

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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| In the Matter of |) | |
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| Wireless E911 Location Accuracy Requirements |) | PS Docket No. 07-114 |
| |) | |
| E911 Requirements for IP-Enabled Service Providers |) | WC Docket No. 05-196 |
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COMMENTS OF YMAX CORPORATION

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YMax Corporation (“YMax”), through its attorneys, hereby respectfully submits its Comments in response to the Federal Communications Commission’s (“Commission” or “FCC”) Further Notice of Proposed Rulemaking in the above-captioned proceedings.¹ YMax’s comments focus specifically on the issues posed by the Commission with respect to “what advanced technologies, if any, permit portable interconnected Voice over Internet Protocol (‘VoIP’) service providers to provide automatic location information (‘ALI’).”² YMax supports the efforts by the FCC and interested stakeholders to enhance the functioning of the public safety E911 systems and improve the ability of VoIP customers to connect with public safety answering points (“PSAPs”) and provide them with necessary location information. YMax believes that the Commission should require interconnected VoIP providers to provide ALI. Indeed, as YMax has detailed in previous filings in this rulemaking proceeding, YMax has developed a technology

¹ See *Wireless E911 Location Accuracy Requirements; E911 Requirements for IP-Enabled Serv. Providers*, PS Dkt No. 07-114 & WC Dkt No. 05-196, Further Notice of Proposed Rulemaking and Notice of Inquiry, FCC 10-177 (rel. Sept. 23, 2010) (“FNPRM”).

² *Id.* ¶ 29.

to enable interconnected VoIP providers to deliver ALI with 911 calls placed by nomadic callers.³

Procedural Background

In 2005, the Commission imposed E911 obligations on interconnected VoIP service providers that were tied to an interconnected VoIP caller's "registered location."⁴ The FCC encouraged nomadic VoIP providers to find new solutions that would provide location information automatically without requiring action on the part of the customer. In 2007, the Commission launched this proceeding to examine technology advancements that would allow the FCC to strengthen its E911 location accuracy and reliability requirements for interconnected VoIP service providers.⁵ On September 23, 2010, the Commission released a Further Notice of Proposed Rulemaking and Notice of Inquiry to update the record relating to E911 location accuracy requirements applicable to interconnected VoIP providers. Among other things, the FCC is inquiring what it can do "to facilitate the development of techniques for automatically identifying the geographic location of users of" portable interconnected VoIP services.⁶

About YMax and Its magicJack[®] Device

Through its magicJack subsidiary, YMax sells the magicJack[®] device, which plugs into the USB port of a desktop or laptop computer. With licensed software, customers can then

³ See *Wireless E911 Location Accuracy Requirements*, PS Dkt No. 07-114, Reply Comments of YMax Corp. (filed Sept. 18, 2007); Comments (filed Aug. 20, 2007); see also Presentation, YMax Corp., magicJack VoIP E911 Automatic Location Information ("ALI") Technology Solution (filed May 12, 2009 & Mar. 25, 2008).

⁴ See *IP-Enabled Servs.; E911 Requirements for IP-Enabled Servs. Providers*, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd. 10245 (2005), *aff'd Nuvio Corp. v. FCC*, 473 F.3d 302 (D.C. Cir. 2006); see 47 C.F.R. § 9.5(d).

⁵ See *Wireless E911 Location Accuracy Requirements*, Notice of Proposed Rulemaking, 22 FCC Rcd. 10609, 10615-16, ¶ 18 (2007).

⁶ *FNPRM* ¶ 29.

subscribe to various VoIP services. Any standard telephone can be plugged into the telephone jack on the magicJack device. Using the Internet (including a cable modem, DSL, Wi-Fi or other system), customers are able to call other magicJack devices wherever located, any PSTN-connected telephone as well as customers of other VoIP services. The magicJack device also enables customers to receive calls from any other magicJack device, PSTN-connected telephone and other VoIP services. In addition, the magicJack device enables such features as voicemail, three-way calling, call forwarding and portable contact lists and call logs.

Among many other benefits, the magicJack device provides consumers with significant flexibility. Customers may use their magicJack device either to make calls from their homes while plugged into their home computer with a broadband connection, or from any computer, including laptops, wherever located. While this flexibility provides great convenience to YMax's customers, as the Commission has acknowledged, the nomadic nature of such services raises serious concerns regarding the provision of E911 service.

magicJack E911 ALI Solution

In prior filings, YMax has explained its technology solution to provide ALI capabilities for VoIP service providers. Specifically, YMax has developed a next-generation magicJack that can incorporate a GSM cellular transceiver into the device, which is triggered when a customer dials "911". In the event a 911 call is placed, the magicJack can perform location calculations and network comparisons in order to determine whether it is more effective to transmit the emergency call over a broadband connection or a GSM network. For instance, when the calculated location of the caller is in close proximity to the customer's current or alternate registered location, the call might be sent via the customer's broadband connection. However, should the calculated location differ from the customer's registered locations, or if there is no

Internet connection or ALI databases have not yet been updated, the call can be sent via a GSM network.

