

**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 SUNCOM WIRELESS, INC.**

SunCom Wireless, Inc. (“SunCom”), by its attorneys, hereby submits these Comments in response to the Federal Communications Commission’s Notice of Proposed Rulemaking<sup>1</sup> in the above-captioned proceedings regarding Enhanced 911 (“E911”) location accuracy and reliability requirements. Section III.A of the Notice sought comment on the Commission’s tentative conclusion that it should adopt a proposal by the Association of Public-Safety Communications Officials-International, Inc. (“APCO”) purported to “clarify Section 20.18(h) of the Commission’s rules” in order to require satisfaction of wireless E911 Phase II location accuracy and reliability standards at geographic levels defined by the coverage area of the local Public

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<sup>1</sup> See *Wireless E911 Location Accuracy Requirements; Revision of the Commission’s Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling; 911 Requirements for IP-Enabled Service Providers*, PS Docket No. 07-114, CC Docket No. 94-102, WC Docket No. 05-196, Notice of Proposed Rulemaking, FCC 07-108 (rel. June 1, 2007) (the “Notice”).

Safety Answering Point (“PSAP”).<sup>2</sup> The Commission also sought comment on whether to defer enforcement of this “clarif[ied]” rule, if adopted, in order to give wireless carriers time to comply with new standards based on this interpretation of Section 20.18(h), 47 C.F.R. § 20.18(h).

SunCom supports the Commission’s goal of E911 rules that “provide meaningful automatic location identification information . . . regardless of the technology or platform employed.”<sup>3</sup> The public interest indeed “demands that carriers and technology providers strive to ensure that . . . emergency responders are provided with location information that enables them to reach the site of the emergency as quickly as possible.”<sup>4</sup> SunCom notes, however, that the challenges involved in meeting the proposed PSAP-level location accuracy standard using present technology would be insurmountable – at least at any reasonable and rational cost to state and local governments, wireless carriers, and wireless subscribers. Because of the technical challenges that carriers face, and the inordinate expense that attempts to comply with the new standard would require, the Commission should not adopt the tentative conclusion. Alternatively, if the Commission does require satisfaction of wireless E911 standards at PSAP geographic levels, it should defer enforcement of Section 20.18(h) as so defined until there is a realistic opportunity for carriers to meet the standard.

SunCom and other wireless carriers have worked diligently with technology providers in striving to meet this important public interest goal, and the industry continues working to obtain better location accuracy using both currently available technology and newly developed solutions that are not yet available in the market on a widespread basis. Nevertheless, SunCom and other licensees subject to Section 20.18(h) would need sufficient time to meet the standards

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<sup>2</sup> *Id.*, ¶ 1.

<sup>3</sup> *Id.*, ¶ 6.

<sup>4</sup> *Id.*

proposed in the Notice, which tentatively concludes to adopt and possibly even enforce new standards *first*, prior to developing and analyzing a complete record on the existence and availability of technology capable of meeting the goal. As Commissioner Adelstein said in his concurring statement attached to the Notice, it is “critical that the Commission . . . conduct this proceeding in a thoughtful and deliberate manner to ensure that the steps [it] take[s] truly advance E911.”<sup>5</sup> For that reason, SunCom agrees that it would be “premature to support the several tentative conclusions” in the Notice “before the Commission has been presented with a full record and conducted its own review of current data and future technology.”<sup>6</sup>

SunCom’s efforts to meet current E911 standards illustrate the challenges that adoption of the tentative conclusion set forth in Section III.A would present. SunCom is a Tier II carrier for E911 purposes, utilizing a network-based solution to determine emergency caller location throughout SunCom’s service area covering North Carolina, South Carolina, and parts of eastern Georgia, eastern Tennessee, and southern Virginia, as well as Puerto Rico and the U.S. Virgin Islands. Providing service in both urban and rural settings involves unique challenges for present E911 location technologies, as the Notice acknowledges, due to the different strengths and weaknesses of network-based and handset-based solutions in different environments. Thus, SunCom’s ability to meet the newly proposed, PSAP-level accuracy standards depends on the relative strengths and limitations of its network-based solution in different settings. Factors such as local topography and existing cell site coverage in a particular area dramatically impact the accuracy and reliability of Automatic Location Information (“ALI”) for emergency callers, and no amount of investment in presently available technologies would ensure compliance with the Section 20.18(h) standard as defined in the Notice.

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<sup>5</sup> *Id.*, Concurring Statement of Commissioner Jonathan S. Adelstein.

<sup>6</sup> *Id.*

Although SunCom shares the Commission’s laudable goal of improving ALI accuracy and reliability for wireless callers in all locations, present technological limitations would require SunCom to resort to inefficient spending on interim network build-out in any attempt to satisfy the PSAP-level accuracy standards proposed in the Notice. For instance, SunCom serves several sparsely populated rural areas that contain very few cell sites at the PSAP level, including some PSAPs that may contain no more than a single tower site. In such sparsely populated areas, and even on major travel routes that receive excellent coverage focused only along a single, well-traversed corridor, SunCom would be required to deploy new facilities – including tower sites and base stations utilizing new sensors, repeaters, and other equipment arrays – solely for the purpose of obtaining the multilateration information necessary to determine caller location. Moreover, even adopting these measures to increase base-station density and create new possibilities for triangulation would not necessarily allow carriers utilizing network-based solutions to comply with Section 20.18(h) location accuracy standards at the PSAP level. The impact of local topography, terrain, and other factors could still combine to limit the accuracy and reliability of ALI obtained when a caller is “visible” to only one or two cell sites at any given location.

