EX PARTE OR LATE FILED



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September 23, 1996



Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: ex parte submissions, CC Docket 94-102, RM-8143

Dear Mr. Secretary:

Pursuant to Section 1.1206 of the Rules, here are an original and one copy of the prepared statements and other materials presented by members of the National Emergency Number Association (NENA), the Association of Public-Safety Communications Officials (APCO), and the National Association of State Nine One One Administrators (NASNA) at public meetings in the above-referenced proceeding conducted by the FCC's Common Carrier Bureau on September 19-20, 1996. Attached are:

- Statement of Laverne Hogan, Executive Director of the Greater Harris County (Texas) 9-1-1 Emergency Network and Gulf Coast Vice President of NENA.

- Statement of Jack Keating, Director of Communications for West Covina, California, and APCO First Vice President.

- Statement of Jim Carefoot, Adcomm Engineering, Woodinville, Washington.

- Statement of David L. Pickett, Director of Operations, Greater Harris County 9-1-1 Emergency Network.

- Legislative materials from Robert G. Oenning, Enhanced 9-1-1 Administrator, State of Washington.

- Surveys of state PBX laws and recent PSAP PBX-related 9-1-1 call incidents from Jim Beutelspacher, State 9-1-1 Product Manager, Minnesota Department of Administration, and NASNA President.

In addition, Mr. Oenning provided and spoke from the diagram entitled "E9-1-1 Call Routing" and Mr. Pickett supplied "Private Switch Service Implementation Handbook" (appended is cover only). Finally, selected pages were submitted from *E9-1-1 Data Base Guide*, published by NENA in 1994.

Please contact the undersigned or Robert Gurss, counsel for APCO, if you have questions or need additional information.

Sincerely,

James R. Hobson, Counsel for NENA

cc: G. Matise, G. Cooke, A. Thomas, CCB/NSD (w/o attachments)

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ORIGINAL

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**STATEMENT BEFORE THE COMMON CARRIER BUREAU**

**EX PARTE MEETINGS ON WIRELINE PORTION OF ENHANCED 9-1-1 RULEMAKING**

September 19-20, 1996

My name is Laverne Hogan; I am Executive Director of the Greater Harris County (Texas) 9-1-1 Emergency Network, which administers 9-1-1 service in two counties and forty-one cities (including Houston), serving approximately 3 million citizens. I am here today representing the National Emergency Number Association (NENA).

NENA is appreciative of the Federal Communications Commission's decision to hold these public ex parte meetings on the wireline portion of the Commission's Enhanced 9-1-1 rulemaking proceeding.

My remarks today will focus on the nature and magnitude of the problem of incompatibility of private branch exchanges (PBXs) with E9-1-1 services. Specifically, my remarks will cover the following:

1. Anecdotal testimony relating to problems encountered by citizens trying to access 9-1-1 for assistance, when a PBX was not compatible with E 9-1-1, and the accompanying difficulty of public safety personnel in attempting to provide the needed assistance.

2. Testimony relating to the experience of public safety/9-1-1 administering agencies, in attempting to administer private switch 9-1-1 service.

3. Testimony relating to the need for rulemaking to insure that all citizens of a community--whether behind a PBX or not--receive the same level of 9-1-1 service.

## ANECDOTAL TESTIMONY

Several months ago in Pascagoula, Mississippi, a call to 9-1-1 was placed from a branch bank several miles north of Pascagoula. A man came into the bank; he subsequently began convulsing. One of the bank tellers called 9-1-1, but hung up before the dispatcher in

Pascagoula could verify an address. The location information on the dispatcher's screen was that of the main bank. Personnel at the main bank informed the dispatcher that no one there had called 9-1-1 and had no idea from which of their branch banks the call may have been placed. By the time the correct branch bank was contacted, the man had died.

In Plano, Texas, on April 9, 1996, a woman in an apartment complex called 9-1-1, screaming into the phone that she was being physically assaulted. The man who was assaulting her grabbed the phone and hung up. The woman lived in an apartment complex served by a PBX. Even though the State of Texas has legislation on the books requiring that residential facilities served by a PBX be provided the same level of service as the citizens in the rest of the community, the data base had not been properly updated. It took the public safety agency twenty-six minutes to determine the woman's exact location. Fortunately, she survived the assault.

