

**SUPPORTING STATEMENT**

The Federal Communications Commission (“FCC” or “Commission”) requests OMB approval of a revision of a currently approved information collection (IC) contained in 3060-1085: Section 9.5, Interconnected Voice over Internet Protocol (VoIP) E911 Compliance and 3060-1131: Section 9.12, Implementation of the NET 911 Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities.

**Section 506 of RAY BAUM’S Act**

First, the FCC requests OMB approval to modify the current information collection in order to implement congressional mandates arising from Section 506 of RAY BAUM’S Act, which requires the Commission to “consider adopting rules to ensure that the dispatchable location is conveyed with a 9-1-1 call, regardless of the technological platform used and including with calls from multi-line telephone system.”<sup>1</sup> RAY BAUM’S Act also states that, “[i]n conducting the proceeding . . . the Commission may consider information and conclusions from other Commission proceedings regarding the accuracy of the dispatchable location for a 9-1-1 call . . . .”<sup>2</sup> RAY BAUM’S Act defines a “9-1-1 call” as a voice call that is placed, or a message that is sent by other means of communication, to a PSAP for the purpose of requesting emergency services.<sup>3</sup>

Currently, the Commission requires providers of interconnected VoIP services to obtain information regarding their end users’ location as a condition of providing service (Registered Location). Interconnected VoIP providers must provide that information to entities that maintain databases used to ensure that the caller’s location and a call back number are provided to requesting public safety answering points when a 911 call is placed. The Commission also requires interconnected VoIP providers to ensure that end users understand any limitations of their service and obtain from the end user evidence of such understanding.

As part of implementing Section 506 of RAY BAUM’S Act, on August 1, 2019, the Commission adopted a *Report and Order (2019 Order)* amending, among other things, its 911 Registered Location and customer notification requirements applicable to VoIP service providers.<sup>4</sup>

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<sup>1</sup> Section 506 of the Repack Airwaves Yielding Better Access for Users of Modern Services Act of 2018 (RAY BAUM’S Act), Pub. L. No. 115-141, 132 Stat. 348, 1095 (codified at 47 U.S.C. § 615 note).

<sup>2</sup> *See id.*, § 506(b).

<sup>3</sup> *Id.* § 506(c)(1).

<sup>4</sup> Implementing Kari’s Law and Section 506 of RAY BAUM’S Act; Inquiry Concerning 911 Access, Routing, and Location in Enterprise Communications Systems; Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Commission’s Rules, PS Docket Nos. 18-261 and 17-239 and GN Docket No. 11-117, Report and Order, 34 FCC Rcd 6607 (2019) (*2019 Order*).

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

For purposes of modifying the instant IC, the Commission's *2019 Order* changed the wording of section 9.11's Registered Location requirements to facilitate the provision of automated dispatchable location in fixed and non-fixed environments. For non-fixed environments, the rule requires automated dispatchable location, if technically feasible. If not technically feasible, VoIP service providers may fall back to registered location, alternative location information for 911 calls, or a national emergency call center. Regarding customer notification requirements, the Commission afforded service providers flexibility to use any conspicuous means to notify end users of limitations in 911 service. In sum, the requirements adopted in the *2019 Order* leverage technology advancements since the *2005 Order*, build upon the existing Registered Location requirement, expand options for collecting and supplying end-user location information with 911 calls, are flexible and technologically neutral from a compliance standpoint and serve a vital public safety interest.

The FCC anticipates the burden and cost levels of the requirements adopted in the *2019 Order* would be comparable to the existing Registered Location and customer notification requirements, which OMB last approved in 2018 and will expire on September 30, 2021. The existing IC requirements will remain in effect through January 6, 2021 and January 6, 2022, for fixed devices and non-fixed devices, respectively. After those dates, the 911 requirements adopted in the *2019 Order* will become effective. Accordingly, because the Commission has largely retained the existing rules, we estimate the incremental increase in burdens below.

**NET 911 Improvement Act of 2008**

Second, the Commission seeks OMB approval to merge the existing information collection in OMB Control No. 3060-1131, Implementation of the NET 911 Improvement Act of 2008: Location Information from Owners and Controllers of 911 and E911 Capabilities. The Commission previously stated that it planned to merge the information collection requirements contained in that information collection into OMB Control Number 3060-1085, Section 9.5, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance, into a single collection. Therefore, upon OMB approval, the Commission will discontinue the information collection under OMB Control No. 3060-1131.

**Part 9 Rule Consolidation**

Third, due to the renumbering of the Commission's rules and the merging of OMB Control Nos. 3060-1131 with OMB Control No. 3060-1085, this collection is renamed Section 9.11 and 12, Interconnected Voice Over Internet Protocol E911 Compliance.

The Commission is reporting an increase in the total annual burden hours.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

**A. Justification:**

**1. Collection of Location Information, Provision of Notice, and Recordkeeping on Interconnected VoIP E911 Compliance.**

In the *Notice* released March 10, 2004,<sup>5</sup> the Commission asked, among other things, about the potential applicability of basic 911, enhanced 911 (E911), and related critical infrastructure regulation to voice over Internet protocol (VoIP) and other internet protocol (IP) enabled services.

Specifically, after noting that the Commission previously found in the *E911 Scope Order* that it has statutory authority under sections 1, 4(i), and 251(e)(3) of the Communications Act of 1934, as amended (Act) to determine what entities should be subject to the Commission’s 911 and E911 rules,<sup>6</sup> the Commission sought comment on whether it should exercise its regulatory authority in the context of IP-enabled services.

The Commission further sought comment on the appropriate criteria for determining:

- (a) Whether and to what extent IP-enabled services should fall within the scope of its 911 and E911 regulatory framework; and
- (b) Whether IP-enabled services are technically and operationally capable of meeting the Commission’s basic 911 and/or E911 rules or of providing analogous functionalities that would meet the intent of the 911 Act<sup>7</sup> and the Commission’s regulations.

The Commission is obligated by statute to promote “safety of life and property”<sup>8</sup> and to “encourage and facilitate the prompt deployment throughout the United States of a seamless, ubiquitous, and reliable end-to-end infrastructure” for public safety.<sup>9</sup>

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<sup>5</sup> See *IP-Enabled Services*, WC Docket No. 04-36, Notice of Proposed Rulemaking, 19 FCC Rcd 4863 (2004) (*Notice*).

<sup>6</sup> 47 U.S.C. §§ 151, 154(i), 251(e)(3).

<sup>7</sup> Wireless Communications and Public Safety Act of 1999, Pub. L. No. 106-81, 113 Stat. 1286, § 2(b) (1999) (911 Act).

<sup>8</sup> See 47 U.S.C. § 151.

<sup>9</sup> 911 Act § 2(b).

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

Congress has established 911 as the national emergency number to enable all citizens to reach emergency services directly and efficiently, irrespective of whether a citizen uses wireline or wireless technology when calling for help by dialing 911.<sup>10</sup>

Efforts by federal, state and local government, along with the significant efforts of wireline and wireless service providers, have resulted in the nearly ubiquitous deployment of this life-saving service.

The *Order* the Commission adopted on May 19, 2005,<sup>11</sup> set forth rules requiring providers of VoIP services that interconnect with the nation's existing public switched telephone network (interconnected VoIP services) to supply E911 capabilities to their customers.

The *Order* required the collection of information in six instances, though two of those are no longer relevant.<sup>12</sup>

*A. Location Registration.*

- (1) Interconnected VoIP service providers, like wireline and wireless telecommunications carriers, utilize information regarding the location of a 911 caller in order to route the 911 call to a geographically appropriate emergency answering point.
- (2) In many cases, the 911 caller's location information and call back number also is automatically provided to call dispatchers at the emergency answering point.
- (3) Prior to the *Order*, there was no way for certain classes of interconnected VoIP providers to reliably and automatically provide information regarding the location of their end users to an emergency answering point without the end user's active cooperation.

