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January 14, 2014

Ex parte
VIA ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission 445 12th Street, SW
Washington, DC 20554

Re: LEGAL AND STATUTORY FRAMEWORK FOR NEXT GENERATION 9-1-1 SERVICES PURSUANT TO THE NEXT GENERATION 9-1-1 ADVANCEMENT ACT OF 2012, PS Docket No. 12-333

Dear Ms. Dortch:

On Friday January 10th, I met with Commissioner Ajit Pai, and Staff members Matthew Berry, Nicholas Degani and Jeffrey Neumann, to discuss the technical and operational challenges of MLTS/PBX telecommunications systems accessing the Public Switched Telephone Network through dialing 9-1-1 directly as well as with a Trunk Access Code (TAC), which in many systems is the digit 9.

We briefly discussed the recent tragic incident that occurred on December 1, 2013 in a hotel in Marshall, Texas that has gained national attention when the nine-year-old daughter of Kari Hunt tried to dial 9-1-1 from their hotel room phone while she watched the brutal murder of her mother. Not understanding that a TAC of "9" was required, the call never completed.¹

The national media attention that this incident has received, in addition to the change.org petition² raised by Kari's father, Hank Hunt, prompted my open letter to FCC Chairman Wheeler³ on December 27, and my subsequent meeting with Commissioner Pai and his staff.

Discussed, were some of the technical requirements requiring a trunk access code on MLTS/PBX systems decades ago, where the TAC would connect you to outside dialtone. Today, modern communications systems have evolved with the use of a "dial plan" that collects and processes all digits dialed by the user, and then makes a routing decision. This can effectively remove the need for a TAC from the environment for some or all external access, and allows the use of the digit 9,

¹ <http://bigstory.ap.org/article/dial-9-911-hotel-death-prompts-petition>

² <http://change.org/karislaw>

³ <http://www.avaya.com/blogs/archives/2013/12/pbx-e911---open-letter-to-the-fcc.html>

and the subsequent direct recognition of the digits 9-1-1. This functionality is available on most systems produced in the last decade, and should not pose any substantial burden on MLTS/PBX owners and operators to implement.

There was some discussion regarding the digits 9-1-1 conflicting with any normal dialing patterns that a user may dial on a multiline telephone system, and it was agreed that the current North American Numbering Plan would not conflict in any way, as 9-1-1 is not a valid local exchange prefix or area code in the US. The digits 0-1-1, however, are the US prefix for international calls, and are often the source of many unintentional mis-dialed calls to 9-1-1.⁴

MLTS manufacturers have become very aware of these issues over the past several years, and have responded by developing embedded software, allowing administrators to capture and filter these dialing sequences, detecting these errors and blocking call termination. This is accomplished by the simple logic of recognizing that 9-1-1 is an emergency call, and should be put through immediately, while 9-1-1 plus any additional digits is a potential misdial, therefore provide alternate handling, yet alert local administrative staff to the incident so that any real 9-1-1 event could be captured and manually handled, while preventing an overburdening amount of false 9-1-1 calls to public safety.⁵

The question was raised on why, if this was such a simple fix, that MLTS system administrators have not addressed the problem. Based on my personal observations spanning nearly 3 decades within the industry, three primary blocking factors continuously emerge;

EDUCATION

If MLTS PBX administrators were more aware of the problem, and were guided by promulgated industry best practices and established standards, many would implement basic functionality that would provide better situational awareness to emergent situations in their facility. Unfortunately, there is a lack of standards and statutory mandates, leading directly to the second contributing factor;

LEGISLATION

There currently is a lack of consistent legislation across the US. Several times a week I am asked, "What is the law?" This question is asked by system administrators, installers, and salespeople across the industry. The fact of the matter is that there are only 18 States⁶ that have legislation for MLTS, and that legislation varies greatly. Primarily it's focused on the granularity of reporting the calling location to the Public Safety Answer Point (PSAP). What is often misunderstood, is the granularity requirement of location reporting at the individual station level. Specifically in a hotel for example, it is common belief that if I am in room 426, the PSAP requires that room information, which at first glance sounds very reasonable. However, in reality, first responders need to arrive at the facility before that specific information becomes relevant. Knowing that caller in distress is located in room 426, does not get emergency services to the building street

⁴ http://www.911dispatch.com/911/911_misdials.html

⁵ <http://www.avaya.com/blogs/archives/2012/11/eliminating-911-misdials-in-your-mltspb.html>

⁶ See Appendix A

address any quicker. However, by the simultaneous alerting of internal staff that a 9-1-1 call has taken place, and from exactly where, proactive steps can be initiated by local on-site individuals during the period waiting for public safety to arrive on scene. When help does arrive, detailed direction can be provided immediately to the emergency responder eliminating confusion normally experienced after arrival.

