

§ 401.420 [Amended]

5. Amend § 401.420 as follows:

a. In paragraph (a), remove the text “\$127” and add, in its place, the text “\$122”; and remove the text “\$1,989” and add, in its place, the text “\$1,910”;

b. In paragraph (b), remove the text “\$127” and add, in its place, the text “\$122”; and remove the text “\$1,989” and add, in its place, the text “\$1,910”; and

c. In paragraph (c)(1), remove the text “\$751” and add, in its place, the text “\$721”; and in paragraph (c)(3), remove the text “\$127” and add, in its place, the text “\$122”, and remove the text “\$1,989” and add, in its place, the text “\$1,910”.

§ 401.428 [Amended]

6. In § 401.428, remove the text “\$766” and add, in its place, the text “\$736”.

Dated: July 27, 2011.

Dana A. Goward,

Director Marine Transportation Systems Management, U.S. Coast Guard.

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FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 9

[PS Docket No. 07-114; GN Docket No. 11-117; WC Docket No. 05-196; FCC 11-107]

Wireless E911 Location Accuracy Requirements; E911 Requirements for IP-Enabled Service Providers

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (the Commission) proposes measures to improve 911 availability and location determination for users of interconnected Voice over Internet Protocol (VoIP) services. First, the Commission considers whether to apply our 911 rules to “outbound-only” interconnected VoIP services, *i.e.*, services that support outbound calls to the public switched telephone network (PSTN) but not inbound voice calling from the PSTN. These services, which allow consumers to place IP-based outbound calls to any telephone number, have grown increasingly popular in recent years. The Commission asks whether such services are likely to generate consumer expectations that they will support 911 calling and consider whether to extend

to outbound-only interconnected VoIP service providers the same 911 requirements that have applied to other interconnected VoIP service providers since 2005.

The Commission seeks comment on whether our proposal to amend the definition of interconnected VoIP service for 911 purposes has any impact on our interpretation of certain statutes that reference the Commission’s existing definition of interconnected VoIP service.

DATES: Submit comments on or before October 3, 2011. Submit reply comments on or before November 2, 2011.

ADDRESSES: You may submit comments, identified by PS Docket No. 07-114; GN Docket No. 11-117; WC Docket No. 05-196, by any of the following methods:

- *Federal Communications Commission’s Web Site:* <http://fjallfoss.fcc.gov/ecfs2/>. Follow the instructions for submitting comments.
- *People With Disabilities:* Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, *etc.*) by e-mail: FCC504@fcc.gov or phone: 202-418-0530 or TTY: 202-418-0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Patrick Donovan, Attorney Advisor, (202) 418-2413.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission’s *Second Further Notice of Proposed Rulemaking and Notice of Proposed Rulemaking* in PS Docket No. 07-114, GN Docket No. 11-117, WC Docket No. 05-196, FCC 11-107, released on July 13, 2011. The full text of this document is available for public inspection during regular business hours in the FCC Reference Center, Room CY-A257, 445 12th Street, SW., Washington, DC 20554, or online at <http://transition.fcc.gov/pshs/services/911-services/>.

I. Second Further Notice of Proposed Rulemaking

A. Applying E911 Rules to Outbound-Only Interconnected VoIP Service Providers

1. *Background.* In 2005, the Commission first asserted regulatory authority over interconnected VoIP service providers for 911 purposes. In the VoIP 911 Order, the Commission defined interconnected VoIP service as a service that (1) enables real-time, two-

way voice communications; (2) requires a broadband connection from the user’s location; (3) requires Internet protocol-compatible customer premises equipment (CPE); and (4) permits users generally to receive calls that originate on the PSTN and to terminate calls to the PSTN. The Commission established requirements for these providers to provide 911 services to their customers. Since the Commission’s adoption of these requirements, Congress has codified them and has also given the Commission the discretion to modify them “from time to time.”

2. In the Location Accuracy NOI, the Commission noted that the Commission’s VoIP 911 rules have thus far been limited to providers of interconnected VoIP services as defined above. The Commission also noted, however, that since these rules were adopted, there has been a significant increase in the availability and use of portable VoIP services and applications that do not meet one or more prongs of the interconnected VoIP service definition. In light of the increase in use of these services, the Commission sought comment on several alternatives for expanding the scope of the VoIP 911 rules, including whether 911/E911 obligations should apply to (1) VoIP services that enable users to place outbound calls that terminate on the PSTN but not to receive inbound calls from the PSTN, and (2) VoIP services that enable users to receive inbound calls from the PSTN but not to make outbound calls to the PSTN.

3. *Comments.* In response to the Location Accuracy NOI, a number of public safety entities argue that the Commission should impose 911 obligations on VoIP services that do not meet the current definition of interconnected VoIP service. NENA contends that consumers expect that they will be able to reach 911 from a VoIP telephone. NENA submits that it is “reasonable for consumers to expect that services which allow outbound calling to the PSTN will properly route calls to 9-1-1.” Further, Texas 9-1-1 Agencies contends that “vendors of these services should be required to provide public education materials related to 9-1-1 limitations and work diligently with public safety and access network provider[s] * * * to minimize confusion and potential adverse consequences to their end users.”

4. Some commercial commenters also support the view that changing consumer expectations support extending 911 requirements beyond the scope of VoIP providers covered by the existing rules. AT&T highlights that “the record suggests that consumers

expect that outbound, residential VoIP services that provide local calling capability will support E911." Sprint Nextel notes that "[m]any * * * new services can be viewed as a form of mobile phone service and, as such, should be treated in a similar way for purposes of 911." TCS states that "[s]ome VoIP services that otherwise fully comply with [the interconnected VoIP service] definition are configured so as to offer only "one-way" (i.e., either in-bound or out-bound calling, but not both) voice services to the PSTN." TCS characterizes this as a "loophole" that encourages "product definition arbitrage" and urges "either Congressional action * * * or clarification from the FCC that such services are included in § 9.3," of the Commission's rules. MobileTREC states that "since a consumer's expectation is that all devices that have dial tone would have 911 service, then any device with dial tone should have a 911 solution, including nomadic or mobile VoIP services such as MagicJack, Skype, Vonage, and Google Voice." DASH believes that "the primary criteria the Commission should apply in determining whether to impose 9-1-1 requirements on new products and services is the reasonable expectations of the subscriber."