In a Minnesota plant, an incident involving a PBX and an attempt to get help by calling 9-1-1, occurred because the PBX was programmed not to allow 9-1-1 calls--without the knowledge of

employees. On January 19, 1995, an employee at a plant in Chaska, Minnesota, was splashed in the face with sulfuric acid; coworkers tried to call 9-1-1. Nothing happened; they tried repeatedly to call 9-1-1 without success. Frustrated, they looked up what they thought was the closest emergency hospital, and called the hospital's 7-digit number. The hospital, however, was in Waconia, Minnesota, not Chaska. The employees asked that an ambulance be dispatched to the plant; the hospital informed the employees that they did not have coverage for Chaska, and directed them to call an ambulance company which does have coverage in Chaska. That ambulance service was called, and an ambulance was dispatched. The ambulance also called the Sheriff's PSAP site and reported the incident. The PSAP immediately dispatched police and fire/rescue units to assist. Because the Public Safety Answering Point was informed by the plant employees that 9-1-1 system was "not working", extensive testing was undertaken to find the problem. Only when the problem was isolated to the plant location, was it discovered that the plant ran off a PBX which was located in another county. The plant personnel had been advised by technicians that they should deny the

ability to call 9-1-1, since 9-1-1 calls placed from the plant would go to the wrong PSAP.

A Private Switch Provider (PSP) in Houston was utilizing a switch which did not have the capability of rolling over to the second 9-1-1 trunk if the first trunk was, for some reason, disabled. The citizen would get a fast busy when trying to call 9-1-1. The problem with the switch was discovered by the 9-1-1 administering agency (in this case, my agency) during a routine and required testing of the switch. The PSP was put on notice that the problem had to be resolved within a designated time frame. The Provider argued that citizens should be aware that if they try to call 9-1-1 and get a fast busy, they'd know to "just hang up and call again." Technical specifications for Private Switch Service in Texas require a minimum of two 9-1-1 trunks; the Provider was informed that two trunks meant that if for some reason one trunk was disabled, the second trunk should be available. Obviously, if the switch does not have rollover capability in this situation, a second trunk is not available. A software fix was provided by the switch manufacturer.

The City of Ocala, Florida, operates its municipal complex with two PBXs, located several miles apart. The E 9-1-1 displayed address is the billing address of each PBX--again, each several miles apart. An employee working in one of the city buildings began to exhibit heart attack symptoms. When 9-1-1 was called, there was a great deal of confusion about the location of the caller. The response was delayed significantly because of this confusion.

When communities across the country began providing enhanced 9-1-1 to their citizens, the public safety community breathed a sigh of relief. Citizens needing emergency assistance, and not being able to speak for one of any number of reasons, could be located and helped. Citizens were educated that when they called 9-1-1, their exact location would be displayed on a screen in the 9-1-1 call center. For parents of young children, for families concerned about elderly and disabled citizens, enhanced 9-1-1 provided a level of comfort--because their loved ones could receive emergency assistance even if they could not verbalize their problem or their location. Our citizens have grown accustomed to expect this from their 9-1-1 systems.

Over the last several years, however, a growing number of residential facility owners have installed PBXs, and offered their residents telephone service. This service seemed like a good deal for all involved: profits for the Private Switch Providers, lower monthly costs, and some bells and whistles for residents. Unfortunately, residents of many of these facilities were not aware that their level of 9-1-1 service was degraded when they signed their contract for this new telephone service. And the public safety agencies? The newest and greatest 9-1-1 technology cannot help them locate a citizen behind a PBX, if the PBX is not compatible with E 9-1-1.