Such prohibitively expensive – and financially disastrous – short-term fixes would drain resources better spent on viable, longer-term solutions, such as the continued development and deployment of hybrid location technologies that combine network-based and handset-based capabilities.<sup>7</sup> Implementing hybrid or other solutions will take some additional time. Based on customer equipment upgrade rates, distribution throughout a carrier’s entire subscriber base of

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<sup>7</sup> Moreover, spending extraordinary sums in an effort to achieve higher location accuracy percentages for existing coverage areas would drain resources that otherwise could be spent by carriers on expanding coverage to areas that currently have limited or no wireless service – a use that would clearly have a greater impact on improving overall public safety.

handsets with new E911 capabilities could take as much as three years or more *after* adequate numbers of GPS-equipped GSM handset models become available from manufacturers.

SunCom submits that such an evolutionary approach, focused on improvements that will ensure increased accuracy and reliability rather than stop-gap measures, is a more prudent route to reaching the Commission's goal of obtaining useful location information for E911 callers across the nation. The imposition of new mandates – especially ones that cannot be satisfied using present technology – will almost certainly render carriers noncompliant with the Commission's rules, but such mandates will not solve location accuracy and reliability problems if they do not allow the industry sufficient time to develop and implement careful solutions. Wireless carriers cannot hope to meet new or “clarified” standards without accounting for technological and economic realities, and a short-sighted approach will only create inefficiencies that delay real improvements in E911.

If the Commission does adopt the tentative conclusion, SunCom submits that the Commission should defer enforcement of the Section 20.18(h) Phase II standards as so interpreted. It would be imperative for the Commission to defer enforcement until there is a realistic opportunity for wireless carriers and equipment manufacturers to work together to meet the new standard. Furthermore, the Commission should recognize in making any decision on deferral the particular difficulties that mid-size and smaller carriers could face, in light of the possibility that such carriers may not have immediate access to the equipment and resources necessary to attain compliance during a period when such equipment would be in high demand.

Ultimately, as Commissioner McDowell succinctly summarized in his separate statement attached to the Notice, “measuring location accuracy at the PSAP level presents real challenges

to carriers, technology providers, and PSAPs alike.”<sup>8</sup> Rushing to adopt new compliance standards that are out of touch with present technological capabilities is not the most effective approach for improving location accuracy, and such a hurried approach will impose tremendous costs on wireless carriers and the customers they serve. Furthermore, as Commissioner Adelstein explained, these significant financial burdens would impact not just consumers from whom carriers would be forced to recoup some of their costs, but also state governments and public safety agencies that would be required to supply additional funding and make up the difference. Adoption of the tentative conclusion would mean the adoption of “an accuracy testing process that cannot be achieved at this time,” which “puts the carrier in a compliance limbo, but also puts many states in a budgetary limbo until someone can figure out how to achieve the requirement.”<sup>9</sup>

SunCom agrees that it is easier to demand improvements than to supply them using inadequate technologies or unrealistic timetables. For these reasons, SunCom urges the Commission not to adopt the tentative conclusion set forth in Section III.A of the Notice, and suggests instead that the Commission heed the advice of individual Commissioners suggesting an accelerated but collaborative approach to meeting the challenges associated with improving the information available to first responders. SunCom also agrees that wireless carriers, equipment manufacturers, public safety agencies, and their respective representatives should continue collaborating to achieve the public interest goals announced in the Notice.<sup>10</sup>

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<sup>8</sup> See Notice, Statement of Commissioner Robert M. McDowell.

<sup>9</sup> *Id.*, Concurring Statement of Commissioner Jonathan S. Adelstein (quoting *Ex Parte* Comments of the National Association of State 9-1-1 Administrators, CC Docket No. 94-102 (filed May 23, 2007)).

<sup>10</sup> See *id.* (proposing that the Commission “immediately convene a committee of industry and public safety experts to develop and submit recommendations to the FCC regarding technical standards and protocols for the next generation of automatic location services”); see also *id.*, Statement of Commissioner Robert M. McDowell (envisioning “development of a meaningful partnership among the commercial wireless industry, technology providers, and public safety entities” to ensure the best possible access to E911 ALI as expeditiously as possible).

SunCom believes that long-term solutions, such as hybrid solutions combining network-based and handset-based technologies, will work far more effectively to obtain consistently accurate location information in urban, suburban, rural, and remote locations, and in both indoor and outdoor settings. Current technologies designed to meet E911 requirements, including the network-based solutions used by SunCom and other large and mid-sized national and regional wireless carriers, cannot meet the standard announced as a tentative conclusion in the Notice. Instead of imposing such unrealistic standards prior to compiling and analyzing a complete record in this proceeding, the Commission should work quickly to gather data on existing technology and rapidly evolving improvements, and then take steps to facilitate continued collaboration between wireless industry and public safety stakeholders. Alternatively, if the Commission does adopt the tentative conclusion set forth in Section III.A of the Notice, it should defer enforcement of Section 20.18(h) as so interpreted in order to allow carriers time to comply with the rule.

Respectfully submitted,

**SUNCOM WIRELESS, INC.**

By: /s/ Michele C. Farquhar

Scott Basham  
Vice President of Technology  
SunCom Wireless, Inc.  
1100 Cassatt Road  
Berwyn, PA 19312

Michele C. Farquhar  
Matthew F. Wood  
HOGAN & HARTSON LLP  
555 Thirteenth Street, NW  
Washington, DC 20004  
(202) 637-5600

Counsel to SunCom Wireless, Inc.

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