5. The VON Coalition, on the other hand, argues that "there is a real risk to innovation if the Commission begins to blur the previously established clear lines and expectations created in the definition of interconnected VoIP * * * to trigger 911 obligations on these innovative applications, products and services." The VON Coalition also notes that "certain IP-enabled services and devices, including non-interconnected VoIP services, may not be technically capable of providing E911, because of the difficulties in identifying the locations of users." In addition, the VON Coalition argues that "to the extent E911 or next generation 911 obligations are extended, it should be considered only for those voice applications or offerings that are designed to provide the essential qualities of a telephone service which is the ability to call anyone and receive a call from anyone in the world."

6. *Discussion.* When the Commission adopted VoIP 911 requirements in 2005, it recognized that the definition of interconnected VoIP service might "need to expand as new VoIP services increasingly substitute for traditional phone service." Since 2005, there has been a dramatic increase in the number and popularity of VoIP services. For example, Skype reported to the Securities and Exchange Commission in

2010 that it had 20 million users in the United States. Skype also stated that it had over 8 million paying users worldwide for its SkypeIn and SkypeOut services and had domestic revenues of over \$100 million in 2009. A number of companies, such as Skype and Google Voice offer a variety of "one-way" interconnected VoIP services that enable inbound calls from the PSTN or outbound calls to the PSTN, but not both.

7. There are now well over 4.2 million subscribers to one-way interconnected VoIP services, which was the number of two-way interconnected VoIP subscribers in 2005 when the FCC adopted the original interconnected VoIP 911 rules. Moreover, since 2005, a number of hardware products have been introduced that support outbound-only interconnected VoIP service and are indistinguishable from traditional landline or cordless phones in their ability to place outbound calls.

8. Outbound-only interconnected VoIP service providers have also been marketing their services to businesses, which generally require a higher grade of quality and reliability than residential-based voice services. For example, since late 2008, Skype has been marketing several versions of its service to small, medium, and large businesses that use Session Initiation Protocol-based PBX systems. In addition to offering low cost rates for outbound calls, the service allows customers to purchase online numbers to receive inbound calls.

9. *Outbound-Only Interconnected VoIP Service.* In light of increased consumer access to and use of outbound-only interconnected VoIP services, we seek comment on whether to extend our 911 obligations to outbound-only interconnected VoIP service providers to further the achievement of long-established regulatory goals to promote the safety of life and property. We invite comment regarding consumers' expectations for being able to contact emergency personnel when using outbound-only interconnected VoIP services. What is the likelihood that a consumer who needs to place an emergency call and is unfamiliar with an outbound-only interconnected VoIP phone would expect it to have the ability to transmit a 911 call? Are warnings at the point of sale regarding a consumer's inability to reach 911 using a particular outbound-only interconnected VoIP service effective? Is there a consumer expectation with respect to being able to contact emergency personnel when using an inbound-only interconnected VoIP service?

10. If we were to extend 911 obligations to outbound-only interconnected VoIP service providers, should we also revise our definition of interconnected VoIP service? As an initial matter, we seek comment on two potential technical modifications to the definition of interconnected VoIP service. First, we seek comment on whether we should modify the second prong of the existing definition, which requires a broadband voice connection from the user's location. Some interconnected VoIP service providers have asserted that VoIP services that are capable of functioning over a dial-up connection as well as a broadband connection fall outside this definition. Since these services provide virtually the same user experience, regardless of the fact that they are in dial-up mode, we seek comment on whether the second prong should specify an "Internet connection," rather than a broadband connection, as the defining feature.

11. Second, we seek comment on whether we should modify the fourth prong of the existing definition to define connectivity in terms of the ability to connect calls to United States E.164 telephone numbers rather than the PSTN. Such a change could reflect the fact that interconnected VoIP service providers are not limited to using the circuit-switched PSTN to connect or receive telephone calls. Indeed, as networks evolve away from circuit-switched technology, VoIP users are increasingly likely to place and receive telephone calls in which the end-to-end transmission is entirely over IP-based networks. By referencing E.164 telephone numbers and eliminating reference to the PSTN, the definition of interconnected VoIP service might be technically more accurate and avoid potential technical obsolescence.

12. Thus, we seek comment on whether to extend 911 requirements to any service that (1) Enables real-time, two-way voice communications; (2) requires an Internet connection from the user's location; (3) requires Internet protocol-compatible customer premises equipment; and (4) permits users to terminate calls to all or substantially all United States E.164 telephone numbers. Would such a new definition accurately reflect current and evolving consumer expectations and the needs of PSAPs and first responders? In the companion *Notice of Proposed Rulemaking*, we seek comment on whether a new definition, were we to adopt one, should be used for any regulatory purpose other than 911 and on issues related to the changing the definition for 911 purposes only.

13. We also seek comment on the cost and technical feasibility of extending the Commission's existing 911 requirements to outbound-only interconnected VoIP service providers. In this regard, we seek comment on the ability of an outbound-only interconnected VoIP service provider to support callback capability. Does the fact that outbound-only interconnected VoIP service providers have already implemented call-back mechanisms for non-emergency purposes mean that it would be feasible for an outbound-only interconnected VoIP service provider to support callback capability for emergency purposes as well? If the Commission were to extend existing 911 requirements to outbound-only interconnected VoIP service providers, what would be an appropriate timeframe for doing so?

14. Would the costs for outbound-only interconnected VoIP service providers to come into compliance with these requirements be no greater, and potentially be lower, than the costs that two-way interconnected VoIP service providers incurred when the Commission adopted its original VoIP 911 requirements in 2005? Has the development since 2005 of mechanisms to support VoIP 911 and the provision of registered location information led to efficiencies that could reduce the cost for outbound-only interconnected VoIP service providers to come into compliance? Conversely, do outbound-only interconnected VoIP services face any additional costs due to technical challenges in transmitting 911 calls, providing call-back information, or using customer-generated location information when compared to bidirectional services?

15. To establish the baseline from which to calculate benefits and costs of extending 911 service requirements to outbound-only interconnected VoIP service providers, we seek comment on the number of firms and subscribers that would be affected; the number of firms that currently provide 911 service for outbound-only interconnected VoIP calls; the number of households and businesses that use outbound-only interconnected VoIP services, including the number that use outbound-only interconnected VoIP services to the exclusion of two-way voice calling services; the projected growth in use of outbound-only interconnected VoIP services, including any growth in the use of such services to the exclusion of two-way voice calling services; and the number of outbound-only interconnected VoIP 911 calls placed annually to PSAPs.