When the call is sent via the GSM cellular transceiver, the local CMRS system will identify it as a typical 911 call from a device not registered to one of its customers. The CMRS provider is then required by existing Commission rules to route the call, including the location information that it obtains for all other 911 calls, to the appropriate PSAP.⁷ The call will be displayed to the local PSAP as a non-service initialized call with network-based location data.⁸ The next-generation magicJack also will be able to supplement the CMRS network's location information with magicJack's own calculated location and the customer's registered location(s), which could include apartment numbers, room numbers and/or floors. By transmitting such registered location along with the CMRS network's location data, YMax's ALI solution can provide PSAPs with information on the vertical location of emergency callers that would not currently be included in ALI transmitted by CMRS networks.

YMax has developed additional capabilities to enhance its ALI solution for nomadic interconnected VoIP service providers. These include performing location calculations and comparisons to the customer's registered locations in order to notify a customer if a registered location does not match within a certain distance of the calculated location. Specifically, when the next-generation magicJack device is turned on and periodically thereafter, the device can scan through all GSM frequencies and obtain information for all GSM transmitters in the area.

⁷ 47 C.F.R. § 20.18(d) (requiring CMRS providers to provide telephone number and location information for 911 calls from any mobile handset accessing their systems).

⁸ The current practice for non-service initialized cellular calls allows transmission to the PSAP of 10 digits, with 911 being the first three digits. magicJack can transmit a seven-digit serial number that is dynamically mapped to a caller's standard 10-digit VoIP call back number. Alternatively, the current practice can be changed to allow for transmission of the VoIP caller's full phone number.

Based on the tower locations and signal strengths, the magicJack device can perform location calculations and comparisons to the registered locations. If one of the customer's registered locations does not match the calculated location within a certain distance, magicJack will send a notice to the customer to update his or her address for 911 purposes, including to add or update a registered address with additional information about the customer's vertical location within a building, which then could be delivered to the PSAP along with ALI sent with the call. The next-generation magicJack also is able to send maps and calculated locations to assist customers in updating their location information in those instances where they might be unsure of their location. The magicJack also is capable of calculating location using both GSM and Wi-Fi networks, where available, or other signals to further enhance accuracy.

YMax has a fully functional prototype of this ALI solution that successfully has completed test calls to PSAPs. This ALI solution has been demonstrated to the FCC, representatives of the public safety community and a focus group of PSAPs from around the country.

While YMax has spent significant time over the last several years to develop this technology,⁹ implementation of this patent pending capability does not require a magicJack device or even a USB port. This technology could be implemented by building the capability into a laptop, VoIP handset or cordless base unit, analog telephone adapter ("ATA") or otherwise. YMax understands the importance of distributing advancements in emergency calling capabilities as broadly as possible, especially for consumers of nomadic VoIP services. Thus, in accordance with the Commission's patent policy and numerous Commission proceedings dealing

⁹ YMax has a series of patent applications pending with the U.S. Patent & Trademark Office and internationally.

with the use of patented technologies,¹⁰ YMax will license the use of its technology to other nomadic VoIP providers on reasonable, non-discriminatory terms and conditions.

Conclusion

As more and more consumers take advantage of the benefits of nomadic VoIP services, the time has come for the Commission to take the next step to ensure that PSAPs now start to receive ALI to respond most effectively when nomadic VoIP users make emergency calls. While there has been much discussion of various hypothetical technological solutions in some distant future, the record in this proceeding to date has made clear that there is one ALI technology – the solution developed by YMax and already demonstrated to the FCC and to the PSAP community – that today would enable nomadic VoIP service providers to deliver reliable location information to the PSAP even if the caller has not registered his or her current location or the registered location has not yet been updated. With YMax’s ALI technology solution, the

¹⁰ See *Revised Patent Procedures of the Fed. Commc’ns Comm’n*, Public Notice, 3 F.C.C.2d 1, App. B (1966); see also, e.g., *Digital Audio Broad. Sys. & Their Impact on the Terrestrial Radio Broad. Serv.*, Further Notice of Proposed Rulemaking and Notice of Inquiry, 19 FCC Rcd. 7505, 7527, ¶ 57 (2004) (examining whether iBiquity was entering into licensing agreements for its IBOC system for digital radio “under reasonable terms and conditions that are demonstrably free of unfair discrimination.”).

Commission has the ability to ensure that consumers of VoIP services begin now to receive the benefits of ALI, including location accuracy, should they make an emergency call.

Respectfully submitted,

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