Initiative Underway to Standardize MLTS E9-1-1 Regulations

By Robert Chrostowski

For all of our progress in providing universal access to Enhanced 9-1-1 (E9-1-1) services, businesses and institutions still face considerable challenges in establishing this service for all of their employees. Even where there are statutory mandates, technical and economic impediments still arise. The MultiMedia Telecommunications Association (MMTA), like NENA, has been working with the FCC and other policy makers to address these impediments. Most recently, MMTA has worked with NENA to draft model legislation that ensures standardization from state-to-state with regard to multi-line telephone system (MLTS) interoperability with E9-1-1 services.

Our focus during the drafting process has been to ensure that public safety officials are informed about the distinctions between multi-line telephone systems (MLTS) used in businesses and residential/single-line telephones, and the importance of establishing thresholds for E9-1-1 support achievable by the business community. Moreover, we opted to collaborate with the NENA working group to better understand the concerns of public safety officials regarding implementation.

We all want to reach the same social policy objectives. And working together on this model legislation offered an excellent forum for the exchange of information necessary between manufacturers/providers of MLTS and the safety community to draft a proposed set of guidelines that achieve those objectives, without unduly burdening business and institutional users. These users tend to look towards the MLTS manufacturers/providers to help them learn how to establish compliance, in the manner most appropriate for their circumstances. And this draft model legislation was structured in a way that will allow manufacturers, providers and MLTS operators, i.e., the entity that owns or leases/rents from a third party and operates a MLTS, to see a clearer path to achieving compliance with the proposed legislation.

Understanding the Problem

During deployment of E9-1-1, MLTS owners have two separate challenges:

1) The billing address, which network databases match to the calling party's number, may not be the same address as that of person dialing 911, and
2) Long-established interface standards for MLTS interconnection to the public network are not consistent with E9-1-1 systems.

The result: life-threatening situations may occur because of misdirected emergency assistance or a delay in response time.

Several state legislatures have already adopted E9-1-1 legislation requirements for enterprises utilizing private branch exchanges (PBX), hybrids, key systems and/or Centrex. Under these laws, businesses are required to modify their telecommunications systems to ensure that, when 9-1-1 is dialed from a business telephone, PSAP operators can automatically retrieve information about the caller's location from the Automatic Location Information (ALI) database that is comparable, simply put, to that received when 9-1-1 is dialed from a normal residential telephone. Such information is not ordinarily available because network interface specifications for business services offered by telephone companies do not provide for the transmission of PBX station information to the called party. Manufacturers, therefore, had not designed systems to transmit this information.

In 1996, an FCC-appointed task force, comprised of MMTA, users and public safety officials (including NENA), proposed the adoption of nationwide rules that specified users' flexibility to opt for alternatives to the expensive analog CAMA trunks designated thus far as a method for compliance. While not eliminating the use of CAMA, additional methods for supporting E9-1-1 were proposed, including a 40,000 square foot rule using Automatic Number Identification (ANI) for locating 9-1-1 callers as well as institutional methods. One benefit of the proposed methods was to allow as best possible for MLTS already in place to comply with proposed state requirements for support of E9-1-1. This would go a long way toward universal implementation by the business community once 9-1-1 legislation was enacted.

In 1999, Illinois enacted a law that largely replicated the task force's 1996 recommendations, including a provision that allows MLTS operators with 40,000 square feet or less of workspace to have *their* locations listed in *one* record location in the ALI database. For buildings with more than 40,000 square feet, distinct location identification need only be provided for each 40,000 square feet of workspace. Though not a perfect solution, MMTA saw the passage of the Illinois legislation as a precedent to be promoted over more stringent state or local equipment regulations emerging elsewhere.

Uniform Guidelines Necessary for Compliance

The proposed model legislation provides for a number of ways for compliance with proposed state regulations. By establishing uniform methods for compliance, manufacturers can optimize their equipment and not be faced with the burden of having to tailor equipment to meet individual state requirements. Coinciding with the proposed model legislation will be changes to the existing FCC part 68 rules and regulations for MLTS equipment, a procedure required for most MLTS manufacturers.

Callers to 9-1-1 can be identified individually, or in groups of forty-eight stations or less, at the PSAP. The methods to accomplish this represent, for the most part, methods achievable by most MLTS manufacturers. Standard network interfaces, including use of ANI, DID, and ISDN are included as means of implementation.

In addition, the proposed legislation offers alternative methods to support E9-1-1 including the MLTS operator's use of attendant notification; MLTS redirection of calls to a private 9-1-1 answering point; alerting devices near the telephone that has dialed 9-1-1; and other means for local identification of the 9-1-1 caller. Signaling between the MLTS and the public telephone network, user dialing instructions, MLTS operator education, limitation of liability and exemptions are also addressed.

In its entirety, the model legislation offers supporting information and rationale to enable legislators to better understand the logic behind each provision. Other considerations and alternatives addressed include:

- Eliminating a Direct Inward Dial (DID) trunk requirement for all business systems for public safety officials' call-back use
- Expanding what constitutes compliance to include alternative means
- Clarifying ALI database maintenance issues
- Inserting qualifiers for compliance requirements to credit end users for taking "reasonable" steps or demonstrating "best efforts"
- Supporting clarification that the MLTS owner cannot be required to comply until the LEC provides facilities
- Assuring uniform standards for ISDN or other network interface support of E9-1-1

- Providing for the MLTS manufacturer/provider to include instructions on supporting E9-1-1.

Standards Development Aims at Uniform Compliance
The NENA draft legislation currently acknowledges the importance of deferring compliance requirements for emerging technologies until compliance standards are firmly in place.

The Telecommunications Industry Association (TIA) is actively developing ANSI-accredited standards for an integrated services digital network (ISDN) solution to E9-1-1. Until the standard is firmly in place, published and consistently deployed, many obstacles stand in the way of uniform compliance. Network service providers (NSPs) are implementing manufacturer-specific versions of ISDN, thereby creating problems of interoperability. Moreover, the NSPs often require what manufacturers argue are superfluous direct inward dial (DID) line subscriptions to provide for individual station location identification, thereby under-utilizing working telephone numbers which may not be necessary.

Although the total solution is not solely standards development, consistent industry standards would greatly assist users in purchase decisions and manufacturers in implementation decisions. And the rules must be technology neutral and forward-looking to accommodate the introduction of new technologies. Wireless, IP telephony and small MLTS are known areas needing standards work. Tomorrow there will be others. By assuring uniform standards for ISDN and other network interface support, manufacturers and users could take giant steps towards compliance.

In addition, the model legislation maintains that regulators will need to be proactive in encouraging the NSPs to utilize recognized standards in order to improve the ubiquity of E9-1-1 service, and asks the FCC to support this initiative as well as development of industry standards.

Working Toward the Same Goal
We at MMTA were indeed pleased to participate in the proposed model legislation activities conducted by NENA. We feel that greater insight of the objectives and concerns of both the safety community and MLTS manufacturer/providers were realized. As a result of this collaborative effort, while each group may not have achieved its ultimate objective, the proposals put forth represent a compromise and workable solution to the identical ultimate goal, MLTS support of E9-1-1.

Robert Chrostowski is senior vice president for Iwatsu America and chairman of the MMTA Government Relations Committee. MMTA is a trade association focused on driving the convergence of communications and computing. The MMTA Government Relations Committee focuses uniquely on advocacy of the public policy interests of enterprise solutions suppliers. To learn more, please visit www.mmta.org.