16. We seek comment on the appropriate manner to calculate the benefits that would result from extending 911 service requirements to outbound-only interconnected VoIP services. These benefits may include decreased response times for emergencies; reductions in property damage, the severity of injuries and loss of life; and the increase in the probability of apprehending criminal suspects. We recognize that these benefits will be tempered when consumers have access to other telecommunications services that already provide 911 service and may increase when outbound-only interconnected VoIP service use grows in the future. Potential benefits may also include less tangible and quantifiable factors, such as an increased sense of security. We seek comment on how these intangibles should be accounted for in any analysis.

17. We seek comment on the costs and technical issues associated with providing 911 services. These costs may include hardware upgrades, software updates, customer service costs, the cost of sending additional 911 calls, decreased innovation and investment in services, market exit, liability concerns, as well as other potential costs not enumerated here. We seek comment on any changes to the proposed rules that could mitigate these cost factors while maintaining the goals of extending access to emergency services to users of outbound-only interconnected VoIP services. We seek comment on how any two-way or outbound-only interconnected VoIP service providers that currently offer 911 service provision these services and ask for a precise quantification of the initial and ongoing costs associated with establishing 911 calling, as well as the number of subscribers that have utilized this feature.

18. We seek further comment on any potential costs that public safety personnel may incur if the Commission were to impose 911 obligations upon outbound-only interconnected VoIP service providers. For instance, assuming that most PSAPs are already capable of receiving 911 calls from two-way VoIP providers, would they incur additional costs were they also to receive 911 calls from outbound-only interconnected VoIP providers? For example, could there be potential costs if emergency response personnel are sent to the wrong location or if PSAPs are forced to deal with an increase in the number of fraudulent 911 calls?

19. Finally, with the introduction of advanced consumer equipment and applications for use on desktop

computers and mobile devices, we expect significant innovation to continue in the provision of voice services over IP networks. Thus, we also seek comment on whether there are voice services that are presently being offered that would fall outside the scope of the proposed new definition for outbound-only interconnected VoIP service for which consumers may have a reasonable expectation of being able to contact 911.

B. Automatic Location Requirements for Interconnected VoIP Services

20. *Background.* The Commission's rules currently do not require providers of portable interconnected VoIP service to automatically provide location information to PSAPs without the customer's active cooperation. In the Location Accuracy NPRM, the Commission tentatively concluded that "to the extent that an interconnected VoIP service may be used in more than one location, providers must employ an automatic location technology that meets the same accuracy standards that apply to those CMRS services." The Location Accuracy NOI sought to refresh the record on this tentative conclusion.

21. Specifically, in the Location Accuracy NOI, the Commission sought comment on a range of questions related to automatic provision of location information for interconnected VoIP services. The Commission sought information on what advanced technologies, if any, permit portable interconnected VoIP service providers to provide ALI, whether portable interconnected VoIP service providers had implemented any practices or methods to provide ALI, and if not, what the Commission could do to facilitate the development of techniques for automatically identifying the geographic location of users of this service. Further, the Commission sought comment on whether interconnected VoIP service providers should incorporate the ability to automatically detect a user's Internet connectivity, identify a user's location, and prompt a user to confirm his/her location, prior to enabling calling features. The Commission also sought comment on whether CMRS operators that provide interconnected VoIP services can deliver location information to a PSAP in the same manner as for CMRS, specifically, delivering longitude and latitude coordinates to the PSAP in lieu of a street address.

22. *Comments.* Several commenters argue that the dramatic growth of interconnected VoIP services has created a market segment too large to

remain exempt from E911 location accuracy and that interconnected VoIP service providers as well as broadband providers should work together to address technical solutions for providing automatic location information for VoIP subscribers (including wireless VoIP callers), with the goal of recommending a standard. APCO maintains that “[c]allers using IP devices expect and should receive the same E9-1-1 service as callers using other types of devices” and that “automatic location requirements should therefore be imposed on all devices that the public uses in the same * * * manner as interconnected telephones.” NENA argues that “[i]t is entirely reasonable for consumers to expect that services which allow outbound calling to the PSTN will properly route calls to 9-1-1, [and] that this is indeed the expectation held by the overwhelming majority of VoIP users.” St. Louis County believes these services must provide location and routing information similar to that provided by wireline voice providers.

23. NENA has two primary concerns about the inability of interconnected VoIP service providers to provide ALI for 911 calls. First, although NENA lacks quantitative figures, it has received a “wealth of anecdotal evidence that PSAPs frequently receive calls routed incorrectly due to a failure of nomadic VoIP systems to update user locations.” Second, according to NENA, there is evidence that callers sometimes intentionally falsify location information, which is “impossible to detect and can negatively impact * * * safety and security * * * by diverting resources away from legitimate emergency calls or directing attention away from [a crime] scene [and] when fraudulent calls are detected, it is technically * * * difficult to locate the perpetrator. St. Louis County states that “while improvements to location accuracy have been [made], there remain inaccuracies and other limiting factors requiring additional time and effort at the point of call taking to adequately determine the location of the reporting party,” a problem compounded by nomadic callers who “seldom [are] aware of their geographic location and can offer only observed landmarks thus delaying initial response.”

24. A number of commenters argue that the existing Registered Location requirement, whereby VoIP subscribers register their physical location with their provider, has worked well and should continue to serve as the basis for routing 911 calls. Vonage states that it has worked with public safety to adapt

Vonage’s 911 service to the equipment or infrastructure on which PSAPs rely, resulting in the delivery of more information to the PSAP than is provided by CMRS carriers. Vonage also asserts that “public safety has not requested ALI data from Vonage.”

25. While commenters differ on whether ALI requirements for interconnected VoIP service are needed, commenters generally agree that at this time there is no technological or cost-effective means to provide ALI for interconnected VoIP service providers. Commenters also state that there are no industry standards to support ALI for interconnected VoIP calls and that “the static ALI database in use today is ill-suited to provide location information for any mobile or nomadic communications service.” According to AT&T, the services encompassed within the Commission’s definition of interconnected VoIP service “operate over a myriad of portable devices and technologies that permit portability, including commercial mobile smartphones running VoIP applications, Wi-Fi enabled VoIP handsets, portable terminal adapters, USB dongles, PC-based softphones [and] VoIP users might access the Internet through traditional wired broadband connections, public or private wireless access points, or commercial mobile broadband networks [such that] each permutation of device and network access may have unique technical and logistical challenges, which makes it infeasible today to rely on a single standard or technology for determining and relaying accurate ALI to PSAPs.” Likewise, Qwest states that “[w]ireline networks, e.g., the architecture defining VoIP 911, have no ability to read each other’s end-user locations [and] no existing technology, let alone applicable industry-agreed standards, support the automatic delivery of user address information from a VoIP piece of equipment to a database capable of manipulating it and getting it delivered to a PSAP.” Vonage argues that “it is particularly critical that the Commission recognize the distinction between fixed, nomadic, and mobile interconnected VoIP service [because] “[f]or fixed and nomadic services, moving to CMRS location requirements would degrade, rather than improve, the accuracy and reliability of emergency caller location information [and] [f]or VoIP mobile products, moving to CMRS location requirements will introduce duplication, inefficiency and confusion.”

