

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) CC Docket No. 94-102
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) WC Docket No. 05-196
Providers)

REPORT AND ORDER

Adopted: September 11, 2007

Released: November 20, 2007

By the Commission: Chairman Martin and Commissioners Copps, Tate, and McDowell issuing separate
statements; Commissioner Adelstein approving in part, dissenting in part, and issuing
a statement.

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I. INTRODUCTION

1. In this Report and Order, we require wireless licensees subject to Section 20.18(h) of the
Commission's rules, which specifies the standards for wireless Enhanced 911 (E911) Phase II location
accuracy and reliability, to satisfy these standards at a geographical level defined by the coverage area of
a Public Safety Answering Point (PSAP). Our decision is supported by a diverse group of public safety
entities whose comments emphasize the tragic results that inaccurate and unreliable location information
can cause. Because we recognize that some carriers presently are measuring their compliance with
Section 20.18(h) at broader geographic levels, we provide a reasonable amount of time to comply with
Section 20.18(h) at the PSAP level. We therefore establish a deadline of September 11, 2012, by which

time all commercial mobile radio service (CMRS) carriers must measure compliance with Section 20.18(h) at the PSAP level. We also establish interim compliance benchmarks, in order to ensure that carriers are making progress toward compliance with Section 20.18(h) at the PSAP level.

2. This Order is the critical first step in a comprehensive examination of E911 location accuracy and reliability. We take this initial step in order to ensure that all stakeholders – including public safety entities, wireless carriers, and technology providers – are subject to an appropriate and consistent compliance methodology with respect to the location accuracy standards in Section 20.18(h).

3. In the coming months, we will continue our examination of 911 location accuracy issues, after which we will release another order that will address the remaining issues on which we sought comment in this proceeding. That continued examination will explore the questions we have raised regarding possible establishment of more stringent, uniform location accuracy requirements across technologies, and the continuing development of technologies that might enable carriers to provide public safety with better information for locating persons in the event of an emergency. Our action today is necessary to ensure that carriers' provision of location information in compliance with current requirements is meaningful to PSAPs and first responders. By making clear that compliance with Section 20.18(h) must be measured at the PSAP level, we effectively "set the stage" for the examination that lies ahead and ensure that all stakeholders are focused on achieving compliance with Section 20.18(h) at a common, PSAP-based geographic level.

II. BACKGROUND

4. Section 20.18(h) of the Commission's rules states that licensees subject to the wireless E911 requirements

shall comply with the following standards for Phase II location accuracy and reliability: (1) For network-based technologies: 100 meters for 67 percent of calls, 300 meters for 95 percent of calls; (2) For handset-based technologies: 50 meters for 67 percent of calls, 150 meters for 95 percent of calls. (3) For the remaining 5 percent of calls, location attempts must be made and a location estimate must be provided to the appropriate PSAP.¹

In the *First Report and Order*, in which the Commission first adopted accuracy requirements for the provision of E911 by wireless carriers, the Commission stated that "the level of accuracy achieved by [a] carrier shall be calculated based upon all 911 calls originated in a service area in which the carrier is required to supply Automatic Location Identification to PSAPs."² The *First Report and Order* required each covered carrier "to demonstrate, upon request made by the PSAP, that its ALI system performs in compliance with the requirements established in this Order."³

5. In April 2000, the Commission's Office of Engineering and Technology (OET) issued Bulletin No. 71 to provide guidance in determining whether wireless licensees required to supply location

¹ 47 C.F.R. § 20.18(h); see also Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Third Report and Order*, 14 FCC Rcd 17388, 17417-23 ¶¶ 66-77 (1999) (adopting the current version of Section 20.18(h)).

² Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *First Report and Order*, 11 FCC Rcd 18676, 18712 ¶ 71 (1996) (*First Report and Order*).

³ *Id.*

information to PSAPs comply with the Commission's accuracy requirements.⁴ OET's Bulletin did not establish mandatory procedures, but stated that compliance with the guidelines set forth therein would establish "a strong presumption that appropriate means have been applied to ensure that an ALI [Automatic Location Information] system complies with the Commission's Rules."⁵ The Bulletin described the Commission's expectations regarding location accuracy measurement and testing as follows:

Reports of compliance testing should clearly define the subject geographical areas. Accuracy tests may be based on the coverage areas of local PSAPs that request Phase II deployment. It may be appropriate to subject a wireless service provider's entire advertised coverage area within a metropolitan area or similar region to testing . . . but these are typically large areas and initial ALI deployment may proceed more gradually. Thus, testing may initially cover an urban core and later extend to the response area of a local PSAP. Compliance may be verified for these sub-areas separately or in combination. However, the areas delineated for compliance testing should not overlap. It is unacceptable to include the same geographic sub-area in two or more test areas, especially if the sub-area is relatively undemanding for the location technology.⁶

6. In October 2004, APCO filed a request for declaratory ruling seeking clarification of the geographic area over which wireless carriers must provide the levels of location accuracy required under the Commission's rules, as well as the degree to which carriers must provide confidence and uncertainty data on the level of location accuracy to PSAPs.⁷ In its request, APCO proposed that carriers should be required to meet the Commission's location accuracy requirements at the PSAP service area level.⁸

7. On June 1, 2007, we released a Notice of Proposed Rulemaking (*Notice*) seeking comment on APCO's proposal, as well as a variety of related questions about how to improve 911 location accuracy and reliability.⁹ In the *Notice*, we agreed with APCO that carriers should not be permitted to average their accuracy results over vast service areas because carriers could assert that they satisfy the requirements of

⁴ OET Bulletin No. 71, Guidelines for Testing and Verifying the Accuracy of Wireless E911 Location Systems (Apr. 12, 2000) at 2, available at http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet71/oet71.pdf.

⁵ *Id.*

⁶ *Id.*; see also, e.g., Cingular Consent Decree, File No. EB-02-TS-003, 18 FCC Rcd 11746, 11751 n.10 (2003) ("OET Bulletin No. 71 . . . states that accuracy testing may be based on, among other things, the coverage areas of local PSAPs that request Phase II deployment or the wireless carrier's entire advertised coverage area within a metropolitan area.").

⁷ See Association of Public-Safety Communications Officials-International, Inc. Request for Declaratory Ruling, CC Docket No. 94-102, at 1 (filed Oct. 6, 2004) (APCO Request).

⁸ *Id.* On February 4, 2005, APCO supplemented its request to indicate that metropolitan statistical areas (MSAs) and rural service areas (RSAs) may also serve as appropriate boundaries within which to measure and test location accuracy. Association of Public-Safety Communications Officials-International, Inc. Supplement to Request for Declaratory Ruling, CC Docket No. 94-102, at 1 (filed Feb. 4, 2005) (APCO Supplement). In subsequent filings, however, APCO reiterated its support for measuring and testing location accuracy at the PSAP level. See, e.g., APCO Comments at 1-2; Letter from Robert M. Gurs, Director of Legal and Government Affairs, Association of Public-Safety Communications Officials-International, Inc., to Marlene H. Dortch, Secretary, FCC, CC Docket No. 94-102, at 2 (filed Sept. 14, 2005).

⁹ Wireless E911 Location Accuracy Requirements; Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; 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*, 22 FCC Rcd 10609 (2007) (*Notice*).

Section 20.18(h) yet not meet the Commission's accuracy requirements in substantial segments of their service areas.¹⁰ We found that although measuring location accuracy at the PSAP level may present challenges, the public interest demands that carriers and technology providers strive to ensure that when wireless callers dial 911, emergency responders are provided location information that enables them to reach the site of the emergency as quickly as possible.¹¹ In recognition of the fact that many carriers are not currently measuring and testing location accuracy at the PSAP service area level, we sought comment on whether we should defer enforcement of Section 20.18(h) if we adopted our tentative conclusion to require compliance at the PSAP level.¹²

III. DISCUSSION

A. Compliance with Section 20.18(h) at the PSAP Level

8. Consistent with the *Notice*, we find that carriers should be required to meet the Commission's Phase II accuracy requirements set forth in Section 20.18(h) at the PSAP service area level. Use of a PSAP-based geographic area for compliance purposes is most consistent with the purpose of the E911 rules, which, as we stated in the *Notice*, is to ensure that PSAPs receive accurate, meaningful location information in order to dispatch local emergency responders to the correct location. Although Section 20.18(h) does not explicitly state that accuracy must be measured and tested at the PSAP level, it is unreasonable to think that the Commission ever envisioned averaging of location accuracy on a large geographic basis, such as a carrier's entire national footprint.

9. As we stated in the *Notice*, measuring over large geographic areas such as a carrier's entire national footprint could allow a service provider to claim compliance with the Commission's accuracy requirements even though the carrier cannot meet them in individual PSAP areas, or even entire states.¹³ In those circumstances, certain PSAPs receive either meaningless location information or no location information. Even worse, PSAPs may receive location information yet not know that the information is not reliable. Any of these results could extend the amount of time necessary for a 911 call taker to obtain the location of the caller or the site of an emergency – including cases as serious as callers attempting to report criminal activity impacting homeland security – and thus result in longer dispatch times, and perhaps even no response by public safety officials who lack sufficient information to locate the caller.¹⁴

¹⁰ *Id.* at 10611-12 ¶ 5.

¹¹ *Id.* at 10612 ¶ 6.

¹² *Id.* The *Notice* established a bifurcated comment cycle; comments and replies on the issues raised in Section III.A of the *Notice*, which are addressed in this Order, were due on July 5 and July 11, 2007, respectively. See Comment and Reply Comment Dates Established for Notice of Proposed Rulemaking in the Matter of Wireless E911 Location Accuracy Requirements and E911 Requirements for IP-Enabled Service Providers, PS Docket No. 07-114, WC Docket No. 05-196, *Public Notice*, 22 FCC Rcd 11171 (Public Safety & Homeland Security Bur. 2007) (*E911 Location Accuracy Public Notice*). A list of the parties that filed comments in the first stage of this proceeding is attached as Appendix A. In Section III.B of the *Notice*, we sought comment on other possible ways to improve wireless E911 location accuracy and reliability. See *Notice*, 22 FCC Rcd at 10613-16 ¶¶ 8-18. The issues raised in Section III.B of the *Notice* are not addressed in this Order, but will be addressed in a future order. Comments on the issues raised in Section III.B were due on August 20, 2007; replies are due on September 18, 2007. See *E911 Location Accuracy Public Notice*, 22 FCC Rcd at 11171.

¹³ *Notice*, 22 FCC Rcd at 10611 ¶ 5.

¹⁴ See Syosset Fire District Comments at 3. Moreover, as pointed out by Syosset, inaccurate location information could put the public at even greater risk of harm while first responders rush to locate the emergency incident with poor information. *Id.*; see also *Phoning 911: Gaps despite new technologies*, ConsumerReports.Org, January 2007, at http://www.consumerreports.org/cro/electronics-computers/news-electronics-computers/phoning-911-1-07/overview/0107_911_ov.htm (last visited Sept. 11, 2007) (January 2007 Consumer Reports Article) (describing (continued...))

In fact, PSAPs often answer calls with: "911. What is the address of your emergency?" because they cannot rely on carriers to meet location accuracy requirements in their PSAP service area.¹⁵ A lack of meaningful data regarding a caller's location would thus render the purpose of the rule – which is intended to ensure that carriers provide meaningful location information to emergency responders – a nullity.¹⁶ Measurement of compliance at the PSAP level is the most appropriate way to avoid this otherwise absurd result consistent with the purpose of the rule.