## EXPERIENCE OF 9-1-1 ENTITIES/PUBLIC SAFETY AGENCIES IN ADMINISTERING 9-1-1 SERVICE BEHIND A PBX

A few states have passed legislation requiring PBX compatibility with E 9-1-1--some for both business and residential, others for only residential. This issue will be covered by others. Even with legislation, however, 9-1-1 agencies experience a number of difficulties in administering Private Switch 9-1-1 Service. The difficulties cover a wide range. I will outline some of the most

frequently-mentioned problems encountered by these agencies. The legislation has, of course, assisted in better serving citizens. Legislative content, however, varies greatly among the states which have succeeded in passing laws related to Private Switch 9-1-1. And because some of the Private Switch Providers operate in a number of states, regulatory consistency is critical. Some Private Switch Providers complain that they have widely different requirements from area to area.

PROBLEMS CITED BY 9-1-1 ADMINISTERING AGENCIES IN ADMINISTERING PRIVATE SWITCH 9-1-1 SERVICE EVEN WITH THE PASSAGE OF LEGISLATION (OBVIOUSLY, THESE SITUATIONS DO NOT RELATE TO ALL PROVIDERS, BUT THEY OCCUR OFTEN ENOUGH THAT THEY HAVE BEEN GENERALLY CLASSIFIED AS PROBLEMS:

1. Lack of information available to 9-1-1 agencies, on where PBXs are installed and operating. In some cases, a PBX is installed and providing service to apartment dwellers, and the property owner or the private switch provider fails to inform the 9-1-1 administering

agency that the switch is providing service. The local exchange company will not reveal that trunks have been installed to the PBX because of privacy issues. The 9-1-1 agencies are concerned about having to become "private switch cops" to insure that their citizens receive the proper level of 9-1-1 service.

2. Resistance to, or delay in taking the necessary steps to bring PBXs into compliance and keeping them in compliance. The 9-1-1 agencies, in these cases, spend considerable time and energy in pressuring these providers to get their PBXs to meet certain technical specifications. Repairs are sometimes made slowly, resulting in citizens not being able to dial 9-1-1, or in the 9-1-1 center's not receiving exact location.

3. Financial impact on 9-1-1 agencies. Because the local exchange company considers the 9-1-1 entity as the customer for 9-1-1 service, monthly bills for CAMA trunks and data base are sent to the 9-1-1 entity. The bills are paid by the 9-1-1 entity, and then passed on to the private switch provider. It has been the experience of many 9-1-1 agencies, that the private switch providers are months

behind in paying these bills--in effect, the private switch providers who are in the business for profit, are using public monies as a float.

4. Failure to keep data bases updated and accurate. In some cases, many of the Direct Inward Dial numbers "error out" in the initial download to the local exchange company, and the private switch provider is not aware that the DIDs have errored out. Test calls to verify accuracy of the data base are not made consistently by a number of the private switch providers.

5. Little or no monitoring to see if 9-1-1 has gone down due to switch or network problems.

6. 9-1-1 agencies' concern about administering a rapidly-growing industry, with no regulatory agency oversight. The private switch industry is growing rapidly, probably because of the profit to be made for apartment owners who can offer telephone service to the residents of their apartments. Personnel in the 9-1-1 agencies, however, find themselves in the position of spending more and more time in trying to assure quality of 9-1-1 service for those apartments residents. My agency in Houston currently oversees Private Switch

9-1-1 Service in approximately 70 apartment complexes, with applications submitted on almost a daily basis.

Public safety needs the assistance of the Federal Communications Commission to help insure that citizens in this country will receive quality 9-1-1 service, and to insure that new opportunities which have been made available to those in the telecommunications industry do not degrade the emergency service that American citizens have come to depend upon in situations which threaten life or property. The National Emergency Number Association encourages the Commission to consider rulemaking to ensure compatibility with enhanced 9-1-1 emergency calling systems.