The *Order* required that:

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<sup>10</sup> See 911 Act § 3, *codified at* 47 U.S.C. § 251(e).

<sup>11</sup> *IP-Enabled Services*, WC Docket No. 04-36, *E911 Requirements for IP-Enabled Service Providers*, WC Docket No. 05-196, FCC 05-116 (rel. June 3, 2005) (*Order*).

<sup>12</sup> The *Order* required a compliance letter detailing their compliance with the E911 rules. The *Order* also required User Notification but noted that: "Due to the widespread proliferation of VoIP services and new telephone equipment sold to replace existing telephone equipment, the information included with the new equipment and the warnings given by service provider representatives at the time of sale absorb this collection in items C and D above. See Appendix A, pp. 1-2 (assumptions) of this support statement."

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

- (1) Providers of interconnected VoIP services must obtain location information from their customers for use in the routing of 911 calls and the provision of location information to emergency answering points.

Specifically, interconnected VoIP providers must obtain from each customer, prior to the initiation of service, the physical location at which the service will first be utilized.<sup>13</sup>

- (2) Interconnected VoIP providers must further provide their end users one or more methods of updating information regarding the end user's physical location.

The most recent location provided to an interconnected VoIP provider by a customer is the "Registered Location."

Although the *Order* does not specify any particular method for collecting such information, the *Order* required that any method utilized allow an end user to update their Registered Location at will and in a timely manner, including at least one option that requires use only of the customer premises equipment necessary to access the interconnected VoIP service.<sup>14</sup>

Interconnected VoIP providers can comply with this requirement directly or by utilizing the services of a third party.

- B. *Provision of Automatic Location Information (ALI)*. The existing E911 network is a dedicated, redundant, highly reliable wireline network (Wireline E911 Network) which is interconnected with but largely separate from the public switched telephone network (PSTN).

When a 911 call is placed, the call is routed to the appropriate emergency answering point based on the location information contained in an Automatic Location Information database (ALI Database) maintained by the entity that operates the Wireline E911 Network.

The ALI Database also is used to provide location information to emergency answering points that request such information.

In order to meet the obligations set forth in the *Order*, interconnected VoIP service providers will place the Registered Location information for their

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<sup>13</sup> Interconnected VoIP providers were also required to obtain from their existing customers, within 120 days of the effective date of the *Order*, the physical location at which the service is being utilized.

<sup>14</sup> We expect that location information will be submitted electronically, either via the customer's CPE or through the service provider's website.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

- customers into, or make that information available through, ALI Databases across the country.
- C. *Customer Notification.* In order to ensure that consumers of interconnected VoIP services are aware of their interconnected VoIP service’s actual E911 capabilities, the *Order* requires that all providers of interconnected VoIP service specifically advise every subscriber, both new and existing, prominently and in plain language, the circumstances under which E911 service may not be available through the interconnected VoIP service or may be in some way limited by comparison to traditional E911 service.
- D. *Record of Customer Notification.* The *Order* requires VoIP providers to obtain and keep a record of affirmative acknowledgement by every subscriber, both new and existing, of having received and understood this advisory.

**Section 506 of RAY BAUM’S Act and Dispatchable Location.**

As noted above, the Commission adopted the Registered Location requirement in 2005 to support the provision of location information from 911 callers that typically use interconnected VoIP service from a single fixed location, such as a residence (fixed VoIP), or that move from one fixed location to another (nomadic VoIP).<sup>15</sup> The Commission has also previously sought comment on the possibility of interconnected VoIP services providing real-time automatic location information to support 911 calls from consumers that use interconnected VoIP services from mobile or portable devices, such as smartphones or laptops.<sup>16</sup>

*2018 Notice.* In the *2018 Notice of Proposed Rulemaking*, the Commission found it appropriate to consider revising the E911 rules for interconnected VoIP to require the provision of dispatchable location.<sup>17</sup> Section 506 of RAY BAUM’S Act defines “dispatchable location” as “the street address of the calling party, and additional information such as room number, floor number, or similar information necessary to

<sup>15</sup> *IP Enabled Services; E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245 (2005).

<sup>16</sup> *IP Enabled Services; E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245, 10276-77, paras. 56-57 (2005); *Wireless E911 Location Accuracy Requirements; E911 Requirements for IP-Enabled Service Providers*, Further Notice of Propose Rulemaking and Notice of Inquiry, 25 FCC Rcd 18957, 18968-69, paras. 27-30 (2010); *Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Commission’s Rules; Wireless E911 Location Accuracy Requirements; E911 Requirements for IP-Enabled Service Providers*, Notice of Proposed Rulemaking, Third Report and Order, and Second Further Notice of Proposed Rulemaking, 26 FCC Rcd 10074, 10094-10100, paras. 59-75 (2011).

<sup>17</sup> *Implementing Kari’s Law and Section 506 of RAY BAUM’s Act; Inquiry Concerning 911 Access, Routing, and Location in Enterprise Communications Systems; Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Commission’s Rules*, PS Docket Nos. 18-261 and 17-239, Notice of Proposed Rulemaking, 33 FCC Rcd 8984 (2018) (*2018 Notice*).

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

adequately identify the location of the calling party.”<sup>18</sup>

*Fixed VoIP.* With respect to fixed VoIP, the Commission stated it is feasible for 911 calls that originate from interconnected VoIP services to convey dispatchable location to the PSAP, in that the current Registered Location obligations are sufficient for this purpose.<sup>19</sup> The Commission stated that “the Registered Location information that is already conveyed with such calls today typically includes street address information, which should be sufficient for dispatchable location in the case of single family homes and small buildings where the PSAP and first responders do not require additional room or floor level information. In addition, interconnected VoIP providers can also enable customers in multi-story buildings and similar environments to provide room or floor level information as part of the Registered Location when needed.”<sup>20</sup>

*Nomadic (Non-Fixed) VoIP.* With respect to nomadic VoIP, the Commission noted that a Registered Location that was recorded when service was initiated is less likely to accurately identify the real-time location of an end user that moves frequently between home, work, and other locations. In the 2018 Notice, the Commission asked whether “Registered Location a sufficient proxy for dispatchable location in a nomadic environment, where the relevant device is able to prompt the user for an updated location when it has been moved?”<sup>21</sup> The Commission sought comment on what technical elements would be required in the end user’s device and/or the service provider’s network to support the provision of real-time dispatchable location as proposed, and the degree to which those technical elements are already in place. The Commission noted that “there appear to be IP-based solutions currently available for providing MLTS dispatchable location dynamically in buildings, campuses, and similar environments.”<sup>22</sup>

The Commission noted that in the Registered Location context the burden is on the end user to update the Registered Location whenever the end user moves from one location to another. To minimize burdens, the Commission sought comment on whether nomadic interconnected VoIP providers have, or can develop in the near term, the means to provide automatic dispatchable location with 911 calls in lieu of conveying the customer’s Registered Location. The Commission believed that automatic provision of location is preferable because end users under stress in emergency situations may have difficulty providing manual updates and the updating process may delay the 911 call or subsequent location and dispatch.<sup>23</sup>

While the Commission preferred to encourage the development of dispatchable location solutions that do not require manual end user updates, the Commission

<sup>18</sup> RAY BAUM’S Act, § 506(a).

<sup>19</sup> 2018 Notice, 33 FCC Rcd at 9008-09 para. 74.

<sup>20</sup> 2018 Notice, 33 FCC Rcd at 9009 para. 74

<sup>21</sup> 2018 Notice, 33 FCC Rcd at 9009 para. 75.