10. The record in this proceeding supports our conclusion that requiring PSAP-level accuracy is necessary to ensure that the goal of providing meaningful location information to emergency responders is met. The public safety organizations that filed comments in response to the *Notice* are nearly unanimous in their support for our tentative conclusion.¹⁷ These organizations represent a cross-section of the public safety community, ranging from nationwide associations such as APCO and NENA, to first responders in densely populated urban areas such as New York City, Chicago, and Orlando, to emergency response organizations in smaller communities such as Lufkin, Texas and San Juan County, New Mexico. The public safety commenters are uniquely qualified to attest to the importance of accurate and reliable location information. Their comments support our observation in the *Notice* that averaging location accuracy over large geographic areas is likely to produce inadequate and unreliable location information in some parts of a provider's service area.¹⁸ The New York City Police Department, for example, emphasizes how difficult it is for PSAPs to ensure that the location information they receive from carriers is accurate and reliable.¹⁹ And *Consumer Reports* estimates that accurate location information is not delivered at the PSAP level in nearly half of the country.²⁰

(...continued from previous page)

the inability of emergency responders to locate a young girl who had called 911 from her cell phone while clinging to her father, who could not swim, after their kayak tipped over in the Hudson River).

¹⁵ *Id.* (noting that every telephone call to the Department of Emergency Response in Dutchess County, New York, is answered this way because of the lack of accurate location information at the PSAP level).

¹⁶ We have never suggested that it is appropriate to average accuracy results over an entire state, much less over a multistate carrier's entire service area. See *Notice*, 22 FCC Rcd at 10612 ¶ 6 & n.17. It would, therefore, have been appropriate for us to clarify that Section 20.18(h) requires compliance at the PSAP level; however, as we stated in the *Notice*, out of an abundance of caution, we have initiated a rulemaking in order to ensure full public input and development of a record on this issue. *Id.* Accordingly, our decision today is supported by the record developed in response to the *Notice*. We therefore find no merit in commenters' procedural arguments regarding our action today. See, e.g., T-Mobile Comments at 13-15; Verizon Wireless Comments at 7-10.

¹⁷ See, e.g., APCO Comments at 2; Johnson County Comments at 2; Lufkin Police Department Comments at 1; NENA Comments at 1; New York City Police Comments at 2-3; Onandaga County Comments at 2; Orange County Comments at 2; San Juan County Comments at 2; Syosset Fire District Comments at 3; Texas 9-1-1 Alliance Comments at 2; Waukesha County Comments at 2; City of Wichita Falls Comments at 2; WSCDC Comments at 2 (all supporting PSAP-level compliance with Section 20.18(h)). Even public safety commenters that expressed some concern about the costs or the benefits of implementing PSAP-level compliance nonetheless supported PSAP-level accuracy as "the ideal approach." NATOA Comments at 5.

¹⁸ See, e.g., Orange County Comments at 3 ("Allowing [wireless carriers] to average location accuracy performance over large areas creates a public safety disadvantage to all, as under performing rural areas may not receive the level of service that public safety agencies need to rapidly locate callers, who may be imperiled in a remote area."); Syosset Fire District Comments at 3 ("If a carrier's coverage area is vast, it may average the more precise accuracy information in some areas with the relatively inaccurate location information it is able to provide in others. . . . [M]easuring accuracy of location information must occur at the PSAP level to be meaningful.").

¹⁹ New York City Police Comments at 3-4; see also Waukesha County Comments at 2 ("[W]e need to be able to meet callers' expectations and be able to locate them accurately and in a timely manner, and to be able to qualify that accuracy within [the boundaries of] 'our' system.").

²⁰ See January 2007 Consumer Reports Article.

11. Some commenters support measuring and testing location accuracy on a statewide basis, rather than at the PSAP service area level.²¹ These commenters, however, fail to address how measurement at the state level furthers the goals of Section 20.18(h). State-level compliance would not solve the problem that APCO described in its 2004 request for declaratory ruling and that public safety commenters in this proceeding have also identified: state-level compliance would still allow service providers to average accuracy results over a geographic area large enough to render the location information provided to some PSAPs within the state “virtually useless.”²² As a result, carriers may achieve acceptable levels of location accuracy in urban areas of a given state, yet provide location information of limited or no use to first responders in rural areas. Indeed, this approach would particularly shortchange residents of larger states with a significant number of PSAPs as they would be more likely to reside in a PSAP where location information of limited or no use would be provided than would residents of smaller states. Moreover, if it is possible for carriers to comply with location accuracy requirements on a statewide basis in small states, this suggests that it would be feasible for carriers to comply with location accuracy requirements at the PSAP level across the nation were they willing to invest appropriate resources. These commenters also provide no persuasive reasons or evidence why the Commission should require compliance at any level other than the PSAP level.²³ In the absence of any such evidence, we reject this approach.

12. Commenters also argue that we should not require location accuracy compliance at the PSAP level before completing the second phase of this rulemaking, or that we should first convene an industry forum or advisory council to assess the possibilities for improving 911 location accuracy.²⁴ We reject this argument as without merit. The step we take today is necessary to ensure first responders receive meaningful location accuracy information as soon as possible, and should not be delayed while we explore additional issues regarding improving location accuracy. By making clear that compliance with Section 20.18(h) must be measured at the PSAP level, we also effectively “set the stage” for the examination that lies ahead, ensuring that all stakeholders are properly discussing location accuracy at the correct geographic level.

13. Our action today, however, does not depend on that examination, nor does it preclude a more comprehensive approach to our E911 location accuracy rules, as some commenters suggest,²⁵ or otherwise “plac[e] the cart before the horse.”²⁶ Although the *Notice* sought comment on whether hybrid location technologies can provide even *better* location accuracy results,²⁷ we do not resolve those questions in this Order.²⁸ We only require service providers to comply with Section 20.18(h) at what may be a smaller geographic area than they are currently using to measure their compliance, with whatever

²¹ See, e.g., State of Montana Comments at 1; Letter from Steve Marzolf, President, National Association of State 9-1-1 Administrators, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 94-102 (filed May 23, 2007) (NASNA May 23, 2007 *Ex Parte* Letter).

²² APCO Supplement at 1.

²³ Some carriers argue that PSAP-level compliance will be hindered by the variety of shapes, sizes, and topographical features that characterize different PSAPs. See, e.g., AT&T Comments at 9-10. We recognize that geographical variations in service areas can present challenges to the provision of E911 service, but in the interest of public safety, we cannot permit those challenges to justify diminished location accuracy.

²⁴ See, e.g., AT&T Comments at 3-6; CTIA Comments at 6-7.

²⁵ See, e.g., QUALCOMM Comments at 7.

²⁶ See, e.g., Sprint Nextel Comments at 3; Verizon Wireless Comments at 12.

²⁷ *Notice*, 22 FCC Rcd at 10614-15 ¶ 11.

²⁸ The *Notice* established a separate comment cycle for all questions relating to the use of hybrid location technologies. See *id.* at 10612 ¶ 7; see also *supra* note 12.

location technology they are now using to locate 911 callers. More specifically, we are not mandating any specific location technology or approach in this Order, nor are we requiring carriers to implement new location technologies. For example, carriers that currently employ a network-based location solution need not incorporate handset-based location technologies into their networks to comply with our ruling in this Order, or vice versa. And, as noted above, our determination here will serve to better inform the discussion going forward. For these reasons, we are not persuaded that the action we take today is premature.

14. We also reject as without merit commenters' assertions that we should not move forward because the location technologies that are currently available are not capable of satisfying the requirements of Section 20.18(h) at the PSAP service area level.²⁹ In the first instance, our decision to allow carriers five years to achieve compliance at the PSAP level substantially mitigates these concerns. Furthermore, the record indicates that in many cases, PSAP-level compliance is technologically feasible today and would require only the investment of additional financial resources.³⁰ In this regard, we note that while it is obviously in carriers' financial interests to argue that any meaningful requirement will not be possible to meet, carriers too often blur the distinction between that which is infeasible and that which simply requires the expenditure of additional resources. Finally, even though the record indicates that some service providers are not currently prepared to meet our current location accuracy requirements at the PSAP level, that fact alone should not prevent us from establishing the PSAP service areas as the geographic basis for compliance with the Section 20.18(h) location accuracy requirements. Indeed, the Commission has consistently found it appropriate to set aggressive benchmarks for carriers and providers when public safety is at stake,³¹ and it is our judgment based on the record as well as our experience regarding the implementation of similar public safety mandates that carriers will be able to meet the compliance deadline and interim benchmarks set forth in this Order. While we acknowledge that meeting the deadline and benchmarks may require the investment of significant resources by certain carriers, we believe that such expenditures are more than justified by the accompanying public safety benefits. Furthermore, we believe that our Order today will have a catalyzing effect on efforts to improve location accuracy measurement because it will create significant incentives for industry.

15. In short, the public interest demands that we no longer allow service providers to nullify our longstanding location accuracy requirements by measuring their compliance over unreasonably large geographic areas. While deployment of E911 Phase II service continues to expand, such service has no significance to local emergency responders if the location information so provided does not permit 911 call takers to locate the caller. In the interests of public safety and homeland security, our action today thus closes any "loopholes" that may allow service providers to avoid providing meaningful location accuracy information. It is clear based on the inability to date of wireless carriers and technology vendors

²⁹ See, e.g., QUALCOMM Comments at 4-7; T-Mobile Reply at 3-10; Verizon Wireless Reply at 4-7.

³⁰ See, e.g., TruePosition Comments at 2-3 (suggesting that TruePosition's U-TDOA location technology can achieve the location accuracy standards for network-based technologies today "in the majority of situations," and that "[w]here the technology as presently deployed does not meet the standard, it could do so with additional [financial] investments").

³¹ See, e.g., 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, 10266-67 ¶ 37 (2005), *aff'd*, *Nuvio Corp. v. FCC*, 473 F.3d 302 (D.C. Cir. 2006) ("While 120 days is an aggressively short amount of time in which to comply with [the Commission's VoIP 911 rules], the threat to public safety if we delay further is too great and demands near immediate action."); Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Third Report and Order*, 14 FCC Rcd 17388, 17399 ¶ 21 (1999) ("The sooner [automatic location identification (ALI)] information is available and used by PSAPs[,] the more rapidly and efficiently emergency help can be sent. We have set an aggressive schedule in order to deploy ALI as soon as reasonably possible[,] and we seek to avoid and minimize any delay.").

to provide meaningful PSAP-level accuracy that it is incumbent on us to clearly establish that compliance must be achieved at the PSAP level.

B. Compliance Deadline and Interim Benchmarks

16. The record in this proceeding contains encouraging evidence that location technology providers have developed and are developing technologies that can achieve PSAP-level compliance.³² The record also reflects that the technology exists to test, monitor, and report compliance at the PSAP level.³³ Moreover, as noted above, PSAP-level compliance is possible in many instances through the deployment of existing resources and technologies presently available to carriers. We recognize, however, that many service providers are not currently measuring and testing location accuracy at the PSAP level,³⁴ and that meeting our location accuracy requirements in every PSAP may take time to achieve. We do not intend to penalize carriers that are making good faith efforts to comply with our location accuracy requirements at the PSAP level.³⁵ At the same time, we must ensure that carriers begin to transition to PSAP-level compliance without delay.

17. Accordingly, we establish a deadline of September 11, 2012 for achieving compliance with Section 20.18(h) at the PSAP level.³⁶ We find that allowing sufficient time for carriers to achieve compliance alleviates parties' concerns about the challenges of PSAP-level compliance with Section 20.18(h),³⁷ yet still leads to appreciable and swift improvements to E911 service that will result from compliance at the appropriate geographic level. The record in this proceeding supports giving carriers five years to achieve PSAP-level compliance.³⁸

18. In order to ensure that carriers are making progress toward compliance with the Commission's location accuracy requirements at the PSAP level, we establish a series of interim requirements, which carriers must also meet in order to comply with Section 20.18(h). These benchmarks consist of the following:

- By September 11, 2008 – one year from the date of adoption of this Order – each carrier subject to the rule must satisfy the location accuracy requirements of Section 20.18(h) within each Economic Area (EA) in which that carrier operates.