26. Motorola states that “[i]mplementation of this functionality * * * would require substantial

standards development, investment, and infrastructure upgrades by both VoIP service providers and PSAPs.” Vonage argues that “existing and proposed automatic location identification technology is significantly less reliable than network end-point location information * * * especially * * * in dense urban environments” and therefore “the Commission should not prematurely impose technological requirements and risk likely decreases in public safety and IVS autolocation.”

27. A number of commenters recommend that the Commission encourage industry and public safety entities to work together to develop automatic location identification solutions for VoIP. NENA states that “[i]n the future, some form of Automatic Location Determination should be mandatory for all portable or nomadic VoIP devices and applications” and recommends that “the Commission consult closely with industry to begin fashioning workable 9-1-1 and E9-1-1 rules for PSTN-terminating VoIP providers.”

28. According to AT&T, one possible technological solution that warrants further consideration would be “to include integrated ALI capabilities in the design of terminal adapters or other user devices employed in the provision of portable VoIP services.” AT&T states that “these devices could include A-GPS, passive CMRS wireless receivers, or both, for use in trilateration and identification of the user’s location.” Nevertheless, AT&T cautions that GPS-based automatic location information poses technical limitations, as many interconnected VoIP subscribers use their service indoors or in urban environments, making GPS less effective if satellite transmissions are reflected off buildings and other obstructions or satellite connectivity is lost when VoIP users are deeper indoors. Dash argues that a key element in an ALI solution for interconnected VoIP service is a Location Information Server (LIS) hosted by the service and/or broadband provider and therefore capable of determining, storing, updating, validating and providing location information to first responders. Motorola supports the provision of a validated Master Street Address Guide (MSAG) “where an interconnected VoIP service connects to a PSAP through an IP/wireline technology, but interconnected VoIP services that connect over wireless networks should not be held to the same location accuracy standard as CMRS networks at this time.”

29. Some commenters believe that the costs associated with the deployment of

VoIP automatic location capability would be very high. In addition, commenters point out that there is no mechanism for cost recovery. Qwest states that “it is unclear whether cost recovery would come from the Federal government, or whether VoIP service providers would need to look to the states (and their funding mechanisms, such as 911 surcharges and state funds) for recovery of their significant costs * * * [a]nd it is even less clear where non-regulated entities would go for their cost recovery.” AT&T argues that any solution will require “substantial up-front investment well before any appreciable results would be seen” and “necessitate significant reengineering” as well as replacement of existing devices with “significant consumer outreach efforts and additional expense for subscribers and service providers.”

30. Discussion. We agree with commenters that, given the increasing popularity and adoption of interconnected VoIP services, the provision of accurate location information to PSAPs is becoming essential information to facilitate prompt emergency response and protect life, health and property. Although some commenters point out that the current Registered Location requirement can provide the necessary detailed location of callers, the current regime remains dependent upon subscribers manually and accurately entering their location information and updating it in a timely manner. NENA indicates that a number of VoIP 911 calls have provided erroneous or fraudulent location information to PSAPs, leading to the waste of scarce emergency resources and squandering time that could have been spent responding to other emergencies. We note that proposals related to NG911 would allow the transmission of multiple location objects for a call and thus permit the PSAP to receive the benefit of both the additional information contained in a civic address provided by a user (*e.g.*, an apartment number or street address) and the automatically determined location information that is less subject to data entry errors, lack of timely updates, and possible misrepresentations.

31. In light of the increasing prevalence of VoIP calling, the evolution of consumer expectations, and the limitations of the Registered Location method, we believe it is imperative to continue working towards an automatic location solution for interconnected VoIP calls to 911. At the same time, given the lack of presently available solutions, we are not proposing to adopt specific ALI requirements for interconnected VoIP

services at this time but instead seek comment on a potential framework for developing solutions that would enable us to consider implementing ALI for interconnected VoIP service at a later date.

32. We agree with commenters that the provision of ALI in the interconnected VoIP context is particularly challenging because of the increasing prevalence of “over-the-top” VoIP service, where the over-the-top VoIP service provider that offers interconnected VoIP service to consumers is a different entity from the broadband provider that provides the underlying Internet connectivity. In this scenario, there will frequently be circumstances where the over-the-top VoIP service provider has a direct connection to the consumer but does not have information about the user’s location, while the broadband provider may be aware of the consumer’s location based on the access point he or she is using but is not aware of when the consumer is placing an emergency call. In these situations, the most efficient and accurate ALI solution may require that both the broadband provider and the over-the-top VoIP service provider play a part.

33. Given the increasing use of interconnected VoIP services, we seek comment whether the Commission should adopt proposed general location accuracy governing principles that could be applied to interconnected VoIP service providers and over-the-top VoIP service providers but that would allow both types of providers the flexibility to develop technologically efficient and cost-effective solutions. The IETF GEOPRIV working group has defined a suite of protocols that allow broadband providers to provide location information to subscribers’ devices through standard protocol interfaces. One governing principle might be that when an interconnected VoIP user accesses the Internet to place an emergency call, the underlying broadband provider must be capable of providing location information regarding the access point being used by the device or application, using industry-standard protocols on commercially reasonable and non-discriminatory terms. For example, a broadband provider might be able to satisfy its obligation by providing the access point location information to: (1) the end user, (2) the over-the-top VoIP service provider, and/or (3) the PSAP. Another general principle might be that when an interconnected VoIP user places an emergency call, the over-the-top VoIP service provider must either provide ALI directly (*e.g.*, using geo-

location information generated by the device or application) or must support the provision of access point location information by the broadband provider as described above.