<sup>22</sup> 2018 Notice, 33 FCC Rcd at 9009 para. 75.

<sup>23</sup> 2018 Notice, 33 FCC Rcd at 9009 para. 76.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

recognized that such solutions may not be feasible or cost-effective in all circumstances. For example, as part of the 911 call session, if real-time dispatchable location information cannot be generated automatically, the VoIP provider may need to send an interactive query to the end user to confirm the location identified by the provider, and to correct the location if needed. To enable interconnected VoIP providers to appropriately balance technical feasibility, functionality, customer impact, and cost, the Commission proposed to allow providers flexibility in implementing dispatchable location solutions, and to fall back to Registered Location options when dispatchable location is not feasible.<sup>24</sup> The Commission also sought comment on whether there were alternatives to dispatchable location that interconnected VoIP providers could use to provide location information, e.g., coordinate-based information.<sup>25</sup>

The Commission also sought comment on whether to adopt 911 rules for any other communications services that are not covered by existing 911 rules but provide the capability for users to make a 911 call, including outbound-only interconnected VoIP. RAY BAUM'S Act defines a "911 call" as a voice call that is placed, or a message that is sent by other means of communication, to a PSAP for the purpose of requesting emergency services.<sup>26</sup>

Finally, the Commission estimated that the maximum cost of developing any software update necessary to comply with the proposed rules for each interconnected VoIP-related entity, would be \$92,000, the cost of compensating one full-time software engineer for six months of labor.<sup>27</sup> The Commission estimated that the cost of testing these modifications (including integration testing, unit testing, and failure testing), which requires as many as 12 software engineers working for two months,<sup>28</sup> will be \$368,000

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<sup>24</sup> 2018 Notice, 33 FCC Rcd at 9009 para. 77.

<sup>25</sup> 2018 Notice, 33 FCC Rcd at 9009-10 para. 77.

<sup>26</sup> RAY BAUM'S Act, § 506(c)(1).

<sup>27</sup> 2018 Notice, 33 FCC Rcd at 9018-19 para. 100. The Commission observed that software engineers in the ninetieth percentile for their field are compensated at a rate of \$184,000 per year, which is total compensation based on salary of \$122,350. See Payscale, Software Engineer, [http://www.payscale.com/research/US/Job=Software\\_Engineer/Salary](http://www.payscale.com/research/US/Job=Software_Engineer/Salary) (last visited Sept. 1, 2018). According to Bureau of Labor Statistics, benefits (including paid leave, supplementary pay, insurance, retirement and savings, and legally required benefits) add 50% to compensation for the information industry as a whole, and for the category including management, professional, and related. See Bureau of Labor Statistics, Employer Costs for Employee Compensation Supplementary Tables March 2016, Table 8, page 9, <http://www.bls.gov/ncs/ect/sp/ecsuptc38.pdf>. We therefore add 50% of this salary, or \$61,175 for benefits to arrive at a compensation rate of \$183,525, rounded to \$184,000. See also Glassdoor.com, Software Engineer Salaries,, [https://www.glassdoor.com/Salaries/software-engineer-salary-SRCH\\_KO0,17.htm](https://www.glassdoor.com/Salaries/software-engineer-salary-SRCH_KO0,17.htm) (stating that the national average annual compensation for a software engineer is \$104,463, based on 264,186 crowdsourced reports) (last visited Sept. 1, 2018).

<sup>28</sup> See *Wireless Emergency Alerts; Amendments to Part 11 of the Commission's Rules Regarding the Emergency Alert System*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 11112, 11179, para. 100 (2016) (estimating that the testing of Wireless Emergency Alert-related software modifications would require 12 software engineers working for two months). We expect this testing will

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

for each interconnected VoIP-related entity. The Commission estimated that the total cost of software modifications for each interconnected VoIP-related entity will be \$460,000. Thus the Commission estimated that the proposed dispatchable location requirement will be implemented by 12 interconnected VoIP-related entities,<sup>29</sup> resulting in a cost of \$5,520,000.<sup>30</sup>

*2019 Order.* In the *2019 Order*, the Commission adopted dispatchable location requirements that distinguish between fixed and non-fixed interconnected VoIP services.<sup>31</sup> Also, the Commission extended this requirement to “outbound only” interconnected VoIP providers as well as two-way interconnected VoIP providers covered by the current VoIP E911 rules.

*Fixed VoIP.* The Commission adopted its proposal to require that fixed VoIP services providers transmit dispatchable location with each 911 call. While dispatchable location may be determined by means of a customer-generated Registered Location in the fixed VoIP context (to the extent a physical location conveys a street address that is validated), it must be provided automatically to the PSAP by the VoIP service provider, without additional action by the caller, at the time the 911 call is made.<sup>32</sup>

*Nomadic (Non-Fixed) VoIP.* In the non-fixed VoIP environment, the Commission found that flexible rules and a longer time frame for providing accurate 911 location information are appropriate. The Commission observed that the ability of non-fixed VoIP providers to provide automated real-time dispatchable location is highly dependent on whether granular location information is available for the access point from which the 911 call is placed, and whether the VoIP provider has access to that information. In some environments, particularly when end users are away from their home or regular workplace, this information is either unavailable or the development of information sources that could be leveraged by VoIP providers to provide dispatchable location (e.g.,

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be completed once and will include all required software modifications.

<sup>29</sup> We have previously estimated that interconnected VoIP service providers have worked together or contracted-out services in order to meet the Commission’s regulatory requirements, and that 12 organizations in total have served this purpose for thousands of interconnected VoIP service providers. See 83 FR 22481 (May 15, 2018). See also 73 FR 66644 (Jan. 9, 2009) (estimating 12 interconnected VoIP respondents under OMB Control No. 3060-1085).

<sup>30</sup> *2018 Notice*, 33 FCC Rcd at 9019 para. 100.

<sup>31</sup> Fixed VoIP services are services that provide the functional equivalent of fixed telephony by means of a device that connects to a single access point and is not capable of being moved by the end user. Non-fixed VoIP services are VoIP services that enable the end user to connect a handset or other IP-enabled device to multiple access points. Such services are variously described as “nomadic” or “mobile” VoIP, depending on the degree of functional mobility that the service allows the end user. We use the term “non-fixed VoIP” to refer to the full range of such services, except where referring to comments that specifically discuss nomadic or mobile VoIP. We also note that the term “non-fixed VoIP” does not extend or apply to Commercial Mobile Radio Services that are subject to our wireless E911 rules.

<sup>32</sup> *2019 Order*, 34 FCC Rcd at 6671 para. 176.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

databases with access point location information) is in early stages. Therefore, the Commission adopted rules that require automatic provision of dispatchable location when technically feasible, but also allow non-fixed VoIP providers to fall back on manual updating of Registered Location information by end users as a backstop approach.<sup>33</sup>

*Registered Location.* With regard to Registered Location, the *2019 Order* updated the rules to encourage real-time location of end users through detection of whether an end user has changed location. Under the VoIP 911 rules adopted in 2005, Registered Location is the most recent information obtained by an interconnected VoIP service provider that identifies the physical location of an end user. The *2019 Order* retained the requirement to obtain from the customer, prior to the initiation of service, the Registered Location, at which the service will first be used, and providing end users one or more methods of updating their Registered Location, including at least one option that requires use only of the CPE necessary to access the interconnected VoIP service. The *2019 Order* further required the service provider, in the non-fixed context, to identify whether the service is being used to call 911 from a different location than the Registered Location, and if so, either:

- (i) Prompt the customer to provide a new Registered Location; or
- (ii) Update the Registered Location without requiring additional action by the customer.

If automated dispatchable location, is not technically feasible, VoIP service providers may fall back to registered location or provide alternative location.