³² See, e.g., Polaris Comments at 3-8; TruePosition Comments at 2-6. *But see* QUALCOMM Comments at 6-7 (arguing that no existing location technology can meet the Commission's location accuracy requirements in every PSAP).

³³ See Technocom Comments at 2.

³⁴ Notice, 22 FCC Rcd at 10612 ¶ 6.

³⁵ See Intraço Comments at 3.

³⁶ By establishing a deadline of September 11, 2012 for compliance with Section 20.18(h) at the PSAP level, we address some commenters' preference for delaying the effective date of a rule requiring PSAP level compliance rather than making the rule effective immediately but deferring enforcement. See, e.g., AT&T Comments at 13-34; Sprint Nextel Comments at 15. Thus, this Order does not address the issue of deferred enforcement of Section 20.18(h).

³⁷ See, e.g., NASNA May 23, 2007 *Ex Parte* Letter at 1-2 (expressing concern about the effect of requiring PSAP-level compliance with Section 20.18(h) on state budgets and E911 cost recovery mechanisms).

³⁸ See, e.g., Letter from Robert M. Gurss, Director, Legal and Government Affairs, APCO International, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114 (filed Sept. 7, 2007) (APCO September 7, 2007 *Ex Parte* Letter) (supporting a compliance deadline of "no more than five years"); Letter from Robert W. Quinn, Jr., Senior Vice President, Federal Regulatory, AT&T, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 07-114 (filed Sept. 6, 2007) (suggesting that a five-year compliance period would be appropriate).

- By September 11, 2009 – two years from the date of adoption of this Order – each carrier subject to the rule must file with the Commission a report describing the status of its ongoing efforts to comply with Section 20.18(h).
- By September 11, 2010 – three years from the date of adoption of this Order – each carrier subject to the rule must (1) satisfy the location accuracy requirements of Section 20.18(h) within each Metropolitan Statistical Area (MSA) and Rural Service Area (RSA) in which that carrier operates; (2) demonstrate PSAP-level compliance with Section 20.18(h) within at least 75% of the PSAPs the carrier serves; and (3) demonstrate accuracy in *all* PSAP service areas within at least 50% of the applicable location accuracy standard (in other words, a carrier subject to the accuracy standard for handset-based technologies in Section 20.18(h)(2), which is 50 meters for 67 percent of calls, must achieve location accuracy of 75 meters for 67 percent of calls in all PSAPs in order to comply with this requirement).
- By September 11, 2011 – four years from the date of adoption of this Order – each carrier subject to the rule must file with the Commission a report describing the status of its ongoing efforts to comply with Section 20.18(h).
- By September 11, 2012 – five years from the date of adoption of this Order – each carrier subject to the rule must be in full compliance with Section 20.18(h) at the PSAP service area level.

In determining their compliance with these benchmarks and preparing their reports to the Commission, carriers must include only those PSAPs that are capable of receiving Phase II location data.³⁹

IV. PROCEDURAL MATTERS

A. Final Regulatory Flexibility Analysis

19. As required by the Regulatory Flexibility Act (RFA),⁴⁰ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the *Notice*.⁴¹ The Commission sought written public comment on the possible significant economic impact on small entities regarding the proposals addressed in the *Further Notice*, including comments on the IFRA. Pursuant to the RFA, a Final Regulatory Flexibility Analysis is set forth in Appendix C.

B. Paperwork Reduction Act of 1995 Analysis

20. This document contains proposed new information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we seek specific comment on how we might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

³⁹ Public safety commenters in this proceeding support this interim benchmark approach. *See* APCO September 7, 2007 *Ex Parte* Letter at 1-2 (stating that APCO and NENA support a five-year transition period with yearly compliance benchmarks).

⁴⁰ *See* 5 U.S.C. § 603.

⁴¹ *See Notice*, 22 FCC Rcd at 10619-32 (Appendix).

C. Congressional Review Act

21. The Commission will send a copy of this Report and Order in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

V. ORDERING CLAUSES

22. Accordingly, IT IS ORDERED, pursuant to Sections 1, 4(i), and 332 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 332, that the Report and Order in PS Docket No. 07-114, CC Docket No. 94-102, and WC Docket No. 05-196 IS ADOPTED, and that Part 20 of the Commission's Rules, 47 C.F.R. Part 20, is amended as set forth in Appendix B. The Order shall become effective 60 days after publication in the Federal Register, subject to OMB approval for new information collection requirements.

23. IT IS FURTHER ORDERED that the Request for Declaratory Ruling filed by APCO IS GRANTED to the extent indicated herein.

24. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

List of Commenters

Comments in PS Docket No. 07-114

Comments	Abbreviation
Association of Public-Safety Communications Officials-International, Inc.	APCO
AT&T Inc.	AT&T
Caddo Parish Communications District Number One	Caddo Parish
Cincinnati Bell Wireless LLC	Cincinnati Bell
City of Los Angeles	City of Los Angeles
City of Wichita Falls, Texas Police Department	City of Wichita Falls
Corr Wireless Communications, LLC	Corr
CTIA – The Wireless Association	CTIA
Independent Telephone and Telecommunications Alliance	ITTA
Intrado Inc.	Intrado
Johnson County, KS Emergency Communications	Johnson County
King County E911 Program	King County
Lufkin, Texas Police Department	Lufkin Police
The Mid-America Regional Council	MARC
Motorola, Inc. and Nokia, Inc.	Motorola/Nokia
National Association of Telecommunications Officers and Advisors, National Association of Counties, National League of Cities, and U.S. Conference of Mayors	NATOA
National Emergency Number Association	NENA
New York City Police Department	New York City Police
Nsighttel Wireless, LLC	NSighttel
Office of United Communications, Washington, DC	OUC
Onondaga County Department of Emergency Communications	Onondaga County
Orange County 9-1-1 Administration, Florida	Orange County
Polaris Wireless, Inc.	Polaris
QUALCOMM Incorporated	QUALCOMM
RCC Consultants, Inc.	RCC
Rural Cellular Association	RCA
St. Tammany Parish Communications District	St. Tammany Parish
San Juan County Communications Authority, New Mexico	San Juan County
Sprint Nextel Corporation	Sprint Nextel
State of Montana Department of Administration, Information Technology Services Division	State of Montana
State of New York Department of Public Service	New York DPS
State of Washington Enhanced 911 Program	Washington 911
SunCom Wireless, Inc.	SunCom
Syosset Fire District	Syosset Fire District
TechnoCom Corporation	TechnoCom
The Texas 9-1-1 Alliance	Texas 9-1-1 Alliance
T-Mobile USA, Inc.	T-Mobile
TruePosition, Inc.	TruePosition

Comments	Abbreviation
United States Cellular Corp.	USCC
Verizon Wireless	Verizon Wireless
Voice on the Net Coalition	VON Coalition
Waukesha County, Wisconsin Department of Emergency Preparedness	Waukesha County
West Suburban Consolidated Dispatch Center	WSCDC

Replies in PS Docket No. 07-114

Replies	Abbreviation
Association of Public-Safety Communications Officials-International, Inc.	APCO
AT&T Inc.	AT&T
Motorola/Nokia	Motorola/Nokia
Polaris Wireless, Inc.	Polaris
Rural Cellular Association	RCA
Rural Telecommunications Group	RTG
SouthernLINC Wireless	SouthernLINC
Sprint Nextel	Sprint Nextel
TechnoCom Corporation	TechnoCom
T-Mobile USA, Inc.	T-Mobile
Verizon Wireless	Verizon Wireless

APPENDIX B

Final Rules

Part 20 of the Code of Federal Regulations is amended as follows:

PART 20 – COMMERCIAL MOBILE RADIO SERVICES

1. The authority for part 20 remains unchanged.
2. Section 20.18(h) is amended to read as follows:
* * *

(h) *Phase II accuracy.* (1) By September 11, 2012, licensees subject to this section shall comply with the following standards for Phase II location accuracy and reliability, to be tested and measured at the PSAP service area geographic level:

(i) For network-based technologies: 100 meters for 67 percent of calls, 300 meters for 95 percent of calls;

(ii) For handset-based technologies: 50 meters for 67 percent of calls, 150 meters for 95 percent of calls.

(iii) For the remaining 5 percent of calls, location attempts must be made and a location estimate must be provided to the appropriate PSAP.

(2) By the dates specified in this paragraph, carriers must satisfy the following requirements:

(i) By September 11, 2008, carriers must satisfy the location accuracy standards in paragraph (h)(1) of this section within each Economic Area (EA) in which that carrier operates;

(ii) By September 11, 2009, carriers must file with the Commission a report describing the status of their ongoing efforts to comply with Section 20.18(h);

(iii) By September 11, 2010, carriers must:

(A) Satisfy the location accuracy standards in paragraph (h)(1) of this section within each Metropolitan Statistical Area (MSA) and Rural Service Area (RSA) in which that carrier operates;

(B) Demonstrate PSAP-level compliance with the location accuracy standards in paragraph (h)(1) of this section within at least 75% of the PSAPs the carrier serves; and

(C) Demonstrate accuracy in all PSAP service areas within at least 50% of the applicable location accuracy standard (*i.e.*, a carrier subject to the location accuracy standards in paragraph (h)(1)(ii) of this section must achieve location accuracy of 75 meters for 67 percent of calls in all PSAPs).

(iv) By September 11, 2011, carriers must file with the Commission a report describing the status of their ongoing efforts to comply with Section 20.18(h).

(v) By September 11, 2012, carriers must be in full compliance with Section 20.18(h) at the PSAP service area level.

(3) In assessing their compliance with the requirements of this section, carriers must include only those PSAPs that are capable of receiving Phase II location data.

* * *

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was included in the *Notice of Proposed Rulemaking* in PS Docket No. 07-114; CC Docket No. 94-102; and WC Docket No. 05-196 (*Notice*).² The Commission sought written public comment on the proposals in these dockets, including comment on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

A. Need for, and Objectives of, the Rules

2. In the *Notice*, we sought comment on how to best ensure that public safety answering points (PSAPs) receive location information that is as accurate as possible for all wireless E911 calls. The objective was to ensure that PSAPs receive reliable and accurate location information irrespective of the location of the caller or the technology that may be used.

3. This *Report and Order* requires that Commercial Mobile Radio Service (CMRS) carriers comply by September 11, 2012, with section 20.18(h) of the Commission's rules at the PSAP service area level and adopts interim benchmarks in each of the preceding years to achieve this level. Section 20.18(h) sets forth the standards for Phase II wireless E911 location accuracy and reliability.⁴ This action responds to a petition for declaratory ruling filed by the Association of Public-Safety Communications Officials-International, Inc. (APCO) expressing concern that by measuring and testing location accuracy over geographic areas larger than PSAP service areas, a wireless carrier can assert that it satisfies the requirements of section 20.18(h) even when it is not meeting the location accuracy requirements in substantial segments of its service area.⁵

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

4. There were no comments filed that specifically addressed the IRFA.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

5. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules.⁶ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and

¹ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² 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*, 22 FCC Rcd 10609 (2007) (*Notice*).

³ See 5 U.S.C. § 604.

⁴ Section 20.18(h) states: Phase II accuracy. Licensees subject to this section shall comply with the following standards for Phase II location accuracy and reliability: (1) For network-based technologies: 100 meters for 67 percent of calls, 300 meters for 95 percent of calls; (2) For handset-based technologies: 50 meters for 67 percent of calls, 150 meters for 95 percent of calls. (3) For the remaining 5 percent of calls, location attempts must be made and a location estimate for each call must be provided to the appropriate PSAP. 47 C.F.R. § 20.18(h).