34. We seek comment on whether we should adopt these or any other governing principles. The Commission asks for comment on the appropriate timeframes for their implementation should the Commission decide to adopt them, considering the technological, cost, and operational aspects of the services and devices that the Commission proposes to subject to the new requirements. We also seek comment on the potential costs and benefits of this proposal. We seek comment on the most cost effective solution for providing reasonably accurate location information for interconnected VoIP services. These comments should address both currently available solutions and solutions under development. We seek detailed comment on the relative merits of any potential solutions, including the degree of location accuracy, the cost of implementing the location solution, the degree of coordination required to implement the solution, to which types of VoIP service providers the location systems would apply (*e.g.* interconnected VoIP, outbound-only interconnected VoIP, “over-the-top” VoIP, *etc.*) and any other limitations that may be relevant.

35. We seek comment on the potential benefits of extending location accuracy requirements to interconnected VoIP services. Are they similar to those described above for extending 911 requirements to outbound-only interconnected VoIP service, including decreased response time to emergencies; reductions in property damage, the severity of injuries, and loss of life; and an increase in the probability of apprehending criminal suspects? We recognize that the extent of any benefits will be in part a function of the degree to which current location methodologies provide incorrect or imprecise location information and thereby delay emergency personnel from arriving at the scene. To aid in the estimation of these benefits, we seek comment on the extent to which the receipt of imprecise or incorrect location information from interconnected VoIP service providers has resulted in problems for first responders. We seek precise quantification of the extent to which emergency personnel are deployed to incorrect locations and the difference in response times for calls initiated from interconnected VoIP service providers versus wireline and wireless service providers.

36. We invite comment on the costs associated with various VoIP location accuracy technologies and how these costs and solutions vary by type of VoIP service. These costs may include hardware upgrades, software updates, liability concerns, and any transaction costs. With respect to the last component, we understand that an interconnected VoIP service provider has a relationship with the user but does not have information about the user's location, while the network provider may be aware of the device or application's location based on the access point being used but is not aware of when an emergency call is being placed. We seek comment on how a solution to this problem can be found and how transaction costs between interconnected VoIP service providers and network providers can be reduced in order to provide the most cost effective and accurate location information. Finally, to the extent that there are any other costs and benefits that we should consider, we seek comment on the nature and quantification of their magnitude.

37. *Privacy Concerns.* We note that section 222 of the Communications Act requires carriers (including CMRS providers) to safeguard the privacy of customer proprietary network information (CPNI), including location information. Section 222 generally permits carriers to disclose CPNI "with the approval of the customer." The statute provides heightened protection for location information: A customer shall not be considered to have given approval with regard to "call location information concerning the user of a commercial mobile service * * * or the user of an IP-enabled voice [interconnected VoIP] service" without "express prior authorization," except that a carrier or interconnected VoIP service provider may provide such information "to providers of emergency services, and providers of emergency support services, solely for purposes of delivering or assisting in the delivery of emergency services." How would section 222 apply to broadband providers if we were to amend our rules to require them to assist interconnected VoIP service providers in providing ALI? Could the Commission use authority ancillary to sections 222 and 615a-1 to require broadband providers to maintain the confidentiality of location information except as consistent with section 222? Could the Commission extend the exception to the prior authorization rule for providers of emergency services to broadband providers? Are there other sources of

authority that would enable the Commission to address privacy concerns in this area?

38. *Liability Protection.* In the larger context of our effort to transition to NG911, we have asked whether some type of liability protection might be necessary or appropriate for those involved in the provision of emergency services. Today we revisit this question in the context of interconnected VoIP service providers and our proposal to extend ALI requirements to them and to broadband providers. Would a broadband provider be considered an "other emergency communications provider" subject to the liability protections of section 615a(a)? The Commission also seeks comment on the extent to which the Commission can address the liability of device manufacturers that include software capable of supporting ALI for interconnected VoIP service. Are there other sources of authority pursuant to which the Commission could address liability issues for service and equipment providers?

C. Location-Capable Broadband Voice Technologies

39. In the Location Accuracy NOI, we observed that "many new forms of IP-based voice communications are being offered to consumers via a variety of wireless services, devices, and applications for use on a wide range of new devices." These IP-based communications are being carried over CMRS circuit-switched and data networks, as well as on Wi-Fi and other types of wireless connectivity and these communications may not be subject to our existing interconnected VoIP service or CMRS rules and therefore would not be included within the scope of our proposed revision to the interconnected VoIP service definition for 911 purposes. The record indicates that most smartphones, and many other new broadband-enabled mobile devices, now offer one or more location capabilities, such as A-GPS, network-based location determination, and Wi-Fi based positioning. Often, these capabilities work in combination to provide fairly accurate location determination. St. Louis County reports that "with the advent of the 'smart phone', it has been observed that the location reported by the device is enormously more accurate than that currently provided by Phase II wireless technologies" and such phones should use their "inherent geo-based accuracy for reporting the location of the calling party." Some commenters argue that an industry advisory group would be able to provide an orderly and standards driven approach to leveraging

commercial location-based service for use in providing location information for emergency calls.

40. The introduction of more sophisticated mobile devices has allowed service providers to offer their customers a wide range of commercial location-based services. Such services allow users to navigate by car or on foot, find nearby points of interest such as restaurants or gas stations, tag photos, share their location information with friends, track jogging mileage, obtain coupons from nearby merchants, receive reminders of errands, or play location-based games. The location-based capabilities inherent in the design of these devices and applications could perhaps be leveraged when consumers contact 911 using non-CMRS-based voice services. These location-based services could potentially permit service providers and applications developers to provide PSAPs with more accurate 911 location information. Exploiting commercially available location determination technologies already in devices may offer a more cost efficient method by which to provide critical life saving information to PSAPs. The Commission seeks comment on whether we should encourage mobile service providers to enable the use of commercial location-based services for emergency purposes. We also seek comment on developing operational benchmarks to assist consumers in evaluating the ability of carriers to provide precise location information for emergency purposes based on the location-based capabilities of devices. Should the Commission develop such benchmarks, and if so, what should they be? In addition, the CSRIC should be directed to explore and make recommendations on methodologies for leveraging commercial location-based services for 911 location determination. CSRIC should also suggest whether it is feasible or appropriate for the Commission to adopt operational benchmarks that will allow consumers to evaluate carriers' ability to provide accurate location information. We seek comment on whether the adoption of such benchmarks would be effective in enabling consumers to be better informed about the ability of wireless devices and technologies to provide a PSAP with accurate location information.