*Alternative Location.* The Commission also concluded that it is important to encourage development of alternative approaches, based on the full range of device-based and other available location technologies, that place less burden on the end user than manual updates, and that can often provide more accurate, timely, and reliable location information for VoIP users that move frequently between multiple locations or are at locations they do not regularly visit.<sup>34</sup> Such information may not always be precise enough to identify the caller's dispatchable location, but it can significantly reduce the potential for error or delay that otherwise occurs when a VoIP provider relies solely on Registered Location and uncertainty arises about whether the VoIP user is actually calling from that location. Therefore, the Commission provided non-fixed VoIP providers flexibility to provide alternative location information, including coordinate-based information, from all available sources when providing dispatchable location is not technically feasible. This will provide flexibility for non-fixed VoIP providers to convey an accurate location to the PSAP while minimizing the burdens on the interconnected VoIP service provider and the end user. Therefore, as an alternative to automated dispatchable location or end users' manual updating of Registered Location information,

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<sup>33</sup> *2019 Order*, 34 FCC Rcd at 6672 para. 179.

<sup>34</sup> *2019 Order*, 34 FCC Rcd at 6673-74 paras. 181-182.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

the Commission allowed non-fixed VoIP providers to provide alternative location information, which may be coordinate-based, sufficient to identify the caller's civic address and approximate in-building location, including floor level, in large buildings.

*National Emergency Call Center.* The Commission also clarified that as a last resort, a VoIP provider may route a 911 call to a national emergency call center for the operator to ask the caller about his or her location, so long as the provider has made a good-faith effort to obtain location data from all available alternative location sources.<sup>35</sup>

*Transition period.* The Commission also concluded that the two-year transition period established for non-fixed VoIP is appropriate for implementation of the requirements in the 2019 Order, provides time for development and deployment of improvements in technology that can refine the nomadic VoIP location process, including improvements to location databases and commercially available device-based technologies. Thus, the existing rules adopted in 2005 will remain in effect through January 6, 2021, for fixed devices and January 6, 2022, for non-fixed devices. After those dates, the amended rules adopted in the 2019 Order will become effective, including the modified information collection requirements.

*Outbound-Only Interconnected VoIP.* Consistent with Congress's approach of establishing regulatory parity across technological platforms and enabling the completion of outgoing 911 calls and messages from people in emergency situations, the Commission adopted 911 location requirements for outbound-only interconnected VoIP providers.<sup>36</sup> Similar to non-fixed VoIP, the Commission required outbound-only interconnected VoIP service providers, to provide (1) dispatchable location if feasible, or, otherwise, either (2) manual updating of Registered Location information; or (3) alternative location information sufficient to identify the caller's civic address, floor level, and approximate floor location in large buildings. The Commission required outbound-only interconnected VoIP providers to comply with the 911 requirements under the same two-year timeline as non-fixed VoIP.

Regarding costs, the Commission acknowledged potential technical challenges for outbound-only interconnected VoIP services to automatically send a caller's dispatchable location to a local PSAP during a 911 emergency. As part of its analysis in the *2019 Order*, the Commission considered an upper bound cost of \$275 million, but an extremely unlikely scenario as many outbound-only interconnected VoIP services already have provision for delivering their location. The Commission noted that most smartphone users can already be located automatically without the aid of a third-party technology. The Commission believed that this would apply to other devices with location service capabilities, not just the smartphone. Moreover, data in the record reflected that consumers would enter the dispatchable location into applications. Thus,

<sup>35</sup> *2019 Order*, 34 FCC Rcd at 6674 para. 182.

<sup>36</sup> *2019 Order*, 34 FCC Rcd at 6675 para. 183.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

the Commission concluded, “the costs imposed by this rule are for those consumers who neither have location services available nor enter an address.”<sup>37</sup> Because the upper bound cost presumed there are no location services available today, the Commission concluded “that the total cost would be \$27.5 million (10% of \$275 million).”<sup>38</sup> Furthermore, the Commission stated, “there are a variety of flexible options to provide 911 caller location information depending on the service, such as x-y-z coordinates or manually updated Registered Location, adding support for our finding that costs are likely to be on the lower end as we describe here.”<sup>39</sup>

The Commission also require outbound-only interconnected VoIP service providers to comply with the customer notification requirements of our rules. We require outbound-only interconnected VoIP service providers to comply with the 911 requirements we adopt today two years after the effective date of the rules. Regarding general 911 requirements the Commission extended to outbound-only interconnected VoIP, the Commission envisioned that the costs for consumer notification and record-keeping would also be comparable to the information collection costs applicable to other interconnected VoIP service providers under the Commission’s rules. In sum, the Commission stated that “the record indicates that the costs for outbound-only interconnected service providers to comply with our 911 rules, including dispatchable location, will not differ from the costs to interconnected VoIP providers that our well-established rules already cover and for which we have previously found to have the benefits outweigh the costs.”<sup>40</sup>

In sum, the *2019 Order* retained certain requirements of the *Order* to transmit Automated Location Information (ALI) with each 911 call without modification, namely, updating the ALI database with location information,<sup>41</sup> and maintaining a record of customer notification. The *2019 Order* essentially retained the Registered Location requirement with two important changes: dispatchable location must be automatically generated and, in the non-fixed VoIP context, service providers must detect when a 911 call is made from a location other than the Registered Location, and, if so, prompt the end user to update its location information. However, in some cases, VoIP service may supply alternative location or direct calls to a national emergency call center.

**Implementation of the NET 911 Improvement Act of 2008: Location Information from Owners and Controllers of 911 and E911 Capabilities**

On July 23, 2008, President Bush signed the New and Emerging Technologies

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<sup>37</sup> *2019 Order*, 34 FCC Rcd at 6697 para. 231.

<sup>38</sup> *2019 Order*, 34 FCC Rcd at 6697 para. 231.

<sup>39</sup> *2019 Order*, 34 FCC Rcd at 6697-98 para. 231.

<sup>40</sup> *2019 Order*, 34 FCC Rcd at 6698 para. 232.

<sup>41</sup> The PSAP accesses the updated ALI database to obtain the location information of the 911 caller.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

911 Improvement Act of 2008 (NET 911 Act).<sup>42</sup> Among other things, the NET 911 Act explicitly imposes on each interconnected voice over Internet Protocol (VoIP) provider the obligation to provide 911 and E911 service in accordance with the Commission's existing requirements.<sup>43</sup> In addition, the NET 911 Act directs the Commission to issue regulations by no later than October 21, 2008 that ensure that interconnected VoIP providers have access to any and all capabilities they need to satisfy that requirement.

On October 21, 2008, the Commission released a *Report and Order (2008 Order)*, FCC 08-249, WC Docket No. 08-171, that implements certain key provisions of the NET 911 Act.<sup>44</sup> As relevant here under the Paperwork Reduction Act (PRA), the Commission requires an owner or controller of a capability that can be used for 911 or E911 service to make that capability available to a requesting interconnected VoIP provider under certain circumstances. In particular, an owner or controller of such capability must make it available to a requesting interconnected VoIP provider if that owner or controller either offers that capability to any commercial mobile radio service (CMRS) provider or if that capability is necessary to enable the interconnected VoIP provider to provide 911 or E911 service in compliance with the Commission's rules.<sup>45</sup>

As the design and operation of 911 architectures have developed on a localized basis, there is substantial variation in how these systems are built and operated. Nevertheless, in many locations, the *2008 Order* has the effect of mandating the collection of Automatic Location Information (ALI), as explained in more detail below. In certain locations, the *2008 Order* may also require the collection of other types of information

Statutory authority is contained in 47 U.S.C. §§ 151, 151-154, 152(a), 155(c), 157, 160, 201, 202, 208, 210, 214, 218, 219, 222, 225, 251(e), 255, 301, 302, 303, 307, 308, 309, 310, 316, 319, 332, 403, 405, 605, 610, 615, 615 note, 615a, 615b, 615c, 615a-1, 616, 620, 621, 623, 623 note, 721, and 1471.

