

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

In the Matter of)	
)	PS Docket No. 10-255
Public Notice Seeking Comment on)	CC Docket No. 94-102
Multi-Line Telephone Systems Pursuant)	WC Docket No. 05-196
to the Next Generation 911 Advancement Act)	PS Docket No. 07-114

To: Public Safety and Homeland Security Bureau

COMMENTS OF THE VOICE ON THE NET COALITION

The Voice on the Net Coalition (VON)¹ hereby submits these comments in response to the above-referenced Public Notice,² which itself is in response to legislation directing the Commission to seek comment on the feasibility of Multi-Line Telephone Systems (“MLTSs”) to provide the precise location of a 911 caller.³ These comments highlight the limitations of MLTSs in providing the precise location of a 911 caller, particularly in a wireless environment, which is common for many users on a campus or in an enterprise setting. These wireless environments include Wide-Area Networks, cordless phones (such as [DECT] handsets), and enterprise Wi-Fi networks on which VoIP applications can be used on a variety of devices. These limitations make it impractical to apply blanket 911 requirements for all MLTS.

¹ The VON Coalition works to advance regulatory policies that enable Americans to take advantage of the promise and potential of IP enabled communications. Its members – including AT&T, Broadvox, BT, Google, iBasis, Microsoft, Nextiva, Skype, T-Mobile, Vonage, and Yahoo – are developing and delivering voice and other communications applications that may be used over the Internet. The VON Coalition has participated actively in various 911-related proceedings at the Commission. See, Reply Comments of the Voice on the Net Coalition, PS Docket 11-153 (filed Feb. 9, 2012); Comments of the Voice on the Net Coalition, GN Docket 11-117 (filed October 3, 2011).

² DA 12-798 (May 21, 2012).

³ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96 (2012), Title VI, Subtitle E (Next Generation 911 Advancement Act).

Discussion

Although many MLTS products and systems today can accurately locate a caller and transmit a caller's location, those capabilities are only available when (a) the caller's communications device is plugged into a fixed location, and (b) that fixed location has been logged into a database on which the MLTS relies for transmitting location information in an emergency situation. When callers are using VoIP-based communications tools in a wireless or nomadic environment, the ability to provide location information and the accuracy of that information is often limited.

One problem is that, while the MLTS may allow for the pre-programming of a location for each wireless user, the location that is provided for the nomadic user may be inapplicable at the time of a 911 call. Similarly, while some systems provide corporate customers the ability to register the location of each Wi-Fi hotspot on campus in a database, even these systems are limited, inasmuch as the accuracy of locating a device on an indoor wireless access point is often unreliable today. Devices often do not connect to the Wi-Fi hotspot that is nearest to the caller's location. For example, a device can easily connect to an access point on the floor above or below the caller. Additionally, devices may not connect to the nearest access point due to the construction of the particular building from which the call is made, e.g., the significant amount of metal/pipes in an office bathroom can block a device's ability to connect to a hot spot that may be just feet away. Similarly, the impacts of glass, concrete and other building materials can unexpectedly impact a device's ability to connect to a particular access point. These indoor accuracy challenges are further exacerbated when the caller is in a multi-story building. Assessing the "z" coordinate to determine the likely floor from which the call was made today is in the nascent stages and could be misleading since devices very often connect to access points

above or below them (in some cases, e.g., a large indoor atrium, significantly above or below them).

In addition to these location accuracy challenges, the expense of maintaining a database to support the location of each access point (as well as the overhead associated with ensuring the database is constantly up to date as access points are added, deleted and moved) on a campus environment *and* the cost of working with a 911 vendor to support the transmission of the access point's location information to the correct PSAP can be significant for an organization implementing a wireless/nomadic VoIP capability on their MLTS. This expense is exponentially increased as the location accuracy requirements are tightened.

Moreover, even if a customer chooses to make this investment at its campus or corporate setting, the location capabilities will not extend beyond that campus or corporate environment. As soon as the user chooses to take his/her device to the local coffee shop (or, perhaps, to another city or state while on vacation or a business trip), there is no ability to locate the caller or transmit real-time location information to the PSAP. Although there are commercially available "Location Based Services" that help users find such places as movie theaters and restaurants, these services have not been designed for, and thus are not suitable for, locating callers in an emergency. In the context of commercially-available "location based services," inaccuracies are likely to arise because these services rely on information collected informally that is not regularly updated and maintained. These location based services, moreover, have not been designed to warrant location for purposes of emergency calling.

The limitations noted here are precisely the kind that the National Emergency Number Association recognized in its "NENA Technical Requirements Document on Model Legislation E9-1-1 for Multi-Line Telephone Systems" when it noted that "wireless voice devices connected

to MLTS may present challenges with providing an accurate location to the PSAP from where the call originated or to identify the movement of the caller due to the technology commonly available today.’’⁴

Conclusion

While over time there has been marked improvement in the location and reporting capabilities of many wireline and fixed MLTS, many significant challenges remain in the wireless environment that should be taken into account in developing the appropriate regulatory policy.

Respectfully submitted,

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⁴ See http://www.nena.org/resource/collection/C9292FAF-6B47-4CEB-83D1-3982DBE77186/NENA_06-750_v3_MLTS_Model_Legislation.pdf, at p. 6.