41. The Commission also seeks comment on the costs and benefits of the approaches described above. As in our discussion above regarding location accuracy in the interconnected VoIP service context, we seek to encourage the development of cost-effective solutions for location-capable

broadband voice technologies to support the provision of accurate location information to PSAPs and first responders. The Commission seeks comment on both currently available solutions and solutions under development, including the degree of location accuracy provided, the cost of implementing the solution, the degree of coordination required to implement the solution, the types of service, application, and network providers that would be affected, and any other limitations that may be relevant. The Commission also seeks comment on the potential benefits for the public and for public safety in terms of improved access to 911 services, reducing response time to emergencies, and enhancing the protection of life, safety, and property.

D. Improving Indoor Location Accuracy

1. Indoor Location Accuracy Testing

42. *Background.* In the Location Accuracy FNPRM, the Commission sought comment on whether it should extend location accuracy testing to indoor environments. Noting the growing number of wireless 911 calls, the Commission asked whether the Commission should update OET Bulletin 71 to include measurements in indoor environments.

43. *Comments.* Some commenters support the Commission's imposing an indoor testing requirement. Polaris "strongly advocates that the Commission establish testing and reporting requirements for in-building location accuracy and yield. With better information regarding the scope and impact of the challenges associated with indoor E911 location information, the Commission will be able to properly assess the best way to improve indoor performance (and the appropriate metrics that need to be put in place)." Polaris argues that "the Commission should hold workshops and other events to get input from industry members and advisory groups regarding indoor testing. Based on this input, the Commission should also consider requiring indoor testing and establishing a testing schedule."

44. NENA argues that the growing number of "wireless-only households * * * may prompt a need for new indoor/outdoor testing to more accurately reflect consumer trends in the use of mobile devices." However, NENA states that it "lacks sufficient quantitative information to recommend a particular fraction of testing that should be conducted indoors." Finally, TruePosition argues that the testing structure "should encompass those

environments from which most calls are made, including indoors. [Testing] must keep pace with consumer expectations and emergency response requirements."

45. Carriers generally oppose expanding testing to indoor environments. T-Mobile argues that unlike outdoor data collection, "which can be performed by drive testing, there is no feasible way to perform indoor testing on any large scale." However, if indoor testing is required, "T-Mobile agrees with the ESIF recommendation that testing representative indoor environments would be far preferable to repetitive application of indoor testing at the local level." Sprint Nextel also opposes an indoor testing standard, stating that "the proportion of calls placed to 911 from indoors varies from PSAP to PSAP, from town to town, from county to county and from state to state" and that because of these variations, "adopting a specified level of indoor testing is not reasonable without further data." Sprint Nextel further argues that "technology for performing indoor testing is still in the process of being developed," and therefore, "[i]t would be premature to impose specific indoor testing requirements on the carriers at this time."

46. AT&T also argues against an indoor testing requirement because, "[p]ractically speaking, AT&T already finds it difficult to conduct outdoor testing on private property," and it anticipates that "gaining indoor building access for testing purposes will be even more difficult." AT&T contends that "obtaining access to the number of indoor sites required to meet a 30% standard may be impossible." Finally, Qualcomm argues that "[t]he FCC has no basis to use OET Bulletin No. 71 as the starting point for indoor compliance testing, and definitely should not make its 'guidelines' mandatory or define a level of indoor versus outdoor testing." Qualcomm states that "the level of 911 wireless calls made indoors versus outdoors is not only presently unquantified, but it is effectively irrelevant to the Commission's ultimate goal of improving the location accuracy of calls made from inside of buildings."

47. *Discussion.* Publicly available reports, such as a March 2011 study from J. D. Power and Associates, indicate that indoor wireless calls have increased dramatically in the past few years, to an average of 56 percent of all calls, up from 40 percent in 2003. Indoor locations pose particular challenges for first responders, as the location of an emergency may not be as obvious as emergencies that occur outdoors. For example, since indoor incidents are often not visible to the first

responder without entering the building, a location accuracy of 100/300 meters or cell-tower only would only identify the city block in which a building is located, which in urban environments could potentially contain thousands of apartments. Thus, we consider indoor location accuracy to be a significant public safety concern that requires development of indoor technical solutions and testing methodologies to verify the effectiveness of such solutions.

48. While we recognize the importance of indoor testing, we believe that further work is needed in this area and seek comment on whether the Commission should require indoor location accuracy testing and, if so, using what standards. Can outdoor testing methodologies be used in indoor environments, or should the standards for outdoor and indoor location accuracy testing be different? Are traditional sampling and drive testing methods used for outdoor testing appropriate for indoor testing, or do we need new testing methodologies tailored to indoor environments? What indoor location accuracy testing methodologies are available today, and what are the costs and benefits associated with each? We also seek comment on the percentage of emergency calls that are placed indoors today and a quantification of how much an indoor location accuracy testing standard could improve the ability of emergency responders to locate someone in an emergency.

49. We also refer the indoor testing issue to the CSRIC for further development of technical recommendations. We direct that the CSRIC provide initial findings and recommendations to the Commission, taking into account the cost effectiveness of any recommendations, within nine months of the referral of this issue to the CSRIC.

2. Wi-Fi Positioning and Network Access Devices

50. *Wi-Fi Positioning.* In the Location Accuracy NOI, the Commission sought comment on the potential use of Wi-Fi connections to support location accuracy determination in indoor environments, including both residential environments and public hotspots, such as coffee shops, airports, or bookstores. In the last several years, many more homes, offices, shops, and public spaces have installed Wi-Fi access points, and a growing number of mobile devices (e.g., smartphones, laptops, and tablet PCs) use Wi-Fi positioning capability as one means of determining the device user's location.

To locate a mobile device using Wi-Fi positioning, a technology vendor must first create a database of Wi-Fi access point information (a Wi-Fi Database). The caller's device must then measure information from visible Wi-Fi access points and send that information to a Wi-Fi Location Server that has access to the Wi-Fi Database. The device's location is then determined by the Wi-Fi Location Server. Since the radii for Wi-Fi access points are typically small, Wi-Fi positioning can produce reasonably accurate location information.

