitted:

Introduction

1) Nsighttel and its affiliated companies are Tier III carriers, individually and in the aggregate, because they are non-nationwide mobile radio service providers with fewer than 500,000 subscribers. *See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, Phase II Compliance Deadlines for Non-Nationwide CMRS Carriers, Order to Stay*, 17 FCC Rcd 14841, 14847 (2002). Nsighttel and its affiliated companies provide cellular and PCS service throughout much of the state of Wisconsin. Nsighttel's affiliated company, Brown County MSA Cellular Limited Partnership, obtained its Green Bay MSA186B cellular radio license in 1986. Since that time Nsighttel has obtained numerous mobiles radio licenses and has constructed and operated numerous mobile networks and numerous mobile transmission facilities. Nsighttel is fully familiar and experienced with testing the E911 location capability of its various mobile networks as required by 47 C.F.R. § 20.18(h)(2) (handset-based location accuracy).

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[1] Nsighttel submitted comments regarding *NPRM*, Section III.a, on July 3, 2007.

[2] Nsighttel is wholly owned by Northeast Communications of Wisconsin, Inc. (NEC). NEC owns several subsidiary and affiliated which provide mobile telecommunication services. As used herein, "Nsighttel" shall refer to NEC and its subsidiary and affiliated companies collectively.

A. Deferred Enforcement of Section 20.18(h)

2) Per our response to Section III.a of the *NPRM* we support the geographical definition for E911 accuracy aggregation to be the county level. In a great many cases the county level coincides with the responsible E911 PSAP level. We support such a requirement on an immediate or on a "as soon as possible" basis. It may be that carriers using network based E911 location methodologies in rural environments may struggle with county level compliance. Thus, it would be reasonable to allow such carriers at least a 12 (twelve) month upgrade period to ensure that their systems are capable of meeting the county level Phase II location requirement. As the Commission discussed in the *NPRM*, para. 6; Nsighttel July 3, 2007 Comments, para. 2; the rule reasonably appears to require county level compliance and it may be presumed that most carriers have endeavored to provide adequate location services to the county PSAPs. Therefore, allowing at least one year to come into compliance would appear to be a reasonable requirement; if a carrier is required to exchange customer handsets, more time would likely be required.

B. A Single Location Accuracy Standard Should Be Adopted

3) Adoption of a single, concise E911 accuracy standard would advance the public interest for a number of reasons:

- From the consumer's point of view safety is paramount and the underlying location technology employed by the carrier is in all likelihood unknown, unfathomable, and unimportant to the vast majority of mobile services subscribers. What is important to a consumer is not how the location service works, but that it works. In a critical emergency the consumer wants, deserves, and is entitled access to emergency E-911 location services. The manner in which the mobile services subscriber's location information is relayed to the PSAP is not a material concern to the consumer and the subscriber's happenstance choice of location technology should not be a public policy lynchpin. However, given the difference in transmission technologies, it is not possible for a CDMA carrier to relay location information for a GSM handset, and vice-versa, because the two technologies do not roam on networks based upon the other technology. See paragraph 15 below for roamer

discussion.

o All carriers have, or should have, the same goal – to provide E-911 location services which are as accurate and dependable as possible. Requiring differing accuracy standards based upon technology effectively puts public safety at risk based upon the carrier's independent economic decisions to employ certain technologies. Independent carrier decisions regarding technology deployment should not control the manner in which Federal public safety decisions are reached nor should private technology deployment decisions be allowed to endanger the public welfare. If a standard of X is an acceptable level of location accuracy, then all carriers should be required to meet that standard. Adoption of a second location accuracy standard of X- effectively states that public safety can be compromised based upon a carrier's technology deployment strategy. Allowing carrier's to choose to provide below par E-911 location services based upon the carrier's own economic and technological decisions is inimical to public health and safety and it creates an unfair competitive landscape for mobile service providers. Adoption of a single accuracy standard would protect the public and would create a level playing field for mobile service competitors as all would be required to provide the same level of E-911 location services regardless of the infrastructure chosen.

o Adoption of a single E-911 location accuracy standard would provide a singular and universal specification for the PSAP dispatcher who would reasonably be able to anticipate the accuracy of the location information received in an emergency without having to research which carrier is providing the emergency information. As it stands today the PSAP dispatcher not only needs to handle the high pressure, time critical E-911 emergency call at hand, but he/she must also interpret the information received, identify the carrier which originated the call, determine the carrier's E911 technology and "filter" the credibility of that information based upon that information. Those steps require precious moments which can mean the difference of life and death to a subscriber who is facing a time critical emergency.

