

LOCATION, LOCATION, LOCATION

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IT'S TIME TO ACKNOWLEDGE THE LESSER KNOWN 9-1-1 PROBLEM—THE LACK OF SPECIFIC OR ACCURATE ENOUGH LOCATION AND CALLBACK INFORMATION FROM CALLERS BEHIND A MULTILINE TELEPHONE SYSTEM OR PRIVATE BRANCH EXCHANGE.

ONE PROBLEM IN THE 9-1-1 industry may not be as famous—or infamous—as the wireless problem, but it can cause potentially life-threatening problems for a 9-1-1 caller: a lack of specific or accurate enough location and callback information from callers *behind* a multiline telephone system (MLTS) or private branch exchange (PBX).

Real-Life (Threatening) Examples

A plant foreman calls 9-1-1 reporting a medical problem (possible heart attack; patient unconscious) for a factory worker and the address that shows up on the screen of the call taker/dispatcher is that of the plant's main branch in a town not the same as the plant from where the foreman is calling. The error is not suspected

until EMS responders show up at the main branch only to discover no problem at all. The delay in bringing treatment to the man fortunately didn't cost him his life, but you don't have to imagine much to see how a severe heart attack, stroke or seizure could have made the outcome grim.

Imagine that you're in a difficult, violent relationship and, once again, physical abuse is being heaped upon you. A lull in the drunken episode allows you to call 9-1-1, but doesn't allow you to give your location—you assume 9-1-1 knows where the call is coming from and you hang up the phone when the abuser wakes up. You pray that police will arrive shortly, but you find out later that the delay in their arrival was caused by the system not delivering your exact location and unit number. First, the police didn't know from which building in the housing com-

plex you were calling. They started at the main building where the manager's office is because that's the address the dispatcher saw indicated on his or her computer screen in the 9-1-1 center. After going door to door in the main building and finding only frustrated, sleepy-eyed tenants, the door-to-door search went to building two with similar results. Finally, after your abusing mate was fast asleep and you are too hurt and tired to call again, you hear police knocking on doors down the hall. The knocks come closer to your apartment and finally are heard on your door. An hour or so after you called, police arrive and can finally help. Fortunately, you are safe from permanent injury this time, but you know now that a simple 9-1-1 call might not be as simple as you once thought.

The Solution

There are at least two ways to reduce the chances of providing less than the best location information to 9-1-1 centers: *public education and legislation*. Legislation and proactive public education efforts in some states are attempting to get MLTS users briefed on how they need to



dial for help (e.g. “9”, then “9-1-1” in many cases). The education also drives home the fact that the billing number and location, not that of the caller, are what is showing up at the 9-1-1 center. Emphasis is rightly placed on getting the users to understand that they must stay on the line and give the 9-1-1 operators the correct and complete information about the whereabouts of the problem.

Although public education is necessary regarding this problem, it is not sufficient. The lack of adequate location information can be life-threatening if the caller cannot verbally supply the correct information. Consider a statement taken from a fact sheet on MLTS problems produced by the Minnesota PBX work group. “The nature of 9-1-1 calls is such that the likelihood for the need to respond directly to the caller with minimal delay increases with the type of calls where the caller for some reason cannot verbally relate that information.” Say that sentence twice and really think about it. The real fix is a technological one that allows the phone number and location of the caller to be given to 9-1-1 without the caller’s involvement, just as we know the address and callback number of the home wireline caller is provided.

Providing the callback number and a location for the phone caller (the station from which they are calling) is neither out of reach nor all that expensive. Solution providers exist, and an increasing number of government agencies, schools, businesses and other MLTS users are quietly solving the problem with help from these providers. The solutions come from the Telcos themselves and/or from third-party providers specializing in providing the hardware; some even provide the database maintenance that is necessary to know what number is matching up with which location. Unfortunately, the vast majority of MLTS operators have not applied the fix.

Increasingly, public safety communications interests such as NENA, APCO and NASNA are banding together to craft legislation that will require all but the smallest systems to provide more specific information to the 9-1-1 centers. NENA has adopted and APCO and NASNA have supported *model legislation* that provides a template from which states can work as they draft their own legislation. It calls for larger systems (more than seven thousand square feet or forty thousand square feet

in the case of a single, contiguous space such as an open warehouse or factory) to list more than just one location—the term is *emergency response location* or *ERL* (pronounced “Earl”).

If the site is larger than seven thousand square feet, emergency responders need more than just the address of the front office. They need a second ERL for those sites between 7,001 and fourteen thousand square feet and a third ERL for those larger than 14,001 square feet, etc. Also, for a huge, open and contiguous facility larger than forty thousand square feet, a second ERL also would be required in most cases (there are other exceptions envisioned in this model and in most of the legislative pieces with which the few states working on this are struggling). Basically, the model legislation recommends implementation seven years after legislation is passed.

Educate and Legislate

Minnesota public safety communications professionals have been active in a diverse work group consisting of NENA, APCO, American Heart Association, NASNA, PSAP, state and vendor employees working to address the lack of precise location information that comes from most MLTSs. Early in their work they estimated that at least half of the state’s population routinely worked, lived, studied or otherwise temporarily resided in locations at which they relied on MLTS as their telephone access. Early estimates (about two years old) indicated that about forty organizations in the Minneapolis / Saint Paul metropolitan area had purchased and installed upgrades to deliver precise ALI to PSAPs, and only about eighty organizations in the whole state had done so.

The Minnesota work group, led by Nancy Pollock, set about to produce public and legislator education materials, guidance for PSAP managers to delivery those education materials and draft legislation (similar to the NENA model, but with tighter requirements) to improve the state of delivery of useful ALI from MLTS. At the time of this writing, the legislation has been introduced and is now being considered by State legislators. You can view, use or adapt the legislation and some excellent public education materials that when put together constitute a *9-1-1 Manager’s*

Toolkit for MLTS. The complete set of material is viewable at the Minnesota Metropolitan 9-1-1 Board’s Web site www.metro911board-mn.org.

Other states have legislation under development, proposed or adopted, but unfortunately, the headcount can be done on your fingers. The NENA model legislation assumes a state-by-state approach. The FCC has less authority in this area than in wireless. States, thus, should take the legislative ball and run with it because the FCC is (probably) only going to deal with MLTS equipment manufacturers and the telephone companies, not the owners or operators of the MLTS themselves.

What You Should Do

How about a checklist? Consider some or all of the following:

Develop a public education effort. See the Web site for the Minnesota Metropolitan 9-1-1 Board for ideas. Replicate and propagate.

Develop legislation that will require public education of MLTS users about the problems of dialing 9-1-1 from behind one.

Better yet, develop legislation that also will require all but the smallest MLTS operators to enhance or replace their system in a reasonable time so that their system can and will deliver specific enough ALI to PSAPs to be valuable to the responders to quickly find the caller.

Leverage your efforts; consider banding together with other individuals or organizations. In Minnesota—aside from the typically good cooperation between APCO and NENA—the State Department of Public Safety (9-1-1 Program), vendors and the American Heart Association have been extremely helpful. **ENO**

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