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<sup>42</sup> New and Emerging Technologies 911 Improvement Act of 2008, Pub. L. No. 110-283, 122 Stat. 2620 (2008) (NET 911 Act) (amending Wireless Communications and Public Safety Act of 1999, Pub. L. No. 106-81, 113 Stat. 1286 (1999) (Wireless 911 Act)).

<sup>43</sup> See NET 911 Act § 101(2); Wireless 911 Act § 6(a). The Commission regulations imposing 911 and E911 service obligations on interconnected VoIP providers are codified at 47 C.F.R. §§ 9.1 *et seq.* See *IP-Enabled Services*, WC Docket No. 04-36, *E911 Requirements for IP-Enabled Service Providers*, WC Docket No. 05-196, FCC 05-116 (rel. June 3, 2005) (*E911 VoIP Order*) (adopting the regulations under Part 9 of the Commission's rules).

<sup>44</sup> Statutory authority for the Order is contained in sections 1, 4(i), 4(j), 251(e) and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i)-(j), 251(e), 303(r), and section 101 of the NET 911 Act, 122 Stat. 2620.

<sup>45</sup> 47 CFR § 9.12(a).

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

This information collection does affect individuals or households, and thus, there are impacts under the Privacy Act. However:

- (1) The information that is related to individuals or households is collected by a third party, the interconnected VoIP provider;
- (2) The FCC has no direct involvement in the collection of this information on individuals or households;
- (3) Since the FCC has no direct involvement in the collection of this information, the Commission is not required to complete a privacy impact assessment; and
- (4) Further, interconnected VoIP providers generally have written privacy policies governing the treatment of information collected from their subscribers, to include information regarding a customer's Registered Location.

**2. Existing Information Collection (3060-1085)**

A. *Location Registration.* The Registered Location will be used by the interconnected VoIP provider, the entity that operates the Wireline E911 Network, and public safety officials in order:

- (1) To deliver 911 calls to an appropriate emergency answering point and, in many cases,
- (2) To deliver a call back number and location information to emergency call takers to facilitate emergency response.

B. *Provision of ALI.* In order to meet the obligations set forth in the *Order*:

- (1) Interconnected VoIP service providers will place the Registered Location information for their customers into, or make that information available through, ALI databases maintained by local exchange carriers (and, in at least one case, a state government) across the country.
- (2) The ALI will be used by the interconnected VoIP provider, the entity that operates the Wireline E911 Network, and public safety officials in order to deliver 911 calls to an appropriate emergency answering point and, in many cases, deliver a call back number and location information to facilitate emergency response.

C. *Customer Notification.* The Commission requires that VoIP providers perform customer notification to ensure that interconnected VoIP service subscribers are

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

aware of their interconnected VoIP service's actual E911 capabilities and limitations (third party notification requirement).

- D. *Record of Customer Notification.* The Commission requires interconnected VoIP service providers to keep and retain affirmative acknowledgement by every subscriber of the customer notification described above in order to facilitate the Commission's review and, if necessary, enforcement of interconnected VoIP providers' compliance with the rules (recordkeeping requirement).

**Proposed Modification to Information Collection (3060-1085)**

A, Dispatchable Location Requirements

- (1) As noted above, the Commission's *2019 Order* retained the requirements from the Order adopted in 2005. The 2019 Order adopted technologically neutral rules intended to reduce burdens, leverage technology advances, promote flexibility while maintaining continuity with the 2005 rules.
- (2) Fixed iVoIP: On January 6, 2021, Providers of fixed interconnected VoIP services must provide automated dispatchable location with each 911 call.
- (3) Non-Fixed iVoIP: On January 6, 2022, providers of non-fixed interconnected VoIP services and providers of all outbound-only interconnected VoIP services must provide automated dispatchable location if technically feasible. Otherwise, they must provide either Registered Location information or alternative location information that meets the requirements below. As a last resort, providers also may route the caller to a national emergency call center, so long as the provider has made a good-faith effort to obtain location data from all available alternative location sources.
  - a. Registered Location:
    - i. The service provider has obtained from the customer, prior to the initiation of service, the Registered Location (as defined in section 9.3 of the rules) at which the service will first be used;
    - ii. The service provider has provided end users one or more methods of updating their Registered Location, including at least one option that requires use only of the customer premises equipment necessary to access the interconnected VoIP service. Any method used must allow an end user to update the Registered Location at will and in a timely manner; and
    - iii. The service provider must identify whether the service is being used to call 911 from a different location than the Registered

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

Location and, if so, either: (i) prompt the customer to provide a new Registered Location; or (ii) update the Registered Location without requiring additional action by the customer.

- b. Alternative location:
  - i. Alternative location information may be coordinate-based, and it must be sufficient to identify the caller's civic address and approximate in-building location, including floor level, in large buildings.
- c. Customer Notification:
  - i. In the 2019 Order, Commission reduced the existing burden by allowing respondents to provide notice by any conspicuous means and forgo costly warning labels or stickers previously required.

**Existing Information Collection (OMB Control No. 3060-1131).**

*A. Access to the ALI Database*

(1). As stated above, in a previous action in 2005,<sup>46</sup> the Commission required interconnected VoIP providers to collect location information from their customers (reporting requirement) and disclose it to the entities (third party disclosure requirement) that own or control an ALI Database (i.e. OMB Control Number 3060-1085). The *2008 Order* provides that the entities that own or control the ALI Database must make that database available to interconnected VoIP providers.<sup>47</sup> Thus, the obligation to make the ALI Database and other 911 and E911 capabilities available to interconnected VoIP providers mirrors the existing requirement that interconnected VoIP providers have to provide 911 and/or E911 service. They need access to those capabilities to provide the required emergency service. Although the NET 911 Act and the Commission's implementing rules are separate legal requirements, all of the relevant costs of the entities that own or control an ALI Database were previously described in OMB Control Number 3060-1085, Section 9.5, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance.

3. *A. Location Registration.* As discussed above, the *Order* required that:

- (1) Any method utilized must allow an end user to update their Registered Location at will and in a timely manner, including at least one option that requires use only of the customer premises equipment necessary to access the interconnected VoIP service.

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<sup>46</sup> See *E911 VoIP Order*.

<sup>47</sup> If the location information from customers of interconnected VoIP service were not included in the ALI Database, those customers' ability to obtain emergency serviced by dialing 911 would be jeopardized.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

- (2) We anticipate that many interconnected VoIP providers will also allow their customers to update their Registered Location via a webpage.
  - B. *Provision of ALI.*
    - (1) Entities that make information available in or through ALI Databases do so by electronic means.
    - (2) Interconnected VoIP providers will also use electronic means to provide location information via the ALI Database.
  - C. *Customer Notification.* Customer notification may be provided in conjunction with an interconnected VoIP provider's subscription process, which may be conducted electronically.
  - D. *Record of Customer Notification.* The record obtained by an interconnected VoIP provider can be obtained and stored electronically, likely in conjunction with the normal product ordering process usually conducted over via a webpage.
  - E. *Dispatchable Location.* In order to reduce the burden on end users, the *2019 Order* requires the automatic generation of dispatchable location in the fixed VoIP context and, if technically feasible, in the non-fixed context. In the non-fixed context, VoIP providers may also allow their customers to update their Registered Location via a prompt.
  - F. *Access to the ALI Database (OMB Control No. 3060-1131).* Entities that access information available in or through ALI Databases do so by electronic means.
4. None of the information collected as a result of the *Order*, *2008 Order* and *2019 Order* will be duplicative of other information.
  5. The Commission has attempted to balance the economic interests of small businesses with the public's great interest in access to E911 services when using interconnected VoIP services:
    - A. The *Order* discusses how E911 service is critical to our nation's ability to respond to a host of crises and that the public has come to rely on the life-saving benefits of such services in emergency situations.
    - B. While the Commission sought comment on, and considered, ways that the public safety could be protected through access to E911 services that are less burdensome to small businesses than the imposition of E911 obligations, the