C. The Current Handset Location Accuracy Standard Should Be Universally Applied

4) The current bifurcated location accuracy standards creates confusion at the PSAP level as PSAP managers and dispatchers struggle to understand exactly what level of location accuracy they truly experience generally on a day-today basis and specifically during discrete emergency E-911 calls. While emergency operations are critically important, E-911 location equipment and services are extremely expensive. The wireless industry and wireless customer has not yet paid for the current implementation, nor have they yet seen all of its benefits of the current deployment – some counties have just or will soon deploy wireless E911. Before proceeding with additional equipment and/or

hybrid equipment requirements and before the industry is again required to perform at a higher level of E-911 location accuracy, a uniform E-911 location standard should be adopted and every carrier and every PSAP should work toward meeting that unitary standard. Only after a single standard has been implemented and PSAPs and carriers gain experience with operating under that standard can a rational evaluation of emergency mobile location services take place.

5) The handset location standard currently in place is more accurate than the system location standard and, therefore, that is the standard which should be adopted. Existing handset-based technology and expenditures produce extremely accurate results in small city and rural environments. Thus, the public interest and safety would be advanced a) by the adoption of the handset-based E-911 location as a unitary E-911 location accuracy standard and b) by the application of that standard to all carriers regardless of technology employed. Network-based systems seem to experience greater difficulty in providing accurate E-911 location information as the service area becomes more rural and as the number of cell sites deployed decreases. Therefore, it would seem that making the location standard tighter than the existing handset-based E-911 location accuracy standard for network-based E-911 location service providers is not realistic. Network-based E-911 location service providers should be afforded a reasonable amount of time to meet the current handset-based E-911 location standard.

6) There may be instances where particular urban areas have special needs due to geography, high population density, and/or a high need for in-building wireless E-911 location services, and additional E-911 location requirements must be fulfilled. However, care needs to be taken in defining if and when deployment of special systems is required. Carriers have proven themselves up to the task of meeting such needs and the Commission should leave such considerations to the carrier and

the PSAP rather than mandating a "one shoe fits all" approach. Requirements such as in-building coverage or elevation information should only be applicable to specific areas which have a need for such services. There does not appear to be a need, for instance, of a requirement that a rural carrier to transmit elevation information where building density is not high and where the buildings are not of the high rise variety such as are found in larger cities. PSAPs and carriers should work cooperatively in determining whether in-building coverage or elevation information is needed. This would ensure that localism is accounted for in the deployment of expensive E-911 location services and equipment. If consensus cannot be reached between the PSAP and the carrier the Commission could referee the issues on a case-by-case basis. In any event, requiring hybrid solutions or encouraging the proliferation of proprietary solutions must be avoided. The simple fact that wireless users move from market to market and carrier to carrier requires that the E-911 location solutions which are deployed be as universal as possible.

D. Real World Compliance Testing and Distribution of Test Results

7) Each carrier should be required to field test and verify that each sector of each cellsite is performing as required by the unitary E-911 location standard. Modeling, predicting or other non-physical means of demonstrating compliance does not insure that each specific cellsite sector is operating properly and is providing the required location information at the required level of accuracy and that the switch, Position Determination Equipment and ALI equipment are all properly filled with the necessary data. Incorrect data fill negatively impacts accuracy and the utility of the information provided to the PSAP.

8) The specific field testing techniques, methodology, and procedures a carrier uses to determine compliance should be up to the individual carrier as it is the carrier's responsibility and

obligation to certify compliance. OET Bulletin 71 is and should be only a guideline. This rulemaking proceeding should focus on the desired results, not how the results are achieved. Mandating the number of test locations, or how the test locations are selected, and any other mandated testing attribute may not reflect the real world situation of discrete markets. Given the plethora of geographic features, man made structures, weather, population densities, distances from cellsites, and a myriad of other factors which can affect testing and which will vary from market to market, and even among locations within the same market, the specification of specific testing procedures will create problems for both the carrier and the PSAP without providing any discernible advance in the public interest.

9) Most PSAPs are not staffed to accommodate extensive testing. Scheduling PSAP time and cooperation to perform even minimal rudimentary operational testing is difficult because of their manpower limitations. Adding additional testing and location requirements or more extensive testing procedures will create problems for both the carrier and the PSAP.