⁵ See *Notice* at paras. 5-8.

⁶ 5 U.S.C. § 604(a)(3).

“small governmental jurisdiction.”⁷ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁸ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁹

1. **Telecommunications Service Entities**

a. **Wireless Telecommunications Service Providers**

6. Below, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated.

7. *Cellular Licensees.* The SBA has developed a small business size standard for wireless firms within the broad economic census category “Cellular and Other Wireless Telecommunications.”¹⁰ Under this SBA category, a wireless business is small if it has 1,500 or fewer employees. For the census category of Cellular and Other Wireless Telecommunications, Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.¹¹ Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.¹² Thus, under this category and size standard, the great majority of firms can be considered small. Also, according to Commission data, 437 carriers reported that they were engaged in the provision of cellular service, Personal Communications Service (PCS), or Specialized Mobile Radio (SMR) Telephony services, which are placed together in the data.¹³ We have estimated that 260 of these are small, under the SBA small business size standard.¹⁴

8. *Common Carrier Paging.* The SBA has developed a small business size standard for wireless firms within the broad economic census category, “Cellular and Other Wireless Telecommunications.”¹⁵ Under this SBA category, a wireless business is small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.¹⁶ Of this total, 804 firms had employment of 999

⁷ 5 U.S.C. § 601(6).

⁸ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such terms which are appropriate to the activities of the agency and publishes such definitions(s) in the Federal Register.”

⁹ 15 U.S.C. § 632.

¹⁰ 13 C.F.R. § 121.201, NAICS code 517212.

¹¹ U.S. Census Bureau, 2002 Economic Census, Subject Series: “Information,” Table 5, Employment Size of Firms for the United States: 2002, NAICS code 517212 (issued November 2005).

¹² *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is firms with “1000 employees or more.”

¹³ “Trends in Telephone Service” at Table 5.3.

¹⁴ *Id.*

¹⁵ 13 C.F.R. § 121.201, NAICS code 517212.

¹⁶ U.S. Census Bureau, 2002 Economic Census, Subject Series: “Information,” Table 5, Employment Size of Firms for the United States: 2002, NAICS code 517211 (issued November 2005).

or fewer employees, and three firms had employment of 1,000 employees or more.¹⁷ Thus, under this category and associated small business size standard, the majority of firms can be considered small. In the Paging *Third Report and Order*, we developed a small business size standard for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.¹⁸ A “small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. Additionally, a “very small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.¹⁹ The SBA has approved these small business size standards.²⁰ An auction of Metropolitan Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000.²¹ Of the 985 licenses auctioned, 440 were sold. Fifty-seven companies claiming small business status won. Also, according to Commission data, 375 carriers reported that they were engaged in the provision of paging and messaging services.²² Of those, we estimate that 370 are small, under the SBA-approved small business size standard.²³

9. *Wireless Telephony.* Wireless telephony includes cellular, personal communications services (PCS), and specialized mobile radio (SMR) telephony carriers. As noted earlier, the SBA has developed a small business size standard for “Cellular and Other Wireless Telecommunications” services.²⁴ Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.²⁵ According to Commission data, 445 carriers reported that they were engaged in the provision of wireless telephony.²⁶ We have estimated that 245 of these are small under the SBA small business size standard.

10. *Broadband Personal Communications Service.* The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission defined “small entity” for Blocks C and F as an entity that has average gross revenues of \$40 million or less in the three previous calendar years.²⁷ For Block F, an additional classification for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the

¹⁷ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is firms with “1000 employees or more.”

¹⁸ *Amendment of Part 90 of the Commission’s Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service*, PR Docket No. 89-552, Third Report and Order and Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 10943, 11068-70, paras. 291-295, 62 FR 16004 (Apr. 3, 1997).

¹⁹ See Letter to Amy Zeslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from A. Alvarez, Administrator, SBA (Dec. 2, 1998) (SBA Dec. 2, 1998 Letter).

²⁰ *Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems*, Memorandum Opinion and Order on Reconsideration and Third Report and Order, 14 FCC Rcd 10030, paras. 98-107 (1999).

²¹ *Id.* at 10085, para. 98.

²² “Trends in Telephone Service” at Table 5.3.

²³ *Id.*

²⁴ 13 C.F.R. § 121.201, NAICS code 517212.

²⁵ *Id.*

²⁶ “Trends in Telephone Service” at Table 5.3.

²⁷ See *Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap*, WT Docket No. 96-59, Report and Order, 11 FCC Rcd 7824, 61 FR 33859 (July 1, 1996) (*PCS Order*); see also 47 C.F.R. § 24.720(b).

preceding three calendar years.”²⁸ These standards defining “small entity” in the context of broadband PCS auctions have been approved by the SBA.²⁹ No small businesses, within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auctions. A total of 93 small and very small business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.³⁰ On March 23, 1999, the Commission re-auctioned 347 C, D, E, and F Block licenses. There were 48 small business winning bidders. On January 26, 2001, the Commission completed the auction of 422 C and F Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in this auction, 29 qualified as “small” or “very small” businesses. Subsequent events, concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant.

11. *Narrowband Personal Communications Services.* To date, two auctions of narrowband personal communications services (PCS) licenses have been conducted. For purposes of the two auctions that have already been held, “small businesses” were entities with average gross revenues for the prior three calendar years of \$40 million or less. Through these auctions, the Commission has awarded a total of 41 licenses, out of which 11 were obtained by small businesses. To ensure meaningful participation of small business entities in future auctions, the Commission has adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.³¹ A “small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$40 million. A “very small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million. The SBA has approved these small business size standards.³² In the future, the Commission will auction 459 licenses to serve Metropolitan Trading Areas (MTAs) and 408 response channel licenses. There is also one megahertz of narrowband PCS spectrum that has been held in reserve and that the Commission has not yet decided to release for licensing. The Commission cannot predict accurately the number of licenses that will be awarded to small entities in future auctions. However, four of the 16 winning bidders in the two previous narrowband PCS auctions were small businesses, as that term was defined. The Commission assumes, for purposes of this analysis that a large portion of the remaining narrowband PCS licenses will be awarded to small entities. The Commission also assumes that at least some small businesses will acquire narrowband PCS licenses by means of the Commission’s partitioning and disaggregation rules.

12. *Rural Radiotelephone Service.* The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.³³ A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System (BETRS).³⁴ The Commission uses the SBA’s small business size standard applicable to “Cellular and Other Wireless

²⁸ See *PCS Order*, 11 FCC Rcd 7824.

²⁹ See, e.g., *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, PP Docket No. 93-253, Fifth Report and Order, 9 FCC Rcd 5332, 59 FR 37566 (July 22, 1994).

³⁰ FCC News, *Broadband PCS, D, E and F Block Auction Closes*, No. 71744 (rel. Jan. 14, 1997); see also *Amendment of the Commission’s Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licenses*, WT Docket No. 97-82, Second Report and Order, 12 FCC Rcd 16436, 62 FR 55348 (Oct. 24, 1997).

³¹ *Amendment of the Commission’s Rules to Establish New Personal Communications Services, Narrowband PCS*, Docket No. ET 92-100, Docket No. PP 93-253, Second Report and Order and Second Further Notice of Proposed Rulemaking, 15 FCC Rcd 10456, 65 FR 35875 (June 6, 2000).

³² See SBA Dec. 2, 1998 Letter.

³³ The service is defined in section 22.99 of the Commission’s Rules, 47 C.F.R. § 22.99.

³⁴ BETRS is defined in sections 22.757 and 22.759 of the Commission’s Rules, 47 C.F.R. §§ 22.757 and 22.759.

Telecommunications," *i.e.*, an entity employing no more than 1,500 persons.³⁵ There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

13. *Air-Ground Radiotelephone Service.* The Commission has not adopted a small business size standard specific to the Air-Ground Radiotelephone Service.³⁶ We will use SBA's small business size standard applicable to "Cellular and Other Wireless Telecommunications," *i.e.*, an entity employing no more than 1,500 persons.³⁷ There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and we estimate that almost all of them qualify as small under the SBA small business size standard.

14. *Offshore Radiotelephone Service.* This service operates on several UHF television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico.³⁸ There are presently approximately 55 licensees in this service. We are unable to estimate at this time the number of licensees that would qualify as small under the SBA's small business size standard for "Cellular and Other Wireless Telecommunications" services.³⁹ Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.⁴⁰

b. Wireline Carriers and Service Providers

15. The SBA has developed a small business size standard for wireline firms within the broad economic census category, "Wired Telecommunications Carriers."⁴¹ Under this category, the SBA deems a wireline business to be small if it has 1,500 or fewer employees. Census Bureau data for 2002 show that there were 2,432 firms in this category that operated for the entire year.⁴² Of this total, 2,395 firms had employment of 999 or fewer employees, and 37 firms had employment of 1,000 employees or more.⁴³ Thus, under this category and associated small business size standard, the majority of firms can be considered small.

16. We have included small incumbent local exchange carriers in this present RFA analysis. As noted above, a "small business" under the RFA is one that, *inter alia*, meets the pertinent small business size standard (*e.g.*, a telephone communications business having 1,500 or fewer employees), and "is not dominant in its field of operation."⁴⁴ The SBA's Office of Advocacy contends that, for RFA purposes, small incumbent local exchange carriers are not dominant in their field of operation because any such dominance is not "national" in scope.⁴⁵ We have therefore included small incumbent local

³⁵ 13 C.F.R. § 121.201, NAICS code 517212.

³⁶ The service is defined in section 22.99 of the Commission's rules, 47 C.F.R. § 22.99.

³⁷ 13 C.F.R. § 121.201, NAICS codes 517212.

³⁸ This service is governed by Subpart I of Part 22 of the Commission's rules. *See* 47 C.F.R. §§ 22.1001-22.1037.

³⁹ 13 C.F.R. § 121.201, NAICS code 517212.

⁴⁰ *Id.*

⁴¹ 13 C.F.R. § 121.201, NAICS code 517110.

⁴² U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517110 (issued Nov. 2005).

⁴³ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

⁴⁴ 15 U.S.C. § 632.

⁴⁵ Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (May 27, 1999). The Small Business Act contains a definition of "small-business concern," which the RFA incorporates into its own definition of "small business." *See* 15 U.S.C. § 632(a) (Small Business Act); 5 U.S.C. § 601(3) (RFA).
(continued....)

exchange carriers in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

17. *Incumbent Local Exchange Carriers (LECs).* Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁴⁶ According to Commission data,⁴⁷ 1,303 carriers have reported that they are engaged in the provision of incumbent local exchange services. Of these 1,303 carriers, an estimated 1,020 have 1,500 or fewer employees and 283 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by our action.

18. *Competitive Local Exchange Carriers, Competitive Access Providers (CAPs), "Shared-Tenant Service Providers," and "Other Local Service Providers."* Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁴⁸ According to Commission data,⁴⁹ 769 carriers have reported that they are engaged in the provision of either competitive access provider services or competitive local exchange carrier services. Of these 769 carriers, an estimated 676 have 1,500 or fewer employees and 93 have more than 1,500 employees. In addition, 12 carriers have reported that they are "Shared-Tenant Service Providers," and all 12 are estimated to have 1,500 or fewer employees. In addition, 39 carriers have reported that they are "Other Local Service Providers." Of the 39, an estimated 38 have 1,500 or fewer employees and one has more than 1,500 employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, "Shared-Tenant Service Providers," and "Other Local Service Providers" are small entities that may be affected by our action.

19. *Local Resellers.* The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁵⁰ According to Commission data,⁵¹ 143 carriers have reported that they are engaged in the provision of local resale services. Of these, an estimated 141 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of local resellers are small entities that may be affected by our action.