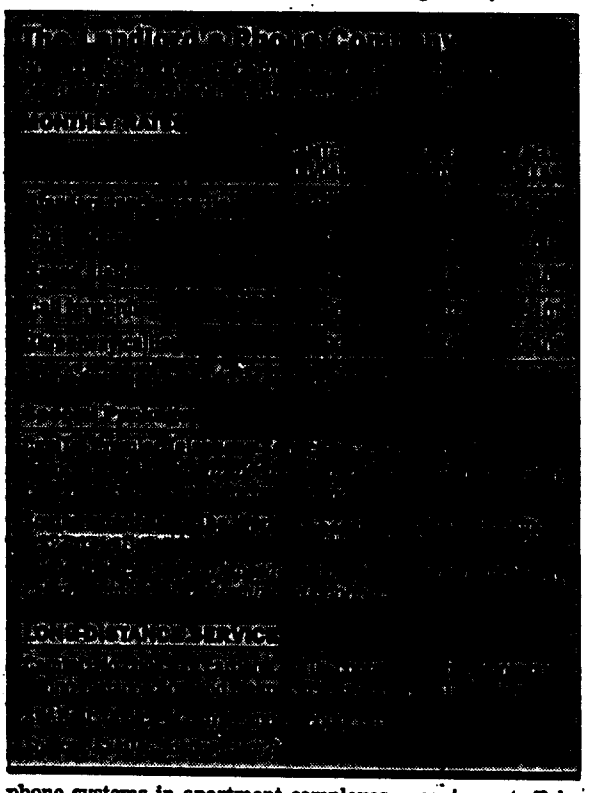
# Apartment Owners Seek Profits in Phone Service

By SUSAN WARREN
*Staff Reporter of* THE WALL STREET JOURNAL

HOUSTON—Ric Campo doesn't find it odd for an apartment developer to be in the telephone business.

In fact, he thinks that will set his real-estate investment trust, Camden Property Trust, apart from the pack in leasing its upscale apartments. He has started a subsidiary called CamTel Inc., which will offer local and long-distance phone service to 26 of Camden's apartment complexes in Houston and Dallas, or about half of the 20,000 units in the company's portfolio.

Just renting space has gone out of fashion with apartment developers. In the search for new revenue, and inspired by their ready-made audience, owners and developers are branching into new areas, such as laundry service, renters' insurance and credit cards. Private



phone systems in apartment complexes have been an especially hot trend in the past couple of years in large real-estate markets such as Texas.

Until now, apartment developers have relied on upstart telecommunications companies, spawned by the advent of local phone competition, to install and run their private phone systems. Apartment residents got cheaper rates, and owners got a slice of the revenue.

But that type of arrangement had its problems. Mr. Campo tried it with two properties in Austin and rates the experiment a disaster. Nothing seemed to work the way it was supposed to. Many tenants rejected the system, and he has stopped even trying to sell it to his new residents (who by law can always opt for the established local phone company, the Southwestern Bell subsidiary of SBC Communications Inc., San Antonio).

But he still liked the idea, so he hired a consultant and went to the drawing board. What he came up with is CamTel, which he likes to call "our virtual phone company." CamTel has just 10 employees and subcontracts most of the work to other companies. "That's the beauty of it," says Boyer Taylor, Camden vice president: Camden simply rents the ultraexpensive technology and expertise required to run its phone company, while making more money and maintaining more control.

But not everyone thinks it's worth the trouble. The prospect of running their own phone companies makes some developers queasy amid rapidly changing telecommunications laws and technology.

"If we stay focused on our principle business, we can do a lot better job for our investors and residents," says Bobby Page, chief operating officer of JPI Investment Co. in Dallas, an apartment developer with about half its 20,000-unit portfolio in Texas. "JPI's philosophy is, 'Let's go find the best telephone provider and let them be the guru.' "

JPI, which has revenue-sharing pacts with a variety of phone companies, also has begun opting for Southwestern Bell's answer to the competition—a program called SmartMoves, which pays a commission to apartment owners who agree to act as an exclusive agent for Southwestern Bell. (Tenants, however, don't get any discounts.) So far, a Bell spokesman says, 750 Texas apartment complexes, including seven Camden properties, have gone with SmartMoves since it began in November 1994.

Mr. Campo dismisses developers' concerns as "in-the-box thinking" and says his phone company provides extra income for his investors and extra value for his tenants.