10) A special case may exist with regard to buildings in which the carrier has placed a transmission facility for the purpose of providing service within that building. Wireless coverage was conceived to provide communication service when the subscriber is mobile and away from landline phone services and is not situated in a fixed indoor location. However, carrier placement of a cellsite inside a building indicates that the carrier intends for customers to use their phones indoors at that location and it is reasonable to conclude that subscriber location information should be available to the PSAP when the subscriber is within the intended use space of the in-building transmission system.[3] The area of in-building service coverage is the subject of an agreement between the building

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owner/lease holder and the wireless carrier and determining where location accuracy compliance must be achieved is, therefore, defined by the parties to the in-building transmission agreement.

11) In the absence of an agreement to provide in-building service between the building owner/lease holder and the carrier, the coincidence of the closeness of a cellsite to a particular building cannot be construed as provision of in-building service for purposes of E-911 location accuracy testing. In such situations, absent advertising to the contrary, the carrier is not representing that it will achieve any level of building penetration and carriers should not be required to meet location accuracy standards where service is not intended and where the properties of radio signal propagation render provision of service problematic. It is common knowledge that there is limited or no RF coverage in many buildings today. If a wireless user chooses to use their phones inside a building where in-building coverage is not intended, the carrier cannot reasonably be expected to provide E-911 location services.

E. Schedule for Testing

12) The regulation regarding the location accuracy testing schedule needs to be specific. A reasonable schedule would require location accuracy testing at deployment and thereafter within 6 months of any system modification which could impact RF coverage or E911 operations. Naturally, the PSAP has the opportunity to test the accuracy of the deployed location service at any time of its choosing and can raise an issue with the carrier, and ultimately the Commission, if the location information is not accurate. In handset-based location systems, once the desired location parameters are loaded into the ALI determination equipment, there is little a carrier can do that will improve or degrade E911 system performance provided that there are no changes to the cellsite. A requirement to test all cellsites and sectors periodically merely because they haven't been tested since the last test

will produce an unnecessary burden on the PSAP and the carrier with no discernible public interest gain.

13) The confidentiality of network information is critical to a carrier's ability to protect essential communications facilities from sabotage and other criminal activity and critical to a carrier's ability to compete in the marketplace. The only parties who could possibly have a legitimate interest in the carrier's ability to deliver accurate E-911 location information are the PSAP and the carrier. Distributing test data demonstrating compliance to others is unnecessary. In any and all situations, carrier test data must be considered critical to network security and carrier competition and must be held confidential by those that receive it. The Commission must implement a rule providing for the confidentiality of carrier location accuracy test data whether generated by the carrier or by the PSAP who is in a special and trusted position to know the entire layout of the carrier's transmission network. PSAP directors or managers should be expected to sign and conform to a confidentiality agreement with each carrier and each PSAP must require its employees, volunteers, and agents to sign and conform to a confidentiality agreement regarding carrier network information. After providing the carrier with information regarding confidentiality practices, the carrier should provide ongoing system E-911 location accuracy test results to the PSAP within 30 days of completing testing. Breaches of the confidentiality requirement should subject the PSAP to a complaint at the FCC with a potential penalty being the loss of access to the carrier's testing data in addition to whatever civil remedies might exist.

F. Provision of Accuracy Data

14) Provision of location accuracy test data should be required only be at the specific request of the pertinent PSAP. If the PSAP does not express an interest in receiving the information, either

because it has a close working relationship with the carrier, it has conducted its own location testing, or it simply is not interested in receiving the information, the wireless carrier should not be required to provide it. As discussed in paragraph 13 above, confidentiality of network information is a critical concern for carriers for security and competitive reasons. Test worksheets and resulting accuracy data, may include detailed and specific network information. Many PSAP's may not understand the critical and confidential nature of this information and the harm that could be done if the information fell into the hands of competitors or persons intent on harming the carrier. Routinely providing unwanted confidential/proprietary network information to a PSAP is an unwise manner of handling critically sensitive network information. Assuming that a PSAP is interested in receiving location accuracy test data information should be provided to the PSAP on a per cellsite basis. This will allow the PSAP to know as accurately as possible which parts of the county might be subject to inaccurate location information. As stated above, the Commission must require that the PSAP and it's agents treat the E-911 location testing information as confidential.

