Appendix B

Costs to Provide E9-1-1 for MLTS

Initial analysis has identified three sets of employer costs to implement E9-1-1 for MLTS:

1. Costs to Plan the E9-1-1 Solution;
2. Initial costs to populate the PS/ALI database; and
3. On-going administrative costs for maintaining the accuracy of the PS/ALI database.

Planning Costs involves evaluating and selecting the E9-1-1 solution from the MLTS equipment manufacture, telecommunications service provider, or the third party E9-1-1 vendor.

A business owner's first decision involves deciding whether to create an E9-1-1 location record for each DID telephone station served by the MLTS. This solution is easiest to plan for but is the most expensive option for large installations involving hundreds or thousands of stations.

An alternative is to establish Emergency Response Location Zones (ERLZ) for subsets of telephone stations based on easily understood criteria such as "floor," "building" or "west end" type of description.[1] In this case, telephone stations could be grouped in sets of 49 or less, so that first responders would need to search only a smaller space within the floor or complex. Within this ERLZ, there would be one telephone station with DID capability which would function as a call back number in case the

[1] "NENA defines ERL as 'A location to which a 9-1-1 emergency response team may be dispatched. The location should be specific enough to provide a reasonable opportunity for the emergency response team to quickly locate a caller anywhere within it.'" MLTS E9-1-1 Caller Location Discovery and Reporting, NENA 06-502 at 23.

PSAP is disconnected during the E9-1-1 call. This approach could significantly reduce the cost of implementation.

Implementing ERLZ does not appear to be difficult or burdensome since the California Fire Code requires business owners to create a Fire Safety and Evacuation Plan.[2] The floor plans required by the fire code which identify the location of exits and evacuation route could easily be used to group work places in an ERLZ. Since these plans are required to be available in the work place to employees and fire code officials, they could provide a readily available reference to first responders.

Initial and Maintenance Costs to populate the PS/ALI database.

The business owner has three options for this step:

1. subscribe to the PS/ALI product from the local exchange carrier,
2. purchase the E9-1-1 solution from the equipment provider, or
3. purchase the E9-1-1 solution from a third party provider.

For a traditional, premise-based MLTS, California's two major ILECs - AT&T and Verizon - have filed tariffs for their PS/ALI product showing initial (non-recurring) and recurring costs. Both of these products require the business owner to purchase two trunks from the MLTS location to the nearest selective router. For a hypothetical MLTS with 100 stations, located 20 miles from a selective router, the tariff prices are shown in the following table. However, LECs are permitted to offer contracts for tariffed service where PS/ALI service elements are provisioned under reduced or waived rates.

[2] 2007 California Code of Regulations, Title 24, Part 9, Chapter 24, Emergency Planning and Preparedness at 43.

AT&T California PS/ALI Tariff Rates[3]

Rate Element	Rate	Initial (NRC)	Monthly
Trunks	$744.73 per trunk	$1,489.46	
(min. two)	$74.09 per trunk		$148.18
Administrative Site		$147.24	
Total for 100 stations		$1,636.70	$148.18
Price per station		$16.37	$1.48

Verizon California PS/ALI Tariff Rates[4]

Rate Element	Rate	Initial (NRC)	Monthly
Trunks = 20 miles	$2.96 per mile		$118.40
(min. two)			
Selective Routing	$250.00 per trunk	$500.00	
(min. two)	$17.48 per trunk		$35.98
Database Administration			$11.00
PS/ALI Software		$265.00	$9.18
PS/ALI Users Guide		$30.00	
Program Site		$440.00	$80.30
Total for 100 stations		$1,235.00	$253.86
Price per station		$12.35	$2.54

For a traditional host-based MLTS, the two major California ILECs offer PS/ALI equivalent products -- AT&T's Centrex or Verizon's CentraNet. AT&T does not charge extra

> to populate secondary address location information for Centrex stations in the 9-1-1 database. This information comes from the service orders generated when those stations are installed, and is updated when a customer places an order

[3] PacBell Cal PUC No. A9.2.4, Sheet 243.12.6. Excludes rate items that are rarely ordered.

[4] Verizon Cal PUC No. A20, Sheet 19.

> with us to relocate those stations. There is no extra charge to update the 9-1-1 record in that situation. If a customer moves one of their Centrex stations or third-party vendor, they can request that we generate a service order to update the 9-1-1 records. There is no charge for this type of service order.[5]
>
> Verizon's E9-1-1 Information Manager offers Centranet and multi-line customers the ability to load and maintain their system location records through a service that is not tariffed. After the load of their data is complete, the customer is then able to make the changes to the database themselves. There is a NRC (non-recurring charge) of $2500 for a 60 month term.[6]

The two ILECs also offer IP-based MLTS. AT&T's Centrex IP is a non-regulated product. Verizon's Hosted IP Centrex is offered by Verizon Business as an FCC designated information service, and Verizon's E911 Information Manager can be used to populate and maintain the 9-1-1 database.

Equipment Manufacturer's E9-1-1 Solutions

The following is a comparison of IP-based PBX Enterprise E9-1-1 solutions from equipment manufactures and third-party vendors, as reported by The Telecom Manger's Voice Report April 10, 2008,[7] based on a RFP presentation by Allan Sulkin at VoiceCon Orlando 2008, for the three PBX market leaders - Avaya, Cisco and Nortel.

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[5] Email from State Regulatory AT&T California, dated March 27, 2009.

[6] Email from State Regulatory Verizon California, dated March 27, 2009.

[7] Available at http://www.thevoicereport.com/Archive.

Comparison of E9-1-1 Solutions for 1500 End-users

Equip. Manufacturer	Product	Price	per user
Cisco	Cisco Emergency Responder runs on a Cisco Media Convergence Server, tracks phone locations dynamically for new phones and user logins and updates PS/ALI.database.	$20,996	$14.00
Nortel	Nortel Discovery Manager finds IP sets after they've moved, automatically updates the PS/ALI database, is built into the CS1000 core software, and is activated with a key code.	$7,000	$4.67
Avaya	Avaya's Communications Manager tracks new phones but needs RedSky' sE911 Manager software license to update the PS/ALI. Implementation license Interfaces for additional PBXs Total price	 $46,500 $8,800 $4,600 $59,900	 $39.95

Source: The Voice Report, April 10, 2008.

Summary

Accordingly, this preliminary analysis finds that the traditional premise-based PBX PS/ALI tariff service installation cost varies range from $12.35 to $18.14 per user and monthly costs vary from $1.48 to $1.95 per user, for a 100 station implementation. The traditional PBX PS/ALI solution also requires staff time to monitor and update the PS/ALI database when there is are moves/adds/changes. For a 1500 station IP-based enterprise MLTS, the cost ranges from $4.67 to $39.95 per user, but updates to the PS/ALI database would be done automatically by the software.

(END OF APPENDIX B)