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Patrick Donovan
Federal Communications Commission
Public Safety and Homeland Security Bureau
445 12th Street, S.W.
Washington D.C. 20554

**Re: Wireless E911 Location Accuracy Requirements, PS Docket No. 07-114
E911 Requirements for IP-Enabled Providers, WC Docket No. 05-196
Framework for Next Generation 911 Deployment, PS Docket No. 10-255**

Dear Mr. Donovan:

On April 4, 2011, you provided NCTA with a series of questions regarding technical issues in the above-listed proceedings. Here are our written responses to those questions.

Location Information

First, you asked for our opinion on location configuration protocols that have been standardized by standards development organizations. Specifically, you are interested in ascertaining the technical feasibility of an end user customer obtaining his or her location information from a broadband provider. Assuming that provision of such location information by broadband providers is feasible, you ask about the costs associated with providing this information.

Compliance with the IETF's HTTP Enabled Location Delivery (HELD) and Dynamic Host Configuration Protocol (DHCP) standards is not currently feasible and would require significant and costly replacement and upgrades of subscriber-owned facilities, including home routers, consumer electronic devices, and corresponding applications. Additional costly and extensive upgrades of provider facilities also would be required.

Currently there are technical challenges that affect a broadband provider's ability to generate or transmit network-based auto-location information. Although the HELD and DHCP standards address the transmission of location information once it is obtained, they do not address how to acquire the location information. These standards rely on the ability of a consumer's home router to retrieve location information from a Location Information Server (LIS).¹ Existing home routers currently do not have this capability.

¹ See *Discovering the Local Location Information Server (LIS)*, IETF RFC 5986, § 2.1, <http://tools.ietf.org/html/rfc5986#section-2.1> (last visited May 11, 2011) ("If the residential gateway does not provide the appropriate information to the Devices it serves, those Devices are unable to discover a LIS.")

The standards further assume that customer home addresses are stored in DHCP servers, but this is not the case in cable operators' networks. It would be extremely costly for providers to upgrade their servers to enable storage of consumer addresses. Absent these upgrades to enable automatic location information retrieval (assuming customer equipment were developed and deployed to access it), cable operators would have to engage in a manual process of linking IP addresses with network nodes. But such a manual method, in addition to being time consuming and costly to administer, would not necessarily yield accurate location information. Cable operators may assign IP ranges to upstream paths or fiber nodes, and may combine fiber nodes. Rather than linking a single IP address to a specific physical address, this would identify only a range of IP addresses linked to a group of 200-500 households served by that node or nodes.

IP-Based 911

You also asked about transitioning voice over Internet protocol (VoIP) services provided by cable providers to an IP-based next generation 911 system. You wanted to know if we think such a transition would be beneficial, and, if so, what can be done to ease this transition. You also asked about the costs for cable VoIP providers of transitioning to an IP-based next generation 911 network.

We believe that such a transition ultimately would be beneficial. Some of the challenges to be overcome include coordinating the transition among the multiple Public Safety Answering Points (PSAPs) throughout the country, and ensuring that the transition happens on a uniform scale. It would be expensive and complicated for providers and PSAPs to operate both the existing 911 and a new IP-based 911 system for an extended period of time. To ensure a smooth transition for consumers, PSAPs, and providers, the Commission should adopt reasonable timeframes and guidelines that would apply to all entities involved in the process of converting to an IP-based 911 system.

While NCTA and its member companies wholeheartedly support the goal of enhanced 911 services for our customers, the Commission must ensure that it does not impose requirements that are technically infeasible and/or prohibitively expensive to implement. We appreciate the Bureau's efforts to fully understand these issues and to facilitate the transition of the 911 system to an IP-based next generation network. If you have any further questions please do not hesitate to contact me.

Respectfully submitted,

/s/ Rick Chessen

Rick Chessen

cc: D. Furth
H. Schulzrinne