51. While some consumer location-based services rely on Wi-Fi positioning, Wi-Fi positioning is not currently used for emergency calls. According to the CSRIC 4C Report, Wi-Fi positioning is not being used to deliver emergency calls because: (1) Current deployments for Wi-Fi positioning are based on proprietary implementations; (2) support for transporting Wi-Fi measurements to the Wi-Fi Location Server are not available in the E911 control plane interface standards; (3) only a small fraction of mobile phones in the marketplace have Wi-Fi capability, although the penetration rate is growing rapidly with the increasing adoption of smartphones; and (4) use of Wi-Fi positioning reduces a portable device's battery life. Despite the fact that Wi-Fi positioning is not currently being used for emergency calls, the CSRIC Report states that the use of Wi-Fi positioning for emergency purposes warrants more detailed study.

52. T-Mobile has concerns about using Wi-Fi positioning for emergency calls and states that "WiFi Proximity only works in urban and dense suburban areas, and only with phones that have Wi-Fi receive capability. WiFi Proximity methods also share common weaknesses with A-GPS in many indoor environments (where access points cannot readily be located and documented) and in heavily forested rural areas (where access point densities are low)." T-Mobile also notes that "current E911 control plane interface standards do not support the use of WiFi Proximity location estimates for E911 purposes, and developing and maintaining the required database to support this method is operationally intensive and costly." T-Mobile concludes by noting that "the WiFi Proximity method has considerable shortcomings: limited areas of applicability, potentially low reliability, only a subset of handsets that can be located, no standards support for E911, limited accuracy, and high cost. For these reasons, though the approach has found some success as a medium

accuracy location method for some commercial-location-based smartphone applications, at present no vendors have even proposed using this method for E911."

53. *Network Access Devices.* Many fixed broadband Internet access devices, particularly those provided to the consumer by the broadband service provider, are permanently located at a civic (street) address, which is known to the network provider. Indeed, in some access network architectures, the device is designed to cease functioning when it has been moved to a different network attachment point. Thus, when a caller uses a wireless phone that is communicating with a Wi-Fi access point or femtocell, the wireless carrier may be able to use the civic address to better locate the caller. For example, in a high-rise building, access to the civic address of the network access device could alleviate the need for vertical location information, since the civic address would include information that is capable of locating the source of the call, such as a floor or apartment number.

54. *Discussion.* We would not expect Wi-Fi positioning to serve as a replacement for other location technologies such as A-GPS or triangulation-based techniques, but could it complement these technologies, particularly in indoor or urban canyon settings where alternative location technologies such as A-GPS may not work reliably? Given the potential public safety benefits of using Wi-Fi positioning to locate emergency callers, we seek comment on whether, and if so, how, the Commission could encourage the use of location information that has been derived using Wi-Fi positioning for 911 purposes. How might location information derived from Wi-Fi positioning be conveyed to the PSAP, VoIP service provider, or broadband Internet access provider in both E911 and NG911 settings? Can network devices now or will they in the future be capable of providing Internet connectivity (e.g., home gateways, hot spots, and set-top boxes)? If so, will they be able to self-locate using Wi-Fi positioning? What are the potential costs of including this capability in devices and how much time would be needed to implement it? The Commission seeks comment on the merits of these proposals.

55. We also seek comment on whether fixed broadband Internet access service providers could provision their network access devices to be capable of providing location information (civic or geospatial) to network hosts that attach to these network access devices.

Further, we seek comment on the methods and technologies that would most effectively enable the provision of location information to network access devices. Because we recognize that it may be highly inefficient and burdensome for manufacturers of consumer equipment and software applications to make individual arrangements with every broadband provider to provide location information using network access devices, we seek comment on whether network access devices could provide location information using one or more recognized industry standards.

56. As in prior sections, the Commission seeks comment on the costs and benefits of the potential indoor accuracy solutions described above, including both currently available solutions and solutions under development. We recognize that the efficacy of any particular indoor solution may vary depending on the nature of the indoor environment, the broadband networks available within the environment, and the particular device, service, or application being used by the consumer to place an emergency call. We seek comment on the relative costs and benefits of each such solution and the costs and benefits of developing multiple solutions that can provide more accurate location information when combined.

E. Legal Authority

57. We seek comment on our analysis that we have legal authority to adopt the proposals described herein. First, we believe that modifying the definition of interconnected VoIP service as proposed flows from the Commission's authority to regulate interconnected VoIP 911 service, which was ratified by the NET 911 Improvement Act. The NET 911 Improvement Act defines "IP-enabled voice service" as having "the meaning given the term 'interconnected VoIP service' by § 9.3 of the Federal Communications Commission's regulations." The legislative history of the NET 911 Improvement Act indicates that Congress did not intend to lock in the then-existing definition of interconnected VoIP service as a permanent definition for NET 911 Improvement Act purposes.

58. We also believe that we have authority to modify the 911 obligations of interconnected VoIP service providers. The NET 911 Improvement Act requires interconnected VoIP service providers to provide 911 service "in accordance with the requirements of the Federal Communications Commission, as in effect on July 23, 2008 and as such requirements may be

modified by the Commission from time to time.” Thus, our authority to modify the manner in which interconnected VoIP service providers provide E911 service falls under Congress’s explicit delegation to us to modify the requirements applying to interconnected VoIP service “from time to time.”

59. To the extent the regulation of network operators or others is reasonably ancillary to the effective performance of the Commission’s statutory responsibilities to oversee the activities of interconnected VoIP service providers, and such regulation lies within our subject matter jurisdiction, as specified in Title I of the Communications Act, the Commission has authority, under section 4(i) of the Communications Act and judicial precedent regarding the Commission’s ancillary jurisdiction to adopt requirements applicable to these other entities. Broadband, Internet access, and other network service providers fall within our general jurisdictional grant as providers of “interstate and foreign communication by wire or radio.” In addition, many VoIP 911 calls are carried over such networks. Accordingly, if a network used by the interconnected VoIP service provider does not accommodate the provider’s efforts to comply with the 911 obligations that we establish for such provider pursuant to our express statutory obligations under the NET 911 Improvement Act, the element required for exercising ancillary jurisdiction over such networks—*i.e.*, that the regulation is reasonably ancillary to the effective performance of our statutory duties—appears to be met, since the requirements we would impose on the network would be designed to enable the provider’s compliance with the 911 obligations that we had promulgated under our express statutory mandate. To the extent the record that develops supports a conclusion that the regulation of other entities will enable interconnected VoIP service providers to fulfill their statutory duties as described herein, then we conclude that the Commission may exercise its ancillary authority to promulgate such regulations. We seek comment on this analysis.