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

- Commission concluded that it was important for *all* interconnected VoIP service providers to participate in protecting the public safety.
- C. As the Small Business Administration (SBA) notes, many VoIP providers are likely to be small businesses. The SBA claims that “[t]hese small providers are developing a nascent technology and are especially vulnerable to disproportionate regulatory costs.”
- D. Nevertheless, as discussed in the *Order*, the Commission believes it is reasonable to expect any business electing to interconnect with the PSTN to the extent required to provide interconnected VoIP service also to provide E911 service in order to protect the public interest.
- E. Small businesses may still offer VoIP service without being subject to the rules adopted in the Order by electing not to provide an *interconnected* VoIP service.
- F. (1) The Commission determined that it was necessary to impose E911 obligations on all providers of interconnected VoIP service in order to ensure the ubiquitous availability of E911 service for users of interconnected VoIP service,
- (2) The Commission minimized the burdens of this regulation by, for example, requiring straightforward reporting requirements and by setting reasonable timetables for implementation of the rules adopted in the *Order*.<sup>48</sup>
- G. (1) The Commission minimized the burdens of this regulation by not mandating any particular technical solution.
- (2) Interconnected VoIP providers may connect:
- (i) Directly to the Wireline E911 Network;
- (ii) Indirectly through a third party, such as a competitive local exchange carrier; or
- (iii) Through any other solution that allows a provider to offer E911 service.
- H. In the *2018 Notice*, the Commission specifically sought comment on the costs and burdens any new rules might impose upon small entities and how these costs could be ameliorated. The *2019 Order* adopted rules that are technologically neutral, flexible and include a multi-year compliance timeline for service providers. In the non-fixed context, when automated dispatchable location is not

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<sup>48</sup> See 5 U.S.C. § 603(c).

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

technically feasible, the 2019 Order also affords VoIP providers the option of falling back to Registered Location, Alternative Location or routing calls to a national emergency call center. As a practical matter, the Commission does not anticipate significant deviation from current practices, particularly from small entities as a result of the *2019 Order*. Many interconnected VoIP providers today are successfully delivering E911 calls.

1. Access to ALI Database (3060-1131)
  - (1) In the *NET 911 Notice*, the Commission specifically sought comment on the costs and burdens any new rules might impose upon small entities and how these costs could be ameliorated.
  - (2) In the Commission's regulatory flexibility analysis that accompanied the *2009 Order*, the Commission emphasized that it must assess the interests of small businesses in light of the NET 911 Act's goal of ensuring that interconnected VoIP providers have access to any and all capabilities they need to provide 911 and E911 service.
  - (3). The Commission considered but declined to issue highly detailed rules listing specific capabilities or entities with ownership or control of those capabilities.<sup>49</sup> The Commission recognized that the nation's 911 system varies from locality to locality, and overly specific rules would fail to reflect these local variations, and would thereby place undue burdens on all entities, including any small entities, involved in providing E911 service. Small interconnected VoIP providers and small entities that own or control those capabilities will benefit from the flexibility of the Commission's rules, which, as noted above, will accommodate the local variations as well as the various technologies necessary for 911 and E911 service.
  - (4). As a practical matter, the Commission does not anticipate significant deviation from current practices, particularly from small entities as a result of the *2008 Order*. Many interconnected VoIP providers today are successfully delivering E911 calls to the appropriate emergency answering point.
6. Describe the consequence to Federal program or policy activities if the collection is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

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<sup>49</sup> See *id.* at para. 22.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

There are no consequences to Federal programs or policy activities if the collection is not conducted or is conducted less frequently. The frequency of the collection is determined by the respondents and its customers.

The collection and disclosure of ALI must be conducted on an “as needed” basis in order to ensure that E911 service is available to all customers of interconnected VoIP service.

7. The Record of Customer Notification will be retained by interconnected VoIP providers for periods longer than three years to the extent individuals remain subscribers for longer than three years.
8. Pursuant to 5 CFR 1320.8(d), the Commission published a 60-day notice in the Federal Register on June 24, 2020 (85 FR 37945). No comments were received.
9. Respondents will not receive any payments.
10. A. If applicants want to seek confidential treatment of their filing, they may do so pursuant to 47 CFR § 0.459 of the Commission’s rules.
  - B. With respect to Location Registration, Provision of ALI, Customer Notification, Record of Customer Location and User Notification, the Commission currently does not have rules governing the treatment of such information by interconnected VoIP providers.
  - B. The *2014 Notice*, however, requested comment on whether the Commission’s existing customer proprietary network information (CPNI) or similar requirements should apply to any provider of interconnected VoIP or other IP-enabled services.<sup>50</sup>
  - C. To implement section 222 of the Communications Act, 47 U.S.C. § 222, the Commission’s rules impose a general duty on carriers to protect the privacy of

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<sup>50</sup> Section 222 of the Act prevents telecommunications carriers from disclosing customer proprietary network information (CPNI), including customer location information, without customer approval. 47 U.S.C. § 222(c)(1). The Commission has noted that Congress in the 911 Act provided certain privacy protections related to wireless carriers’ ability automatically to obtain and transmit precise customer location information, and exceptions from those rules for the provision of E911 service. See 911 Act § 5 (amending section 222 by, *inter alia*, adding new sections 47 U.S.C. § 222(d)(4), (f) (concerning CPNI) and 47 U.S.C. § 222(g) (concerning subscriber information)). Also, in redesignating former section 47 U.S.C. § 222(f) as section 47 U.S.C. § 222(h), the 911 Act amended or added definitions. 47 U.S.C. § 222(h)(1)(A), (h)(4)-(7). Interconnected VoIP service providers to date have not been classified as telecommunications carriers under the Act.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

customer proprietary network information and carrier proprietary information from unauthorized disclosure.<sup>51</sup>

D. In the *2008 Order*, the Commission additionally has clarified that the Commission’s “rules contemplate that incumbent LECs and other owners or controllers of 911 or E911 infrastructure will acquire information regarding interconnected VoIP providers and their customers for use in the provision of emergency services. We fully expect that these entities will use this information only for the provision of E911 service. To be clear, no entity may use customer information obtained as a result of the provision of 911 or E911 services for marketing purposes.”

11. This information collection does not address any private matters of a sensitive nature.

12. A. Respondent Burden:

(1) We estimate that there are 1,297 interconnected VoIP service providers.<sup>52</sup> We anticipate that a significant number of smaller interconnected VoIP providers:

(i) Will partner to provide E911 functionality; and/or

(ii) Will outsource the execution of the information collection obligations set forth in the *Order* to third parties, resulting in significant economies of scale.

(iii) As a practical matter, the Commission does not anticipate significant deviation from current practices, particularly from small entities as a result of the *2019 Order*. The 2019 Order retained the requirements from the *Order* with specific changes to leverage technological advances over the last 15 years. Many interconnected VoIP providers today are successfully delivering E911 calls to the appropriate PSAP, under the existing rules, and in many cases, are already delivering automated dispatchable location from fixed devices. For non-fixed environments, when automated dispatchable location is not technically feasible, interconnected VoIP service providers may fall back to Registered Location, Alternative Location or directing calls to a national emergency call center. In sum, interconnected VoIP service providers, consistent with past practice will partner to provide E911 functionality and/or outsource the execution of the

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<sup>51</sup> See generally 47 CFR §§ 64.2001 *et seq.*

<sup>52</sup> See Voice Telephone Services Report: Status as of December 31, 2018 at Table 2, Number of Providers Reporting Voice Subscriptions (Mar. 2020) available at <https://docs.fcc.gov/public/attachments/DOC-362882A1.pdf>.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

information collection obligations set forth in the *2019 Order* to third parties.