Based on this, a more efficient and cost-effective solution would be to provide building or zone level information, as recommended by the NENA MLTS model legislation⁷ to the 9-1-1 center removing the burden of maintaining the Automatic Location Information (ALI) database, eliminating the monthly expense of a dedicated telephone number in each unit, as well as the need for the overall management solution, which contributes significantly to the base price of these solutions.

The complexity and expense of a solution to provide station level detail to the PSAP, weighed against the value that this would provide to public safety, forms a considerable delta.

COST

As noted previously, legacy solutions that were developed over a decade ago were complex and matched user locations with telephone numbers as they existed in the ALI database. With the fact that, in commercial MLTS systems, telephone numbers may no longer correlate to locations, and specifically, hotel units often do not provide individual telephone numbers for rooms in most locations; therefore these legacy management solutions are of little value in correcting the problem within smaller facilities like hotels where the endpoints are in fixed locations. Device mobility is not a primary concern in these environments and the inherent emergency call feature often provides a sufficient level of functionality at minimal incremental costs, if any.

As proof points of the ease and ability to activate this functionality in most modern systems, several hotels have taken action themselves, and have made service request calls to their vendors which have fixed the issues⁸. Additionally, I am happy to report that a mid-sized distributor in New England has reached out to me after hearing of the issue. TelServ of Cromwell, CT is initiating a program AT NO COST for their maintenance customers to implement the basic emergency services functionality outlined in my letter to Chairman Wheeler³ and reiterated below.

Admittedly, the needs of a commercial MLTS are certainly more complex and may require more advanced solutions, however we cannot let that fact delay preliminary mandates that would apply across the board as the following basic capabilities are applicable to any solution:

Access to 9-1-1 from any device

NENA promotes 9-1-1 as "one number, any device, anywhere". Ty Wooten, NENA's Education Director states that "The brand knowledge of 9-1-1 is one of the highest in the world. When you

⁷ http://www.nena.org/?page=MLTS_PBX

⁸ <http://www.kltv.com/story/24359759/karis-petition-hotels-upgrading-911-software-following-marshall-murder>

put anything or do anything that requires someone to do something other than dialing 9-1-1, it lends itself to potential problems."⁹

Localized Alerting

Providing discrete information about the 9-1-1 event to local personnel is a key to increasing localized situational awareness of an emergent condition. Local staff is aware that a problem exists, and can assist as a Good Samaritan responder, while public safety resources are in route to a location. When public safety arrives they can respond to a designated meeting point where they will be given further information. Larger facilities such as college campuses can even set up a two-way hotline functionality with the local PSAP to share information during the response time. Critical information can be conveyed between the local establishment and responding agency without impeding, or intercepting the actual 9-1-1 call path.

Call connections to the PSTN Emergency network

It is becoming a common and alarming practice for PBX administrators to intercept and locally terminate calls to 9-1-1 at internal stations, allegedly in an attempt to provide better service. What is often not realized by these administrators is that this alarming practice actually may put a caller with an emergency in the hands of an untrained employee. 9-1-1 centers are staffed by certified Emergency Medical Dispatchers (EMD's) who are specifically trained to handle emergent situations. Examining a typical 9-1-1 call taker workstation, you will find Protocol Cards. These cards are specifically designed to instruct the call taker on specific procedures to follow for a multitude of police situations the caller may have, as well as procedures for fire and medical emergencies.

While they are verbally assisting the caller over the phone, calls can be entered into the Computer Aided Dispatch (CAD), and sent out for dispatch. These first few moments on the phone are critical to the call taker, as this is their opportunity to gather pertinent information that is useful to first responders. When calls are answered internally and then transferred to 9-1-1 from a front desk or security operator who has intercepted the call, precious seconds are lost.

Specialized procedures may not be known, understood or followed. Internally, the answer position is the front desk of the hotel where there often is no backup for the local on-site responder. In the event of a situation generating multiple calls, this procedure could significantly interfere and delay the emergency call handling. While rare cases may exist where a commercial enterprise may be suited to answer 9-1-1 calls, the general public must be afforded the same level of service they would receive from a normal residential telephone line.

If a commercial entity were able to demonstrate their ability to answer and respond to emergency calls, and committed the appropriate staff and resources, then, upon approval by local public safety, there may be good reason to grant them this ability. Doing so without oversight and promulgation by an appropriate agency may place users in further peril.