60. We also ask commenters to address other potentially relevant sources of authority. For example, as to wireless broadband providers, does the Commission have authority, pursuant to Title III provisions, to impose license conditions in the public interest and adopt the proposals discussed herein to support the provision of 911/E911 services by interconnected VoIP service

providers? How would the statutory goals of sections 1302(a) and (b) be furthered by the rules we propose?

II. Notice of Proposed Rulemaking on Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Commission’s Rules

61. In the *Second Further Notice* above, we seek comment on whether to include outbound-only interconnected VoIP service within the definition of interconnected VoIP service solely for purposes of our 911 rules and not for any other purpose. We note that since enactment of the NET 911 Improvement Act, Congress has passed two other statutes that refer to the definition of interconnected VoIP service in § 9.3 of the Commission’s rules. In October 2010, the Twenty-First Century Communications and Video Accessibility Act (CVAA) became law. It requires, among other things, that the Commission promulgate regulations to “ensure the accessibility, usability, and compatibility of advanced communications services and the equipment used for advanced communications services by individuals with disabilities” and to do what is necessary to “achieve reliable, interoperable communication that ensures access by individuals with disabilities to an Internet protocol-enabled emergency network, where achievable and technically feasible.” The CVAA defines “advanced communications services” to include interconnected VoIP service as defined in § 9.3 of the Commission’s rules “as such section may be amended from time to time,” as well as “non-interconnected VoIP” service, which is service other than interconnected VoIP service “that * * * enabled real-time voice communications that originate from or terminate to the user’s location using Internet protocol or any success protocol; and * * * requires Internet protocol compatible customer premises equipment.” In December 2010, the Truth in Caller ID Act became law. It amends section 227 of the Communications Act to prohibit any person from engaging in caller ID spoofing in connection with “any telecommunications service or IP-enabled voice service.” That Act defines “IP-enabled voice service” to have “the meaning given that term by § 9.3 of the Commission’s regulations (47 CFR 9.3), as those regulations may be amended by the Commission from time to time.”

62. We seek comment on whether, if we decide to amend the definition of interconnected VoIP service in § 9.3 of the Commission’s rules, we should amend it for 911 purposes only. Would

an amendment for 911 purposes only necessarily require the Commission to use the same definition when implementing the CVAA or the Truth in Caller ID Act? Would there be any necessary effect on the Commission’s other rules that cross-reference § 9.3 of the Commission’s rules?

III. Procedural Matters

A. Ex Parte Presentations

63. The proceedings initiated by this *Second Further Notice of Proposed Rulemaking* and this *Notice of Proposed Rulemaking* shall be treated as a “permit-but-disclose” proceedings in accordance with the Commission’s ex parte rules. Persons making ex parte presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral ex parte presentations are reminded that memoranda summarizing the presentation must: (1) List all persons attending or otherwise participating in the meeting at which the ex parte presentation was made; and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda, or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during ex parte meetings are deemed to be written ex parte presentations and must be filed consistent with § 1.1206(b) of the Commission’s rules. In proceedings governed by § 1.49(f) of the Commission’s rules or for which the Commission has made available a method of electronic filing, written ex parte presentations and memoranda summarizing oral ex parte presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s ex parte rules.

B. Comment Filing Procedures

64. Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments in response to this *Second Further Notice of Proposed Rulemaking* and *Notice of Proposed Rulemaking* on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121 (1998).

- **Electronic Filers:** Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.

- **Paper Filers:** Parties that choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW., Room TW-A325, Washington, DC 20554. The filing hours are 8 a.m. to 7 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW., Washington, DC 20554.

C. Accessible Formats

65. To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

D. Regulatory Flexibility Analyses

66. As required by the Regulatory Flexibility Act of 1980, see 5 U.S.C. 604,

the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. Written public comments are requested in the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to this *Second Further Notice of Proposed Rulemaking* and *Notice of Proposed Rulemaking* as set forth on the first page of this document, and have a separate and distinct heading designating them as responses to the IRFA.

E. Paperwork Reduction Act Analysis

68. The *Second Further Notice of Proposed Rulemaking* and *Notice of Proposed Rulemaking* contain proposed new information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and OMB to comment on the information collection requirements contained in this document, as required by PRA. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."

Federal Communications Commission.

Marlene H. Dortch,
Secretary.

[FR Doc. 2011-19718 Filed 8-3-11; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS-R8-ES-2011-0041; MO-92210-0-0008]

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition To List Six Sand Dune Beetles as Endangered or Threatened

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of petition finding and initiation of status reviews.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list six sand dune beetles as endangered or threatened and to designate critical habitat under the Endangered Species Act of 1973, as amended (Act). Based on our review, we find that the petition

does not present substantial scientific or commercial information indicating that listing two of the six species [Hardy's aegialian scarab (*Aegialia hardyi*) and Sand Mountain serican scarab (*Serica psammobunus*)] may be warranted. However, we find that the petition presents substantial scientific or commercial information indicating that listing may be warranted for four of the six species [Crescent Dunes aegialian scarab (*A. crescenta*), Crescent Dunes serican scarab (*S. ammomenisco*), large aegialian scarab (*A. magnifica*), and Giuliani's dune scarab (*Pseudocotalpa giuliani*)]. Therefore, with the publication of this notice, we are initiating a review of the status of these species to determine if listing these four species is warranted. To ensure that the status reviews are comprehensive, we are requesting scientific and commercial data and other information regarding these four species. Based on the status reviews, we will issue 12-month findings on these four species, which will address whether the petitioned actions are warranted, as provided in the Act.

DATES: To allow us adequate time to conduct the status reviews, we request that we receive information on or before October 3, 2011. Please note that if you are using the Federal eRulemaking Portal (see **ADDRESSES** section, below), the deadline for submitting an electronic comment is 11:59 p.m. Eastern Time on this date.

ADDRESSES: You may submit information by one of the following methods:

- **Federal eRulemaking Portal:** <http://www.regulations.gov>. In the box that reads "Enter Keyword or ID," enter the Docket number for this finding, which is [FWS-R8-ES-2011-0041]. Check the box that reads "Open for Comment/ Submission," and then click the Search button. You should then see an icon that reads "Submit a Comment." Please ensure that you have found the correct rulemaking before submitting your comment.

- **U.S. mail or hand-delivery:** Public Comments Processing, Attn: [FWS-R8-ES-2011-0041]; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042-PDM; Arlington, VA 22203.

We will post all information we receive on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the Request for Information section below for more details).

After October 3, 2011, you must submit information directly to the Field Office (see **FOR FURTHER INFORMATION**