(iv) Additionally, in the *2019 Order*, the Commission established a multi-year transition for fixed and non-fixed devices. For fixed devices, the Commission established January 6, 2021 as the effective date of the amended rules. For non-fixed devices, the Commission established January 6, 2022 as the effective date for non-fixed VoIP. The Commission believed that it is appropriate for implementation of the requirements in the *2019 Order*, provides time for development and deployment of improvements in technology that can refine the nomadic VoIP location process, including improvements to location databases and commercially available device-based technologies. Thus, the existing rules adopted in 2005 will remain in effect through January 6, 2021, for fixed devices and January 6, 2022, for non-fixed devices. After those dates, the amended rules adopted in the *2019 Order* will become effective, including the modified information collection requirements.

(2) We therefore calculate the estimated number of interconnected VoIP providers (respondents) for the remaining information collection requirements adopted in the *Order* to be at 12, a number which is smaller than the estimated number of interconnected VoIP providers subject to the *Order* when this IC was submitted to OMB in 2005.

(i) Variable costs have been averaged over the three-year authorized period for the information collection revision.

(ii) Please note that annualized capital and startup costs, which are identified in Item 13, are not included in the figures for this item 12.

(3) For purposes of this modified information collection, we calculate the estimated number of interconnected VoIP service providers (respondents) for implementing the information collection requirements adopted in the *2019 Order* to be at 12, a number which is smaller than the estimated number (1,297) of interconnected VoIP providers. As noted above, the requirements adopted in 2005 have been implemented by interconnected VoIP providers and those requirements will remain in effect through 2022, which is beyond the current expiration date for the existing OMB Control No. 3060-1085. After the amended rules become effective, interconnected VoIP service providers will continue to be subject to many of the requirements adopted in 2005, but will be subject to the amended location rules adopted in the *2019 Order*. In that connection, interconnected VoIP service providers and end users will enjoy greater flexibility and reduced burdens in registering and

updating location information. Specifically, the rules will encourage automated generation of dispatched location as opposed to relying on manual collection and entry of information as well as allowing customer notification by any conspicuous means, thus ultimately reducing estimated hours and cost burdens associated with the existing IC.

*B. Location Registration.*

- (1) Interconnected VoIP providers will be required to obtain a Registered Location for each customer on the date the Order became effective or upon signup of a new customer.
- (2) As discussed in paragraph 12.A.2 above, we calculate the number of interconnected VoIP provider respondents for the Location Registration information collection at 12.
- (3) Interconnected VoIP providers will, in addition, receive from customer's periodic updates of customer Registered Locations on an occasional basis, and will be required to maintain and update the associated databases.
- (4) Although the annual hour burden for each interconnected VoIP provider will vary as a function of the number of subscribers, customer churn, and mobility of customers, we estimate on an industry wide basis that the annual hour burden of obtaining registered locations. The average annualized for 2020 was 27,660 for all 12 interconnected VoIP respondents. (Appendix, A, Items A.1 and A.2.)
- (5) The "in-house" cost to respondents for the hour burden associated with obtaining Registered Locations is estimated, the average annualized cost for the first three years of the registered location information collection is \$1,571,294. (Appendix, A, Items A.1 and A.2).
- (6) The annual burden to customers for providing their Registered Locations depends on the number of registrations, churn plus other changes. The average annual hour burden to customers is 1,443,600 and the average annualized cost to customers for the associated hour burden is \$43,322,436. (Appendix A, Item A3.)

*C. Provision of Automated Location Information (ALI).*

- (1) Interconnected VoIP providers will be required to place Registered Location information for their customers into, or make that information available through, ALI Databases each time a 911 call is made.

- (2) As discussed in paragraph 12.A.2 above, we calculate the number of interconnected VoIP provider respondents for the Provision of ALI information collection at 12.
  - (3) The programming required to ensure such ALI provision is estimated to result in an annual hour burden of 6,000 hours (12 interconnected VoIP providers x 500 hours per response = 6,000 hours). (Appendix A, Item B3.)
  - (4) The “in-house” average annualized cost to respondents for the hour burden for the programming required to ensure the provision of ALI is estimated at \$628,260 per year (Appendix A, Item B.3).
- D. *Customer Notification.* The annual hour and cost burdens of the Customer Notification requirement are incorporated into the figures in Item 12.A (Registered Location) above (Appendix A, Item C).

E. *Record of Customer Notification.*

- (1) Interconnected VoIP providers will be required to obtain and store one record per customer, usually in conjunction with the customer signup process.
- (2) As discussed in paragraph 12.A.2 above, we calculate the number of interconnected VoIP provider respondents for the Record of Customer Notification information collection at 12.
- (3) The annual hour burden for obtaining and storing such record is estimated at 144 hours per year (Appendix A, Item D2)
- (4) The “in-house” average annualized cost to respondents for the hour burden for collection of such records and storage of records is estimated per year: (Appendix A, Item D2) \$15,078.

F. *Dispatchable Location.*

As noted above, the *2019 Order* requires interconnected VoIP providers, including outbound-only interconnected VoIP service providers, to provide automated dispatchable location from fixed devices and, if technically feasible, from non-fixed devices. Over time, the automated generation of location information will reduce costs for interconnected VoIP service providers and end users.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

In the *2018 Notice*, the Commission estimated cost and hours burden of developing any software update necessary to comply with the proposed rules for each interconnected VoIP-related entity, would be \$92,000, the cost of compensating one full-time software engineer for six months of labor. The Commission estimated that the cost of testing these modifications (including integration testing, unit testing, and failure testing), which requires as many as 12 software engineers working for two months, will be \$368,000 for each interconnected VoIP-related entity. The Commission estimated therefore that 12 respondents would require eight months of engineering labor (320 hours) to develop software updates.

For purposes of modifying this information collection, we estimate there are 12 interconnected VoIP service providers. The Commission estimated that interconnected VoIP service providers have worked together or contracted-out services in order to meet the Commission's regulatory requirements, and that 12 organizations in total have served this purpose for thousands of interconnected VoIP service providers.

Total estimated hours burden to implement the dispatchable location requirement will require 3,840 hours ( $320 \text{ hours} \times 12 = 3,840$ ) for fixed devices and non-fixed devices, in software development to meet the January 6, 2021 and January 6, 2022 deadlines.

Total one-time software costs to implement automated dispatchable location for fixed devices by January 6, 2021, and automated dispatchable location for non-fixed devices and non-fixed devices, are estimated to be: **\$5,520,000** ( $\$460,000 \times 12 \text{ respondents} = \$5,520,000$ ).

In cases where automated dispatchable location is not technically feasible by January 6, 2022, for non-fixed devices, we do not have information to estimate whether VoIP service providers will elect to fall-back to Registered Location, Alternative Location or a National Emergency Call Center.

Because the Commission amended the rules to afford service providers the option to supply notification through any conspicuous means, we anticipate that this cost of providing customer notification will also decrease over time.

For outbound-only interconnected VoIP service providers, in the *2019 Order*, the Commission presumed that most of these service providers have enabled 911 location services. Where there are no location services available, the

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

Commission estimated that the total cost would be \$27.5 million to enable 911 location services. However, this incremental cost will be reduced by \$4.19 million because the *2019 Order* removes the requirement for costly warning labels or stickers. Thus, for purposes of this information collection, we estimate an additional \$23,310,000 in costs to enable 911 location services.