20. *Toll Resellers.* The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁵² According to Commission data,⁵³ 770 carriers have reported that they are engaged in the

(...continued from previous page)

SBA regulations interpret "small business concern" to include the concept of dominance on a national basis. See 13 C.F.R. § 121.102(b).

⁴⁶ 13 C.F.R. § 121.201, NAICS code 517110 (changed from 513310 in Oct. 2002).

⁴⁷ FCC, Wireline Competition Bureau, Industry Analysis and Technology Division, "Trends in Telephone Service" at Table 5.3, page 5-5 (April 2005) ("Trends in Telephone Service"). This source uses data that are current as of October 1, 2004.

⁴⁸ 13 C.F.R. § 121.201, NAICS code 517110 (changed from 513310 in Oct. 2002).

⁴⁹ "Trends in Telephone Service" at Table 5.3.

⁵⁰ 13 C.F.R. § 121.201, NAICS code 517310 (changed from 513330 in Oct. 2002).

⁵¹ "Trends in Telephone Service" at Table 5.3.

⁵² 13 C.F.R. § 121.201, NAICS code 517310 (changed from 513330 in Oct. 2002).

⁵³ "Trends in Telephone Service" at Table 5.3.

provision of toll resale services. Of these, an estimated 747 have 1,500 or fewer employees and 23 have more than 1,500 employees. Consequently, the Commission estimates that the majority of toll resellers are small entities that may be affected by our action.

21. *Payphone Service Providers (PSPs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for payphone services providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁵⁴ According to Commission data,⁵⁵ 613 carriers have reported that they are engaged in the provision of payphone services. Of these, an estimated 609 have 1,500 or fewer employees and four have more than 1,500 employees. Consequently, the Commission estimates that the majority of payphone service providers are small entities that may be affected by our action.

22. *Interexchange Carriers (IXCs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁵⁶ According to Commission data,⁵⁷ 316 carriers have reported that they are engaged in the provision of interexchange service. Of these, an estimated 292 have 1,500 or fewer employees and 24 have more than 1,500 employees. Consequently, the Commission estimates that the majority of IXCs are small entities that may be affected by our action.

23. *Operator Service Providers (OSPs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁵⁸ According to Commission data,⁵⁹ 23 carriers have reported that they are engaged in the provision of operator services. Of these, an estimated 20 have 1,500 or fewer employees and three have more than 1,500 employees. Consequently, the Commission estimates that the majority of OSPs are small entities that may be affected by our action.

24. *Prepaid Calling Card Providers*. Neither the Commission nor the SBA has developed a small business size standard specifically for prepaid calling card providers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁶⁰ According to Commission data,⁶¹ 89 carriers have reported that they are engaged in the provision of prepaid calling cards. Of these, 88 are estimated to have 1,500 or fewer employees and one has more than 1,500 employees. Consequently, the Commission estimates that all or the majority of prepaid calling card providers are small entities that may be affected by our action.

25. *800 and 800-Like Service Subscribers*.⁶² Neither the Commission nor the SBA has developed a small business size standard specifically for 800 and 800-like service ("toll free") subscribers. The appropriate size standard under SBA rules is for the category Telecommunications

⁵⁴ 13 C.F.R. § 121.201, NAICS code 517110 (changed from 513310 in Oct. 2002).

⁵⁵ "Trends in Telephone Service" at Table 5.3.

⁵⁶ 13 C.F.R. § 121.201, NAICS code 517110 (changed from 513310 in Oct. 2002).

⁵⁷ "Trends in Telephone Service" at Table 5.3.

⁵⁸ 13 C.F.R. § 121.201, NAICS code 517110 (changed from 513310 in Oct. 2002).

⁵⁹ "Trends in Telephone Service" at Table 5.3.

⁶⁰ 13 C.F.R. § 121.201, NAICS code 517310 (changed from 513330 in Oct. 2002).

⁶¹ "Trends in Telephone Service" at Table 5.3.

⁶² We include all toll-free number subscribers in this category, including those for 888 numbers.

Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.⁶³ The most reliable source of information regarding the number of these service subscribers appears to be data the Commission collects on the 800, 888, and 877 numbers in use.⁶⁴ According to our data, at the end of January, 1999, the number of 800 numbers assigned was 7,692,955; the number of 888 numbers assigned was 7,706,393; and the number of 877 numbers assigned was 1,946,538. We do not have data specifying the number of these subscribers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of toll free subscribers that would qualify as small businesses under the SBA size standard. Consequently, we estimate that there are 7,692,955 or fewer small entity 800 subscribers; 7,706,393 or fewer small entity 888 subscribers; and 1,946,538 or fewer small entity 877 subscribers.

c. International Service Providers

26. The Commission has not developed a small business size standard specifically for providers of international service. The appropriate size standards under SBA rules are for the two broad census categories of "Satellite Telecommunications" and "Other Telecommunications." Under both categories, such a business is small if it has \$13.5 million or less in average annual receipts.⁶⁵

27. The first category of Satellite Telecommunications "comprises establishments primarily engaged in providing point-to-point telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications."⁶⁶ For this category, Census Bureau data for 2002 show that there were a total of 371 firms that operated for the entire year.⁶⁷ Of this total, 307 firms had annual receipts of under \$10 million, and 26 firms had receipts of \$10 million to \$24,999,999.⁶⁸ Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

28. The second category of Other Telecommunications "comprises establishments primarily engaged in (1) providing specialized telecommunications applications, such as satellite tracking, communications telemetry, and radar station operations; or (2) providing satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems."⁶⁹ For this category, Census Bureau data for 2002 show that there were a total of 332 firms that operated for the entire year.⁷⁰ Of this total, 303 firms had annual receipts of under \$10 million and 15 firms had

⁶³ 13 C.F.R. § 121.201, NAICS code 517310 (changed from 513330 in Oct. 2002).

⁶⁴ See FCC, Common Carrier Bureau, Industry Analysis Division, *Study on Telephone Trends*, Tables 21.2, 21.3, and 21.4 (Feb. 1999).

⁶⁵ 13 C.F.R. § 121.201, NAICS codes 517410 and 517910.

⁶⁶ U.S. Census Bureau, "2002 NAICS Definitions: 517410 Satellite Telecommunications" (www.census.gov, visited Feb. 2006).

⁶⁷ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 517410 (issued Nov. 2005).

⁶⁸ *Id.* An additional 38 firms had annual receipts of \$25 million or more.

⁶⁹ U.S. Census Bureau, 2002 NAICS Definitions, "517910 Other Telecommunications"; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

⁷⁰ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 517910 (issued Nov. 2005).

annual receipts of \$10 million to \$24,999,999.⁷¹ Consequently, we estimate that the majority of Other Telecommunications firms are small entities that might be affected by our action.

d. Cable and OVS Operators

29. *Cable and Other Program Distribution.* The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged as third-party distribution systems for broadcast programming. The establishments of this industry deliver visual, aural, or textual programming received from cable networks, local television stations, or radio networks to consumers via cable or direct-to-home satellite systems on a subscription or fee basis. These establishments do not generally originate programming material."⁷² The SBA has developed a small business size standard for Cable and Other Program Distribution, which is: all such firms having \$13.5 million or less in annual receipts.⁷³ According to Census Bureau data for 2002, there were a total of 1,191 firms in this category that operated for the entire year.⁷⁴ Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.⁷⁵ Thus, under this size standard, the majority of firms can be considered small.

30. *Cable Companies and Systems.* The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers, nationwide.⁷⁶ Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard.⁷⁷ In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers.⁷⁸ Industry data indicate that, of 7,208 systems nationwide, 6,139 systems have under 10,000 subscribers, and an additional 379 systems have 10,000-19,999 subscribers.⁷⁹ Thus, under this second size standard, most cable systems are small.

31. *Cable System Operators.* The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000."⁸⁰ The Commission has determined that an operator serving fewer than 677,000

⁷¹ *Id.* An additional 14 firms had annual receipts of \$25 million or more.

⁷² U.S. Census Bureau, 2002 NAICS Definitions, "517510 Cable and Other Program Distribution"; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

⁷³ 13 C.F.R. § 121.201, NAICS code 517510.

⁷⁴ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

⁷⁵ *Id.* An additional 61 firms had annual receipts of \$25 million or more.

⁷⁶ 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

⁷⁷ These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

⁷⁸ 47 C.F.R. § 76.901(c).

⁷⁹ Warren Communications News, *Television & Cable Factbook 2006*, "U.S. Cable Systems by Subscriber Size," page F-2 (data current as of Oct. 2005). The data do not include 718 systems for which classifying data were not available.

⁸⁰ 47 U.S.C. § 543(m)(2); see 47 C.F.R. § 76.901(f) & nn. 1-3.

subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.⁸¹ Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.⁸² We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,⁸³ and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

32. *Open Video Services (OVS)*. In 1996, Congress established the open video system (OVS) framework, one of four statutorily recognized options for the provision of video programming services by local exchange carriers (LECs).⁸⁴ The OVS framework provides opportunities for the distribution of video programming other than through cable systems. Because OVS operators provide subscription services,⁸⁵ OVS falls within the SBA small business size standard of Cable and Other Program Distribution Services, which consists of such entities having \$13.5 million or less in annual receipts.⁸⁶ The Commission has certified 25 OVS operators, with some now providing service. Broadband service providers (BSPs) are currently the only significant holders of OVS certifications or local OVS franchises.⁸⁷ As of June, 2005, BSPs served approximately 1.4 million subscribers, representing 1.5 percent of all MVPD households.⁸⁸ Affiliates of Residential Communications Network, Inc. (RCN), which serves about 371,000 subscribers as of June, 2005, is currently the largest BSP and 14th largest MVPD.⁸⁹ RCN received approval to operate OVS systems in New York City, Boston, Washington, D.C. and other areas. The Commission does not have financial information regarding the entities authorized to provide OVS, some of which may not yet be operational. We thus believe that at least some of the OVS operators may qualify as small entities.

e. Internet Service Providers

33. *Internet Service Providers*. The SBA has developed a small business size standard for Internet Service Providers (ISPs). ISPs "provide clients access to the Internet and generally provide related services such as web hosting, web page designing, and hardware or software consulting related to

⁸¹ 47 C.F.R. § 76.901(f); see Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

⁸² These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

⁸³ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. See 47 C.F.R. § 76.909(b).

⁸⁴ 47 U.S.C. § 571(a)(3)-(4). See *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eleventh Annual Report*, 20 FCC Rcd 2507, 2549 ¶ 88 (2006) ("2006 Cable Competition Report").

⁸⁵ See 47 U.S.C. § 573.

⁸⁶ 13 C.F.R. § 121.201, NAICS code 517510.

⁸⁷ See *2006 Cable Competition Report*, 20 FCC Rcd at 2549 ¶ 88. BSPs are newer firms that are building state-of-the-art, facilities-based networks to provide video, voice, and data services over a single network.

⁸⁸ See *id.* at 2507 ¶ 14.

⁸⁹ See *2006 Cable Competition Report*, 20 FCC Rcd at 2549 ¶ 89. WideOpenWest is the second largest BSP and 16th largest MVPD, with cable systems serving about 292,000 subscribers as of June, 2005. The third largest BSP is Knology, serving approximately 170,800 subscribers as of June, 2005. *Id.*

Internet connectivity.”⁹⁰ Under the SBA size standard, such a business is small if it has average annual receipts of \$23 million or less.⁹¹ According to Census Bureau data for 2002, there were 2,529 firms in this category that operated for the entire year.⁹² Of these, 2,437 firms had annual receipts of under \$10 million, and 47 firms had receipts of \$10 million or more but less than \$25 million.⁹³ Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

34. *All Other Information Services.* “This industry comprises establishments primarily engaged in providing other information services (except new syndicates and libraries and archives).”⁹⁴ The SBA has developed a small business size standard for this category; that size standard is \$6.5 million or less in average annual receipts.⁹⁵ According to Census Bureau data for 1997, there were 195 firms in this category that operated for the entire year.⁹⁶ Of these, 172 had annual receipts of under \$5 million, and an additional nine firms had receipts of between \$5 million and \$9,999,999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

f. Equipment Manufacturers

35. *Wireless Communications Equipment Manufacturing.* The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.”⁹⁷ The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.⁹⁸ According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year.⁹⁹ Of this total, 1,010 had

⁹⁰ U.S. Census Bureau, “2002 NAICS Definitions: 518111 Internet Service Providers” (Feb. 2004) <www.census.gov>.