⁹ <http://www.npr.org/templates/story/story.php?storyId=261253901>

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Again, legislation is unclear or nonexistent at the State level. Given the vacuum of legislation mandating proper guidelines, MLTS operators will make their own decisions without the proper guidance. Case in point is an incident that took place in Delaware, Ohio in September of 2013. In this case Delaware Police Chief Bruce Pijanowski reported that workers at ICS Telecom of Ohio have been answering 9-1-1 calls, taking down the callers names and locations, and then calling in the information to police themselves.¹⁰

Also discussed was the number of systems thought to be non-compliant with the proposed rules. While I, nor Avaya, has any quantifiable statistics, an informal 'straw poll', solely based on my weekly visits to hotels as well as information gathered from colleagues, indicates a compliance level in the single digits, percentage wise.

I noted that during the deliberation process of the NENA Model Legislation⁷ workgroup in 2007, members that had worked on the previous group warned that there would be 'significant concern' by the hospitality industry, primarily due to the perceived potential cost of remediation.

The facts stand for themselves, and additional inquiries are warranted to assess and evaluate the most effective execution of legislation and compliance. As a closing thought, I asked Hank Hunt to provide his thoughts:

"It's hard to describe the things that go through my head when I think about that day. Did she suffer much? Did she fight back? Did she know she was going to die, and if she did, did she cry for me to help her?"

Torturing questions I can't get out of my head.

But, the most bothersome thought is what my grand daughter was hearing while she tried to dial 9-1-1. What was this 9 year old thinking, hearing, all while trying to get help and push her younger siblings to safety. We have repeatedly told her that she did right, that she is the "hero" of all this but while she smiles at that, her eyes go to the floor as if she's wondering if what we are telling her is true."

Respectfully submitted,

/s/Mark J. Fletcher

Chief Architect -Worldwide Public Safety Solutions
Avaya, Inc.

cc: Commissioner Ajit Pai
Matthew Berry
Nicholas Degani
Jeffrey Neumann

¹⁰ <http://www.avaya.com/blogs/archives/2013/10/police-claim-unlawful-e911-call-interception.html>



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Current Legislative Landscape

- ▶ **ONLY 18 States** have a reference to MLTS/PBX
- ▶ Chicago – 40,000 Sq.ft.
- ▶ Massachusetts – 22,500 Sq. Ft.
- ▶ Virginia – 7,000 Sq. Ft.
- ▶ California – Fire Alarm Zone (pending)
- ▶ NENA response to FCC Notice of Inquiry:
 - ▶ *"MLTS Location capabilities are feasible, and [the FCC] should begin a proceeding to establish a timeframe for mandatory implementation."*

States with E9-1-1 MLTS/PBX Legislation

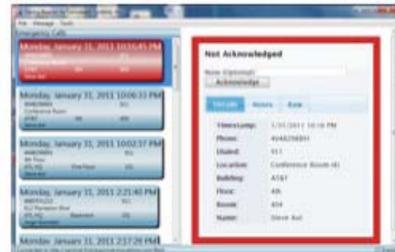


Location granularity INTERNALLY

- ▶ Technology exists that provides information to designated personnel on site:
 - Emergency Response Teams
 - Designated Safety Officers
 - Building Security

- ▶ Data that can be provided includes
 - Floor Plans
 - HazMat information
 - Proxy to IP Video Feeds

- ▶ What about After Hours?
 - Many new applications will provide an output to a wall display that can be located in a building lobby.
 - Provides direction to 1st responders to the station that initiated the emergency call.



Location Granularity EXTERNALLY

- ▶ What level of reporting is needed at the PSAP?
 - Response Address
 - Building Entrance Identifier
 - Floor Indicator

- ▶ *Concentrate on getting the 9-1-1 Dispatcher the **details they need** to get responders dispatched to the scene*

- ▶ Terminal equipment without a Telephone Number cannot have an ALI record

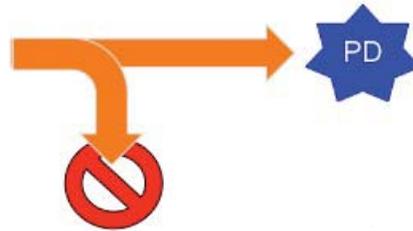


Basic System Requirements (Kari's Law)

- ▶ Direct access to 9-1-1
Eliminate the 'Trunk Access Code' (TAC)
- ▶ On Site Notification
Alerting to devices that an emergency call has occurred
- ▶ Termination of calls internally prohibited unless a trained facility.



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EMERGENCY	



DRAY