G. E-911 Calls Placed While Roaming

15) It seems that CDMA technology based carriers have nearly universally selected the handset-based 911 solution while GSM technology based carriers have selected a network based solution. Handsets of differing underlying technologies cannot roam on the other network – CDMA phones will not work on a GSM network and vice-versa. Accordingly, the Commission should continue to mandate that any wireless phone of a capable technology should be able to access the emergency services of any similarly capable network regardless of the existence of roaming agreements. A roaming handset from a carrier utilizing a similar location technology, but with whom there is no roaming agreement, appears to the network like a deactivated or 'bandit' phone. All

handset-based carriers can readily verify that any carrier's handset-based phone will work on its network by simply making one test phone call to the pertinent PSAP from any deactivated location capable handset. It's an easy test, educational for the PSAP, and confirms that roaming phones and deactivated phones will receive emergency services on handset-based networks. Each carrier must, however, set up its ALI equipment to accept an extended ESN range to accommodate any capable phone. If this is not done a roamer can only achieve Phase I location service.

16) Currently, If a carrier chooses to improve accuracy on his network by overlaying a handset solution on a network-based solution, roaming customers having a non-GPS capable handsets are not going to enjoy the same level of accuracy as roamers which use GPS capable handsets. As discussed in paragraph 3 above, a subscriber, including one who is roaming, is entitled to transmit accurate location information regardless of the technology employed by the serving carrier. A roamer's access to safety services should not depend upon nor be compromised by the technology deployment chosen by the serving carrier. The ultimate goal is the ubiquitous provision of emergency services. A regulation which permits hybrid location solutions consisting of differing location standards or which permits proprietary solutions which cannot be used from market to market is not in the public interest.

17) A very serious problem relating to E-911 and roaming arises from the lease or other use of spectrum by third-party non-licensees who are building systems which serve merely as roaming portals to provide service to roamers. These wireless providers have no customers of their own and they exist by providing roaming services to other carriers. In many cases the "other carrier" whose customers are receiving "roaming portal service" is the licensee in the market!!! This relationship results in the following situation which is extremely harmful to the public interest and safety: a) the

license holder does not provide E-911 capabilities because the service is not being provided on their network; while b) the wireless "roaming service portal provider" does not provide E-911 location services because it has no subscribers. This relationship used in this manner clearly intends to circumvent the E-911 location regulations and is clearly detrimental to the public's interest in obtaining accurate location services. The regulations need to incorporate language which obligates the license holder to provide E-911 capable location services for any cell site which is constructed based upon the authority of its Commission issued radio station authorization or by contractually obligating the wireless provider "using" their license to provide those services..[4]

H. Interconnected VOIP Services

18) VOIP was initially deployed in competition with landline services. VOIP enjoyed a significant cost advantage because it did not have to provide E-911 location capabilities. As VOIP is re-invented to become a part of a mobile solution alternative or in conjunction with a mobile solution, VOIP must be required to meet the same E-911 specifications and regulations that other similarly capable telecommunications services provide. This would also provide for the public safety and would provide for a level competitive playing field. If the VOIP application is done as a fixed landline alternative, then landline 911 regulations should then apply. If the VOIP application is intended to be portable, then automatic location technology needs to be incorporated and wireless E-911 regulations should apply. The carrier that is deploying (selling) the application should be the one responsible for deploying the 911 solution. While this type of response is conceptually simple,

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[4] An exception to this requirement would be where one licensee permits another licensee to construct a cellsite in the its market. These type of agreements are not uncommon and are in place to improve service at the border and/or in hard to serve areas. The discussion above is only concerned with nefarious, rule circumventing relationships between licensees and non-licensees in which the licensee effectively immunizes itself from the need to provide E-911 location services.

drafting appropriate regulations will have challenges. However, just as the public safety cannot be placed at risk based upon carrier technology deployment decisions, or the circumstance of what kind of phone a roamer is using, the public cannot be placed at risk merely because the provider of a service utilizes VOIP technology. Public safety cannot be skirted based upon technology decisions and the functional use of the VOIP the application is the critical element in determining which set of E-911 standards are applicable.

WHEREFORE, in view of the foregoing information, it is respectfully submitted that wireless mobile E911 location capability compliance should be determined on a county-wide basis to the extent that a carrier provides Commission authorized wireless mobile service within the county.

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