⁹¹ 13 C.F.R. § 121.201, NAICS code 518111 (changed from previous code 514191, “On-Line Information Services,” in Oct. 2002).

⁹² U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 518111 (issued November 2005).

⁹³ *Id.* An additional 45 firms had annual receipts of \$25 million or more.

⁹⁴ U.S. Census Bureau, “2002 NAICS Definitions: 519190 All Other Information Services” (Feb. 2004) <www.census.gov>.

⁹⁵ 13 C.F.R. § 121.201, NAICS code 519190 (changed from 514199 in Oct. 2002).

⁹⁶ U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 514199 (issued Oct. 2000). This category was created for the 2002 Economic Census by taking a portion of the superseded 1997 category, “All Other Information Services,” NAICS code 514199. The data cited in the text above are derived from the superseded category.

⁹⁷ U.S. Census Bureau, 2002 NAICS Definitions, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing”; <http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342>.

⁹⁸ 13 C.F.R. § 121.201, NAICS code 334220.

⁹⁹ U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released May 26, 2005); <http://factfinder.census.gov>. The number of “establishments” is a less helpful indicator of small business prevalence in this context than would be the number of “firms” or “companies,” because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 2002, which was 929.

employment of under 500, and an additional 13 had employment of 500 to 999.¹⁰⁰ Thus, under this size standard, the majority of firms can be considered small.

36. *Telephone Apparatus Manufacturing.* The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing wire telephone and data communications equipment. These products may be standalone or board-level components of a larger system. Examples of products made by these establishments are central office switching equipment, cordless telephones (except cellular), PBX equipment, telephones, telephone answering machines, LAN modems, multi-user modems, and other data communications equipment, such as bridges, routers, and gateways."¹⁰¹ The SBA has developed a small business size standard for Telephone Apparatus Manufacturing, which is: all such firms having 1,000 or fewer employees.¹⁰² According to Census Bureau data for 2002, there were a total of 518 establishments in this category that operated for the entire year.¹⁰³ Of this total, 511 had employment of under 1,000, and an additional 7 had employment of 1,000 to 2,499.¹⁰⁴ Thus, under this size standard, the majority of firms can be considered small.

37. *Semiconductor and Related Device Manufacturing.* These establishments manufacture "computer storage devices that allow the storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media."¹⁰⁵ The SBA has developed a small business size standard for this category of manufacturing; that size standard is 500 or fewer employees.¹⁰⁶ According to Census Bureau data for 1997, there were 1,082 establishments in this category that operated for the entire year.¹⁰⁷ Of these, 987 had employment of under 500, and 52 establishments had employment of 500 to 999.

38. *Computer Storage Device Manufacturing.* These establishments manufacture "computer storage devices that allow the storage and retrieval of data from a phase change, magnetic, optical, or magnetic/optical media."¹⁰⁸ The SBA has developed a small business size standard for this category of manufacturing; that size standard is 1,000 or fewer employees.¹⁰⁹ According to Census Bureau data for 1997, there were 209 establishments in this category that operated for the entire year.¹¹⁰ Of these, 197

¹⁰⁰ *Id.* An additional 18 establishments had employment of 1,000 or more.

¹⁰¹ U.S. Census Bureau, 2002 NAICS Definitions, "334210 Telephone Apparatus Manufacturing"; <http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342>.

¹⁰² 13 C.F.R. § 121.201, NAICS code 334210.

¹⁰³ U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334210 (released May 26, 2005); <http://factfinder.census.gov>. The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 2002, which was 450.

¹⁰⁴ *Id.* An additional 4 establishments had employment of 2,500 or more.

¹⁰⁵ U.S. Census Bureau, "2002 NAICS Definitions: 334413 Semiconductor and Related Device Manufacturing" (Feb. 2004) <www.census.gov>.

¹⁰⁶ 13 C.F.R. § 121.201, NAICS code 334413.

¹⁰⁷ U.S. Census Bureau, 1997 Economic Census, Industry Series: Manufacturing, "Semiconductor and Related Device Manufacturing," Table 4, NAICS code 334413 (issued July 1999).

¹⁰⁸ U.S. Census Bureau, "2002 NAICS Definitions: 334112 Computer Storage Device Manufacturing" (Feb. 2004) <www.census.gov>.

¹⁰⁹ 13 C.F.R. § 121.201, NAICS code 334112.

¹¹⁰ U.S. Census Bureau, 1997 Economic Census, Industry Series: Manufacturing, "Computer Storage Device Manufacturing," Table 4, NAICS code 334112 (issued July 1999).

had employment of under 500, and eight establishments had employment of 500 to 999.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

39. In this *Report and Order*, we have taken steps to advance our public safety mission by establishing a requirement that CMRS carriers comply by September 11, 2012, at the PSAP service area level, with section 20.18(h) of the Commission's rules. The Order requires carriers to submit compliance reports to the Commission at the two-year and four-year marks, explaining their progress in achieving compliance with section 20.18(h) at the PSAP level. In addition, some carriers may have to revise their internal recordkeeping procedures to comply with the Order's requirements, although the Order imposes no specific requirements in this regard.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

40. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) and exemption from coverage of the rule, or any part thereof, for small entities."¹¹¹

41. In the *Notice*, the Commission specifically considered the impact of potential revisions to the wireless E911 accuracy rules on small entities. The *Notice* asked whether certain classes of carriers and/or rural networks should be held to a uniform standard of accuracy if the Commission were to adopt one, and if so, by what date they should be required to come into compliance with a more stringent, uniform accuracy requirement.¹¹² In previous rulemakings, the Commission has established different compliance deadlines for small wireless carriers.¹¹³ The questions posed in the *Notice* enabled the Commission to assess whether similar concessions to small entities were warranted with respect to wireless E911 accuracy requirements.

42. The Commission has determined that the benefits of requiring all CMRS carriers to comply with the requirements of Section 20.18(h) at the PSAP service area level far outweigh any burdens associated with implementing these requirements. E-911 represents a significant and valuable investment that enables emergency responders to reach the site of an emergency as quickly as possible. The public safety comments in response to the *Notice* were nearly unanimous in support of this requirement. We acknowledge that compliance with the rule adopted in the order may impose cost burdens on small entities. However, given the great public interest benefits of the rules, we find that the public interest benefits outweigh the economic burdens. Furthermore, the Order gives carriers a full five years to come into compliance with section 20.18(h) at the PSAP level, in large part because we have taken into account the specific economic and technological concerns that small entities face. In the Initial Regulatory Flexibility Analysis, we sought comment on these rules and no commenter proposed an alternative version that would serve these benefits while lessening the economic burdens. Accordingly, we find that we have discharged our duty to consider the burdens imposed on small entities.

¹¹¹ 5 U.S.C. §§ 603(c)(1)-(c)(4).

¹¹² See *Notice* at para. 13.

¹¹³ See *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102, *Order*, 17 FCC Rcd 14841, 14851-52, ¶¶ 32-35 (2002) (establishing a longer compliance period for small wireless carriers to achieve compliance with the handset sale and activation requirements of the Commission's wireless E911 rules).

43. **Report to Congress:** The Commission will send a copy of the *Report and Order*, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.¹¹⁴ In addition, the Commission will send a copy of the Second Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Second Report and Order and FRFA (or summaries thereof) will also be published in the Federal Register.¹¹⁵

¹¹⁴ See 5 U.S.C. § 801(a)(1)(A).

¹¹⁵ See 5 U.S.C. § 604(b).

**STATEMENT OF
CHAIRMAN KEVIN J. MARTIN**

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

Supporting the safety of the public and the needs of our first responders is our highest obligation as public officials. Nowhere is this more apparent than ensuring that the most basic need of the public to call for help by dialing 911 is fulfilled. But not only must the public be able to call 911, help must be able to reach them in a timely manner. E911 is meant to ensure that when someone dials 911 during an emergency, public safety can easily and reliably find them. To achieve that goal, our enhanced 911 rules must provide meaningful automatic location information that permits first responders to reliably find persons in need when seconds count.

We all know that people are relying on cell phones for more and more of their calls, including calls to 911. The advances in wireless technology allow people to call for help more quickly and from more remote places than ever before. We need to make sure that our location accuracy requirements keep pace with these changes so that consumers can take advantage of all the opportunities wireless technology has to offer.

I am pleased that today's item adopts the Commission's tentative conclusion to require location accuracy measurement at the PSAP-level. This will help provide necessary and possibly life-saving information to our first responders. As I have stated before, providing location accuracy information on a multi-state or state-wide basis does not provide public safety with the information it needs to do its job effectively. Meeting location accuracy standards on average in the entire state of New York by providing enhanced 911 capability in Manhattan does not help first responders in Buffalo.

While I would have also been comfortable with a shorter time period, I also support the delayed effective date for PSAP-level compliance requested by several public safety groups, which includes specific, measurable benchmarks that will improve both the level of accuracy achieved by carriers and the quality of the location information first responders receive. While new solutions such as hybrid location technologies can increase location accuracy even over our current standards and solve some of the technological challenges carriers may face, the Commission finds today that there are concrete measures that carriers can be taking now to improve location, and that PSAP-level compliance is technologically feasible today in many cases, requiring only the investment of additional financial resources. It is appropriate, therefore, that we delay the effective date of this rule rather than deferring enforcement, and adopt benchmarks that will facilitate compliance with the rule by the effective date.

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

Here we are again—September 11th. The sixth anniversary of that terrible and murderous day when America began to understand just how vulnerable we are in this 21st century. Six years later, not enough has changed. We are still vulnerable. Our communications infrastructure is still not capable of connecting us in the ways we need to be connected in the maelstrom of catastrophe. In some few ways and places, we may be better off, but in far more other ways and places, we are not. We're working, but there remains so much to do. Two months ago, the Commission embarked on a huge effort to encourage construction of an interoperable, nationwide broadband public safety network, to be turned into reality by the combined efforts of the public safety community, a commercial licensee, and the FCC. Today we visit—actually *revisit*—the challenging world of wireless E911, in hopes of providing our citizens with effective and reliable connections to emergency operators in times of crisis.

Our reliance on wireless phones grows deeper every day. The number of handsets deployed in the United States grows almost exponentially—an increase of 50 percent over the last three years.¹ The amount of time we spend on our phones continues to soar—an average consumer uses his or hers for around 13 hours each month, an increase of two hours from just the year before.² That's just part of the picture when it comes to E911. More tellingly, for 14 percent of American adults, their wireless phone is now their *only* phone.³ When these 30 million wireless-only consumers—and any child in their care—face a medical crisis or physical threat, they will seek help through the wireless E911 system. If that system fails them, it can be the difference between life and death.

Many Americans probably believe that their wireless handsets provide the same level of protection as the wireline phones they have replaced. The terrifying reality is that, in many cases, this is not so. Wireless phones do not transmit a particular street address to an emergency operator, as the wireline E911 system does. In fact, even under the best of conditions, carriers are required only to transmit a set of geographic coordinates that is accurate within 50 or 100 meters. In other situations, the accuracy may be far worse. Indeed, one recent study looked at call performance within a small sample of individual PSAPs and concluded that the overall level of accuracy was below what the experts expected and, in many cases, below what the FCC's rules require. Available evidence also indicates that location accuracy is especially unreliable for calls placed from inside a building or in a rural area—two places where mobile handsets are increasingly common. Nor is it possible using current technology to estimate the elevation from which a call is placed—a critical piece of information for first responders if the caller-in-need is located in a sky-scraper or other multi-story building.