**Total Respondents: 12 respondents**

**Total Responses: 12 responses (one-time software costs)**

**Total Annual Burden Hours: 3,840 hours**

**Total In-House Costs to the Respondent: \$5,520,000 + \$23,310,000 = \$28,830,000.** The Commission already has accounted for the cost burden of complying with the existing requirements which will remain in effect through January 6, 2022. The one-time software developing costs for updating systems that enable interconnected VoIP providers to obtain automated dispatchable location capabilities from respondents, give rise to the modified information collection, under OMB Control No. 3060-1085. To the extent that automated dispatchable location is not technically feasible, interconnected VoIP service providers may fall back to Registered Location or Alternative Location Information. We estimate that the one-time costs of developing software to enable detection of when a non-fixed move or the transmission of geodetic information, for purposes of this revised collection to be \$5,520,000. Additionally, we anticipate that routing calls to a National Emergency Call Center would significantly decrease costs associated with this information collection. For purposes of this collection, and to avoid double-counting these burdens, we therefore estimate respondents have zero costs associated with the present collection and the incremental cost burden will be \$28,830,000 to develop software updates for 1,297 estimated interconnected VoIP service providers, including outbound-only interconnected VoIP service providers.

*G. Total burden hours and costs (3060-1085)*

(1) The total in-house burden hours and costs to interconnected VoIP respondents and consumers is **1,481,244 hours** [27,660 + 1,443,600 + 6,000 + 144 + 3,840] and **\$74,367,068** [\$1,571,294 + \$43,322,436 + \$628,260 + \$15,078 + \$28,830,000].

(2) Total Number of Respondents: 12 (interconnected VoIP services providers)

(3) Number of Responses:

A. Location Registration: Registrations x percent requiring handling  
(Appendix A, notes 2 and 10) plus registrations (Appendix A, note 2) 16,200,400

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

B. Provision of Automated Location Information (ALI): Each provider must make ALI available to or through ALI databases	12
C. Customer Notification: (Included in A above, see Appendix A, Item C)	0
D. Record of Customer Notification (Each provider must maintain records)	12
E. Dispatchable Location	12
Total Number of Responses:	<b>16,200,436</b>

*H. Total burden hours and costs (3060-1131)*

*Respondent Burdens.* The Commission is not currently aware of any existing data or information regarding the number of entities that will be impacted by the information collection obligations set forth in the *2008 Order*. The Commission has estimated there to be 12 interconnected VoIP providers respondents for the information collected in 3060-1085. Interconnected VoIP providers in most circumstances provide E911 service by partnering with a traditional telecommunications carrier or through outsourcing rather than by obtaining 911 and E911 capabilities directly. Consequently, we estimate that each interconnected VoIP provider identified above will collect and disclose information subject to the Paperwork Reduction Act to no more than 5 respondents, including those who own or control an ALI Database.

The Commission estimates the following:

5 interconnected VoIP providers (respondents) x 12 entities (who own or control a relevant 911 or E911 capability) = 60 respondents.

We are not aware of any significant respondent burdens associated with the present collection. We anticipate that the obligations in the *Order* would be triggered only if a respondent had already constructed and was operating a relevant 911 or E911 capability. Consequently, we assume that all 60 respondents have existing 911 or E911 capabilities that they are operating and making available to other providers of telephone service. Due to the limited amount of information being collected, and its use in the routing of 911 calls and services provided to emergency call takers, we believe respondents will use their existing processes to collect the information at issue in this analysis. Due to the existing, routine, and largely automated nature of the present data collection, we estimate the information collection obligations in the *Order* impose approximately a 5 minute burden per respondent.

60 respondents x 0.0833 hours (5 minutes) per respondent = 5 total annual burden hours.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

**Total Respondents: 60 respondents**

**Total Responses: 60 responses**

**Total Annual Burden Hours: 5 hours**

**Total In-House Costs to the Respondent: None.** The Commission already has accounted for the cost burden of designing the systems that enable interconnected VoIP providers to obtain 911 and E911 capabilities from respondents, which give rise to the present information collection, under OMB Control No. 3060-1085. To avoid double-counting these burdens, we therefore estimate respondents have zero costs associated with the present collection.

**Cumulative totals (3060-1085 and 3060-1131)**

**Total Respondents: 72 responses (12 + 60)**

**Total Responses: 16,200,496 responses (16,200,436 + 60)**

**Total Annual Burden Hours: 1,481,249 hours (1,481,244 + 5)**

13. A. The total annualized capital and start-up costs are estimated to include:

(1) The annual equipment cost of VoIP gateway routers (Appendix A, Item B1):  
\$3,750,000

B. Total operation and maintenance and purchase of services costs are estimated to include:

(1) Payments for connections between gateway routers and ILEC selective routers (Appendix A, Item B2): \$3,540,000

(2) Payments to ILECs (Appendix A Item B4): \$231,600,000

(3) Cost of storing electronic customer certifications (included in 12.E4 above)

C. Regarding the proposed modification to the IC under OMB Control No. 3060-1085, the Commission already has accounted for the outside software development costs to the respondents above.

D. Regarding access to the ALI Database under OMB Control No. 3060-1131, there are no outside costs to the respondent. The Commission already has accounted for the outside costs to the respondent under OMB Control No. 3060-1085, Section 9.5, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008: Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

**Total annualized capital and start-up costs:        \$238,890,000 [\$3,750,000 + \$3,540,000 + \$231,600,000]**

14. Cost to the Federal Government: Minimal. The only requirements in this information collection are third party requirements and recordkeeping requirements. There will be minimal Commission review. Only if the Commission is queried or if someone files a complaint, the Commission will use a GS-13/Step 5 staff attorney in the Washington, DC area at \$55.75 per hour to review the complaint or query that is filed, each requiring approximately 10 minutes to review.<sup>53</sup>

$$12 \text{ responses} \times 0.166 \text{ hours/response} \times \$55.75/\text{hour} = \$111$$

15. The Commission is reporting adjustments to this collection from the last submission to OMB. The total annual responses, total annual burden hours and total annual cost increased as result of a regulatory changes in VoIP 911 requirements and merging OMB Control No. 3060-1131 with updated OMB Control No. 3060-1085. The use of VoIP technology has grown rapidly and it increasingly is used to provide voice telephone service.<sup>54</sup> The Commission anticipates that as service providers leverage new technology, previous burden estimates will be reduced.

There no program changes to this collection.

16. The data will not be published for statistical use.

17. The Commission is not requesting to “display” the OMB expiration date for this information collection because this IC contains recordkeeping and third-party requirements. The information collected will be functionally incorporated into a telephone system switch that is a component of 911 and E911 provisioning systems. In addition, there are no FCC forms associated with this information collection. Therefore, it is not feasible to display on an FCC form or in the 911 and E911 provisioning system the expiration date for OMB approval of the information collection. However, the Commission publishes a list of all OMB-approved information collections in 47 CFR 0.408 of the Commission’s rules.

18. There are no exceptions to the Certification Statement.

**B. Collections of Information Employing Statistical Methods:**

<sup>53</sup> [https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2020/DCB\\_h.pdf](https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/salary-tables/pdf/2020/DCB_h.pdf).

<sup>54</sup> See Voice Telephone Services: Status as of June 30, 2016 Industry Analysis and Technology Division Wireline Competition Bureau April 2017, [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-344500A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-344500A1.pdf) at 1.

**Section 9.11, Interconnected Voice Over Internet Protocol (VoIP) E911 Compliance; Section 9.12, Implementation of the NET 911: Improvement Act of 2008:  
Location Information From Owners and Controllers of 911 and E911 Capabilities**

**3060-1085  
September 2020**

This information collection does not employ any statistical methods.