So it should be abundantly clear that the FCC faces a profound set of challenges to develop a wireless E911 system that will give American consumers the level of protection they need and deserve. This is starkly urgent business, but in the best of cases, it will still take time; it will take more money; and it will take supreme efforts on the part of industry, public safety and the FCC. On this sixth anniversary

¹ *Eleventh Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, FCC 06-142, at ¶ 158.

² *Id.* at ¶ 168.

³ Alex Mindlin, "Cellphone-only Homes Hit a Milestone," *New York Times* (August 27, 2007).

of the searing tragedy of 9/11, we should require no reminder that the status quo is not acceptable and that the burdens of protecting the people's safety must be an ongoing national priority.

Is today's item aggressive and demanding? Yes it is. But let me say right now that we would be in even worse shape public safety-wise without having already taken some aggressive steps. Making sure that Voice over Internet Protocol was part of the E911 system was aggressive and controversial. But it was the right thing to do and I continue to commend Chairman Martin for his leadership in that. If our public safety alternatives are to do either too much or too little, you will find this Commissioner is always going to err on the side of doing more rather than less.

As I suggested when we initiated this docket earlier this summer, I think the right path forward involves a sequence of two steps. First, the FCC—in full partnership with public safety and industry—needs to test and really understand the capabilities and the limitations of our existing E911 system, and we need to assess developing and future technologies that can improve these capabilities. Second, after we understand the technical realities of where we are today and the limits on what is possible in the future, we need to set aggressive accuracy standards—the most aggressive that law and technology allow—and require carriers to meet them.

In the discussions surrounding the release of our NPRM earlier this summer, I was pleased that my colleagues accepted my suggestion that we commission two reports from our Office of Engineering and Technology that could put this process on a sound technical footing. These reports were to address the question of how well in-building coverage fares under current technology, as well as the extent to which so-called hybrid technology—the most promising technique out there right now—could help remedy some of the limitations of the existing wireless E911 infrastructure. I had hoped that these studies would be available before I was called upon to vote on a framework for adjusting the FCC's accuracy standards.

Unfortunately, those studies are not before us today, even as we have an item that adopts the specific compliance benchmarks suggested to us in recent days by the two leading public safety organizations. In a more perfect world, we would have the additional time necessary to develop a fuller factual record before reaching a decision. But I also recognize that any technical issue can always benefit from additional study and that any important decision contains a degree of legal risk. The simple truth is that public safety officials and the wireless industry are rarely going to agree about the appropriate timeframe for developing and implementing new and expensive technologies. Faced with a choice between the concerns of industry and the suggestions of the public safety community, I think the right answer is to forge ahead with a set of aggressive—but I believe achievable—benchmarks. The rules we announce today will give industry a strong incentive to develop technical solutions that will make the American public safer. I appreciate the Chairman's leadership in bringing us to this point.

Now that we are resolving the PSAP-level accuracy issue, I hope we can focus our energies on moving forward swiftly to address the many additional issues raised by the second phase of the NPRM in this docket, Section III.B. Our resolution of this portion of the proceeding—even more than the decision we reach today—will determine whether American wireless consumers will benefit from a technologically advanced E911 system capable of keeping them as safe as they possibly can be. Indeed, our approach to that next phase is perhaps the best test of whether this Commission is really on-target to improve the state of public safety readiness in the years ahead. The specific questions we must address include (1) whether to mandate a "hybrid" technical solution and a single wireless accuracy standard, (2) whether to require carriers to report the height as well as the latitude and longitude of E911 calls, (3) how to require carriers to measure and report compliance with our standards, and (4) how to deal with the remaining issues of wireless VoIP provision. I certainly look forward to receiving OET's studies and to addressing these questions in the weeks and months immediately ahead. We can settle for no less.

I also think it is important to mention that the OET studies and our consideration of the further issues raised in Section III.B will give us a second opportunity to assess whether the compliance deadlines we set today are appropriate. I am not now, nor ever will be, interested in compromising public safety just because the right technical standards will require substantial investment by industry in infrastructure. But I also recognize that it is possible to set standards so high that they become counter-productive. While I believe that the benchmarks we set today are achievable, if the record that develops between now and one year from now suggests otherwise, I am willing to revisit the timeframes we establish today. The important point is today's action provides what seem to be realistic parameters and timeframes for getting the job done. E911 has taken a long time—too long—and we just do not have the luxury of frittering away more of that precious commodity.

Many thanks to the Bureau for its hard work on this item—and also to my colleagues who worked so hard on this item and the other public safety proceedings the Chairman has teed up. I am pleased to see the Commission back in the forefront of public safety communications. It is where we should have been all along.

STATEMENT OF
COMMISSIONER JONATHAN S. ADELSTEIN
APPROVING IN PART, DISSENTING IN PART

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

It has been nearly a decade since Congress enacted the Wireless Communications and Public Safety Act for the purpose of establishing 911 as the universal emergency assistance number, and to promote, among other things, the further deployment of wireless 911 services.¹ Congress recognized then, as we must today, that our efforts to maintain and upgrade our vital 911 network necessitate reliance on broad coordination efforts and emerging technologies – critical elements in effectuating networks that are “seamless, ubiquitous and reliable.”² Over the past several years, the Commission, together with public safety, state and local governments, and relevant industries, has made significant progress in promoting the deployment of 911 and enhanced (E911) emergency services and improving location accuracy information.

Keeping these directives and past progress in mind, it remains my objective in promoting E911 services to make sure that the Commission is always looking ahead – that we are making policy and enforcement decisions that will lead to more advanced 911 and E911 services for all citizens in the most effective and efficient manner possible. I believe the ultimate goal of today's *Report and Order* – ensuring that public safety answering points (PSAPs) receive reliable and accurate location information – is critical. It is a goal that I share with my colleagues. I have also expressed my full support for requiring carriers to conduct testing on the PSAP level, particularly in response to requesting PSAPs.

But while I support providing first responders with the best data possible, today's item is fraught with highly dubious legal and policy maneuvering that bypasses a still developing record on what should be the reasonable and appropriate implementation details. Instead of giving the public safety community, industry and this Commission the benefit of a decision based on a full record, the majority plows forward with details on benchmarks and compliance determinations – findings that are the very subject of the III.B. portion of this bifurcated proceeding.

When we launched this proceeding, I questioned our decision to bifurcate the issues with the goal of setting a new accuracy compliance standard well in advance of a making a determination of how we can actually achieve improved location accuracy. I also advocated putting “in place a series of hearings and reports that will guide us to develop benchmarks and targets that will pave the way to a new approach to accuracy compliance.”³ In response, the record reflects both overwhelming concern regarding technical feasibility and compliance deadlines, and overwhelming support for a joint FCC, industry and public safety forum on new requirements. And while I appreciate the efforts of public safety to flesh out

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a path to compliance, a proposal such as that put forth on benchmarks should be considered in a forum that is open and conducive to a dialogue with all of the involved parties.

Given the huge commitment of resources and effort needed to make the vast progress we have yet to make, a collaborative, cooperative approach is the most effective way to achieve the goals all of us share. Adopting in whole cloth an eleventh hour proposal at the stroke of Sunshine's end is not the way to promote an atmosphere for progress. Instead of working with all stakeholders, the Commission today simply adopts on a Tuesday a proposal filed on Friday. Offering no opportunity for deliberation or participation by so many stakeholders does not befit an expert agency. Indeed, members of the wireless industry have announced plans for a joint public safety and industry technology summit entitled, "*Automatic Location Information Summit, 9-1-1 Technical Requirements and Capabilities*" scheduled for October 11th - the goals of which include setting public safety and industry objectives and timelines.⁴ Rather than jump the gun, our Commission should help sponsor and draw from such a forum before reaching conclusions.

So I am disappointed that we are not conducting this proceeding in a more thoughtful and deliberate manner to ensure that the steps we take truly advance E911. As I said in the response to the underlying *NPRM*, no one will be well served by a proceeding that inevitably draws affected parties into unnecessary disputes and legal uncertainties. That only distracts all of us from the real objective of improved E911. It is unfortunate that we move forward today on compliance details that do not leverage the expertise of industry and public safety, and ignores the Network Reliability and Interoperability Council VII's recommendation on improving delivery of E911 location accuracy information.⁵ Nor do we leverage the work of APCO's Project Locate⁶ or other studies in our determinations. The majority has blindly pushed wireless carriers off the edge with the possibility of offering a parachute some time in the future when the second portion of this proceeding is completed.

While I have objections to the process that led to the adoption of today's Order, that should not minimize the real need I believe there is for improving location accuracy. Indeed today, as we commemorate those who lost their lives in the tragic events of September 11th, we are reminded of how critical location information is for first responders trying to coordinate efforts to save lives. But saving lives is more than a political platform. Let's unearth today's action for what it really is and is not. The sum total here is a set of compliance details that may bring confusion rather than clarity, and incite litigation, rather than progress.

For these reasons, while I support the goals of this item, I am unable to fully support it and must dissent in part.

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**STATEMENT OF
COMMISSIONER DEBORAH TAYLOR TATE**

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

On this sobering day for our nation, the sixth anniversary of 9/11, we take steps to improve the safety and security of all Americans by strengthening the requirements related to emergency services whenever a consumer calls 911. This identical set of numbers ironically means so much to the provision of public safety services and those who summon their assistance. Specifically, the rules we adopt today will help more accurately measure the provision of important Enhanced 911 (E911) services, especially the ability of wireless service providers to help locate 911 callers.

Wireless service providers play an increasingly important role in supporting our nation's communications related to public safety and homeland security. Our increasingly mobile society means mobile subscribers may be the first to see and report accidents, crimes, terrorist threats, or any other emergency. Incredibly, mobile phones are used to make over a quarter of a million 911 calls every day. Moreover, even when the subscriber is not mobile, the mobile phone often is the preferred means of communication. One of every eight homes in this country is "wireless only," so even at home people call 911 wirelessly. The ability to locate callers who are unable to describe their location, or unaware of their location, is critical to ensuring a timely, and potentially life-saving, response by public safety officials.

I recognize that, in some geographic areas, accomplishing the goals we establish today will be challenging, at least with current technologies. Thus, we need to ensure that, by establishing these rules, we do not provide disincentives for expanding service to rural Americans, especially as it relates to our goal of nationwide broadband deployment.

At the same time, I believe that the Commission must set reasonable goals to ensure that wireless service providers move steadily towards better location capabilities. Thus, while I am supportive of the item, I would have preferred seeking a consensus of public safety and technical experts regarding the benchmarks established herein.

I thank the staff of the Public Safety and Homeland Security Bureau for their work on this important item, as well as the men and women who respond to 911 calls every day and especially to those who have given their lives keeping us safe in times of emergency.

STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

At the outset, I thank the Chairman and my colleagues for your efforts to forge consensus on this important matter. I also thank all of the participants for sharing your knowledge on the highly technical issues discussed in this proceeding. It is especially poignant that we are taking action to further improve Enhanced 911 on Patriot Day. I thank our nation's bravest for their selfless service to all of us.

Passions are high. We all agree that wireless E911 service must satisfy the needs of public safety personnel, as well as the expectations of America's wireless consumers. This is especially important because the percentage of Americans living in cellphone-only households recently reached 14 percent, overtaking for the first time the percentage in landline-only households, which stands at 12.3 percent. Given this growth, I agree that an aggressive time table is in order.

On the other hand, as I stated in May, we must walk before we can run. Since that time, a broad array of entities – wireless service providers, technology vendors and public safety – have told us that we are not yet in a position to devise a plan for rolling out a system of improved wireless E911 location accuracy. I hope that these predictions turn out to be incorrect. Ideally, I would have preferred that the Commission complete its own in-house testing and verification prior to our implementing benchmarks that may be unachievable at best, or, inefficient.

At the same time, I am eager to ensure that consumers and first responders alike will benefit from the latest location-capable wireless technologies. I have every expectation that the Commission will be a part of a meaningful partnership among the commercial wireless industry, technology providers, and public safety entities that will ensure the best possible access to E911 location information for the benefit of wireless callers *and* emergency response providers in as expeditious a time frame as possible. I continue to believe that harnessing the expertise of all interested stakeholders in this manner will serve the public interest and move all of us ahead to quickly solve these technology challenges in a straightforward, comprehensive and transparent manner.

**STATEMENT OF
CHAIRMAN KEVIN J. MARTIN**

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

Supporting the safety of the public and the needs of our first responders is our highest obligation as public officials. Nowhere is this more apparent than ensuring that the most basic need of the public to call for help by dialing 911 is fulfilled. But not only must the public be able to call 911, help must be able to reach them in a timely manner. E911 is meant to ensure that when someone dials 911 during an emergency, public safety can easily and reliably find them. To achieve that goal, our enhanced 911 rules must provide meaningful automatic location information that permits first responders to reliably find persons in need when seconds count.

We all know that people are relying on cell phones for more and more of their calls, including calls to 911. The advances in wireless technology allow people to call for help more quickly and from more remote places than ever before. We need to make sure that our location accuracy requirements keep pace with these changes so that consumers can take advantage of all the opportunities wireless technology has to offer.

I am pleased that today's item adopts the Commission's tentative conclusion to require location accuracy measurement at the PSAP-level. This will help provide necessary and possibly life-saving information to our first responders. As I have stated before, providing location accuracy information on a multi-state or state-wide basis does not provide public safety with the information it needs to do its job effectively. Meeting location accuracy standards on average in the entire state of New York by providing enhanced 911 capability in Manhattan does not help first responders in Buffalo.

While I would have also been comfortable with a shorter time period, I also support the delayed effective date for PSAP-level compliance requested by several public safety groups, which includes specific, measurable benchmarks that will improve both the level of accuracy achieved by carriers and the quality of the location information first responders receive. While new solutions such as hybrid location technologies can increase location accuracy even over our current standards and solve some of the technological challenges carriers may face, the Commission finds today that there are concrete measures that carriers can be taking now to improve location, and that PSAP-level compliance is technologically feasible today in many cases, requiring only the investment of additional financial resources. It is appropriate, therefore, that we delay the effective date of this rule rather than deferring enforcement, and adopt benchmarks that will facilitate compliance with the rule by the effective date.

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

Here we are again—September 11th. The sixth anniversary of that terrible and murderous day when America began to understand just how vulnerable we are in this 21st century. Six years later, not enough has changed. We are still vulnerable. Our communications infrastructure is still not capable of connecting us in the ways we need to be connected in the maelstrom of catastrophe. In some few ways and places, we may be better off, but in far more other ways and places, we are not. We're working, but there remains so much to do. Two months ago, the Commission embarked on a huge effort to encourage construction of an interoperable, nationwide broadband public safety network, to be turned into reality by the combined efforts of the public safety community, a commercial licensee, and the FCC. Today we visit—actually *revisit*—the challenging world of wireless E911, in hopes of providing our citizens with effective and reliable connections to emergency operators in times of crisis.

Our reliance on wireless phones grows deeper every day. The number of handsets deployed in the United States grows almost exponentially—an increase of 50 percent over the last three years.¹ The amount of time we spend on our phones continues to soar—an average consumer uses his or hers for around 13 hours each month, an increase of two hours from just the year before.² That's just part of the picture when it comes to E911. More tellingly, for 14 percent of American adults, their wireless phone is now their *only* phone.³ When these 30 million wireless-only consumers—and any child in their care—face a medical crisis or physical threat, they will seek help through the wireless E911 system. If that system fails them, it can be the difference between life and death.

Many Americans probably believe that their wireless handsets provide the same level of protection as the wireline phones they have replaced. The terrifying reality is that, in many cases, this is not so. Wireless phones do not transmit a particular street address to an emergency operator, as the wireline E911 system does. In fact, even under the best of conditions, carriers are required only to transmit a set of geographic coordinates that is accurate within 50 or 100 meters. In other situations, the accuracy may be far worse. Indeed, one recent study looked at call performance within a small sample of individual PSAPs and concluded that the overall level of accuracy was below what the experts expected and, in many cases, below what the FCC's rules require. Available evidence also indicates that location accuracy is especially unreliable for calls placed from inside a building or in a rural area—two places where mobile handsets are increasingly common. Nor is it possible using current technology to estimate the elevation from which a call is placed—a critical piece of information for first responders if the caller-in-need is located in a sky-scraper or other multi-story building.

So it should be abundantly clear that the FCC faces a profound set of challenges to develop a wireless E911 system that will give American consumers the level of protection they need and deserve. This is starkly urgent business, but in the best of cases, it will still take time; it will take more money; and it will take supreme efforts on the part of industry, public safety and the FCC. On this sixth anniversary

¹ *Eleventh Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, FCC 06-142, at ¶ 158.

² *Id.* at ¶ 168.

³ Alex Mindlin, "Cellphone-only Homes Hit a Milestone," *New York Times* (August 27, 2007).

of the searing tragedy of 9/11, we should require no reminder that the status quo is not acceptable and that the burdens of protecting the people's safety must be an ongoing national priority.

Is today's item aggressive and demanding? Yes it is. But let me say right now that we would be in even worse shape public safety-wise without having already taken some aggressive steps. Making sure that Voice over Internet Protocol was part of the E911 system was aggressive and controversial. But it was the right thing to do and I continue to commend Chairman Martin for his leadership in that. If our public safety alternatives are to do either too much or too little, you will find this Commissioner is always going to err on the side of doing more rather than less.

As I suggested when we initiated this docket earlier this summer, I think the right path forward involves a sequence of two steps. First, the FCC—in full partnership with public safety and industry—needs to test and really understand the capabilities and the limitations of our existing E911 system, and we need to assess developing and future technologies that can improve these capabilities. Second, after we understand the technical realities of where we are today and the limits on what is possible in the future, we need to set aggressive accuracy standards—the most aggressive that law and technology allow—and require carriers to meet them.

In the discussions surrounding the release of our NPRM earlier this summer, I was pleased that my colleagues accepted my suggestion that we commission two reports from our Office of Engineering and Technology that could put this process on a sound technical footing. These reports were to address the question of how well in-building coverage fares under current technology, as well as the extent to which so-called hybrid technology—the most promising technique out there right now—could help remedy some of the limitations of the existing wireless E911 infrastructure. I had hoped that these studies would be available before I was called upon to vote on a framework for adjusting the FCC's accuracy standards.

Unfortunately, those studies are not before us today, even as we have an item that adopts the specific compliance benchmarks suggested to us in recent days by the two leading public safety organizations. In a more perfect world, we would have the additional time necessary to develop a fuller factual record before reaching a decision. But I also recognize that any technical issue can always benefit from additional study and that any important decision contains a degree of legal risk. The simple truth is that public safety officials and the wireless industry are rarely going to agree about the appropriate timeframe for developing and implementing new and expensive technologies. Faced with a choice between the concerns of industry and the suggestions of the public safety community, I think the right answer is to forge ahead with a set of aggressive—but I believe achievable—benchmarks. The rules we announce today will give industry a strong incentive to develop technical solutions that will make the American public safer. I appreciate the Chairman's leadership in bringing us to this point.

Now that we are resolving the PSAP-level accuracy issue, I hope we can focus our energies on moving forward swiftly to address the many additional issues raised by the second phase of the NPRM in this docket, Section III.B. Our resolution of this portion of the proceeding—even more than the decision we reach today—will determine whether American wireless consumers will benefit from a technologically advanced E911 system capable of keeping them as safe as they possibly can be. Indeed, our approach to that next phase is perhaps the best test of whether this Commission is really on-target to improve the state of public safety readiness in the years ahead. The specific questions we must address include (1) whether to mandate a "hybrid" technical solution and a single wireless accuracy standard, (2) whether to require carriers to report the height as well as the latitude and longitude of E911 calls, (3) how to require carriers to measure and report compliance with our standards, and (4) how to deal with the remaining issues of wireless VoIP provision. I certainly look forward to receiving OET's studies and to addressing these questions in the weeks and months immediately ahead. We can settle for no less.

I also think it is important to mention that the OET studies and our consideration of the further issues raised in Section III.B will give us a second opportunity to assess whether the compliance deadlines we set today are appropriate. I am not now, nor ever will be, interested in compromising public safety just because the right technical standards will require substantial investment by industry in infrastructure. But I also recognize that it is possible to set standards so high that they become counter-productive. While I believe that the benchmarks we set today are achievable, if the record that develops between now and one year from now suggests otherwise, I am willing to revisit the timeframes we establish today. The important point is today's action provides what seem to be realistic parameters and timeframes for getting the job done. E911 has taken a long time—too long—and we just do not have the luxury of frittering away more of that precious commodity.

Many thanks to the Bureau for its hard work on this item—and also to my colleagues who worked so hard on this item and the other public safety proceedings the Chairman has teed up. I am pleased to see the Commission back in the forefront of public safety communications. It is where we should have been all along.

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COMMISSIONER JONATHAN S. ADELSTEIN
APPROVING IN PART, DISSENTING IN PART

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

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COMMISSIONER DEBORAH TAYLOR TATE**

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I thank the staff of the Public Safety and Homeland Security Bureau for their work on this important item, as well as the men and women who respond to 911 calls every day and especially to those who have given their lives keeping us safe in times of emergency.

**STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL**

Re: Wireless E911 Location Accuracy Requirements (PS Docket No. 07-114); In the Matter of 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), Report and Order

At the outset, I thank the Chairman and my colleagues for your efforts to forge consensus on this important matter. I also thank all of the participants for sharing your knowledge on the highly technical issues discussed in this proceeding. It is especially poignant that we are taking action to further improve Enhanced 911 on Patriot Day. I thank our nation's bravest for their selfless service to all of us.

Passions are high. We all agree that wireless E911 service must satisfy the needs of public safety personnel, as well as the expectations of America's wireless consumers. This is especially important because the percentage of Americans living in cellphone-only households recently reached 14 percent, overtaking for the first time the percentage in landline-only households, which stands at 12.3 percent. Given this growth, I agree that an aggressive time table is in order.

On the other hand, as I stated in May, we must walk before we can run. Since that time, a broad array of entities – wireless service providers, technology vendors and public safety – have told us that we are not yet in a position to devise a plan for rolling out a system of improved wireless E911 location accuracy. I hope that these predictions turn out to be incorrect. Ideally, I would have preferred that the Commission complete its own in-house testing and verification prior to our implementing benchmarks that may be unachievable at best, or, inefficient.

At the same time, I am eager to ensure that consumers and first responders alike will benefit from the latest location-capable wireless technologies. I have every expectation that the Commission will be a part of a meaningful partnership among the commercial wireless industry, technology providers, and public safety entities that will ensure the best possible access to E911 location information for the benefit of wireless callers *and* emergency response providers in as expeditious a time frame as possible. I continue to believe that harnessing the expertise of all interested stakeholders in this manner will serve the public interest and move all of us ahead to quickly solve these technology challenges in a straightforward, comprehensive and transparent manner.