The key to CamTel's operation is an agreement with Teleport Communications Group Inc., a New York telecommunications access provider. Bypassing Southwestern Bell, CamTel's apartment complexes tap into Teleport's extensive fiber-optic network as well as switches and other necessary equipment. Teleport gets a flat fee per customer for use of its lines.

CamTel promises service equal to Bell's but cheaper. A telephone line plus a package of features such as call waiting costs $23.95 a month through CamTel in Houston; Southwestern Bell charges $27.68 for similar service.

Out of an average monthly bill of $50, which would include long-distance charges, CamTel says it expects to earn about $8. That is double what it earned when it struck revenue-sharing agreements with other phone companies.

Joe Harvey, an analyst for the mutual fund Cohen & Steers Realty Shares, which has a stake in Camden, says Camden's investment in the phone company—about $2 million so far—is a pittance compared with the company's $572 million of assets. Is CamTel risky? Yes. But, he says, "you can't earn above-market returns without taking risks."

Mr. Campo says developers' fear of those risks will work to his benefit. "It creates an opportunity for being first and getting ahead of the market," he says. But not for long, perhaps.

Already, Teleport has struck a similar agreement with the developer of a new upscale neighborhood north of Houston. And others are watching CamTel closely. One is Flagship Properties Corp. in Houston. Vice President David Culderman says the company hopes to copy CamTel in the near future. "Why share [the phone revenue] with somebody else?" he says. "Let's do it ourselves."

**STATEMENT BEFORE THE COMMON CARRIER BUREAU**

**EXPARTE MEETING ON WIRELINE PORTION OF ENHANCED**

**9-1-1 RULEMAKING**

September 19-20, 1996

STATEMENT OF JACK KEATING

My name is Jack Keating. I am the Director of Communications for the City of West Covina, California, which is located in the East San Gabriel Valley section of Los Angeles County, and serves a population of just over 102,000 residents. I am also the First Vice-President of the Association of Public-Safety Communications Officials, Inc. (APCO), the nation's largest and oldest public safety communications organization, and I am here today in that capacity.

APCO has over 12,000 members nationwide, many of whom are directly involved in the management and operation of Public Safety Answering Points (PSAPs) which have responsibility for answering and directing responses to 9-1-1 calls.

APCO has worked closely with the National Emergency Number Association (NENA) and the National Association of Nine One One Administrators to address the specific problem of the inability of 9-1-1

operators to correctly identify the location of 9-1-1 calls originating from PBX and Centrex telephone systems. Joe Blaschka and Jim Carefoot of Adcomm Engineering have worked with us on this issue, and Mr. Carefoot will also be participating in this meeting on our behalf.

Before the other participants begin to address the more technical issues, I wanted to discuss the problem from a practical perspective. Earlier this year, APCO and NENA submitted a survey to the Commission describing specific instances where 9-1-1 operators had difficulty in locating calls originating on multiline systems.

Some of the most serious problems are with schools, where the telephones in all of the school buildings within a particular school district are often connected to a single PBX. As a result, if someone calls 9-1-1 from one of those instruments, the address that is displayed on the dispatcher's screen at the PSAP, is that of the school district headquarters, not the specific school site at which the emergency is taking place. That condition exists in my own City which includes three school districts, one of which has all school sites within the district served by a single PBX. We had an incident where a substitute teacher dialed 9-1-1 from a district campus located on the east side of the City, to report that another teacher was experiencing a heart attack. Unfortunately the address which displayed on our PSAP's ALI

screen was that of the District Headquarters situated on the west side of town - some 3.5 miles away. Tragically, because the line was disconnected before we could establish the exact location, the emergency response units were sent to the wrong address initially. Whether the additional 8-10 minutes it took for the responding units to finally reach the victim, materially contributed to her subsequent death was never factually established, but the incident clearly illustrates the problem. The need for accurate location information is paramount, since dispatching a police officer, fire engine, or ambulance to the wrong address can have life-threatening , and indeed on occasion, even fatal consequences.

Similarly, regional banks will often have all of their branch offices connected to one PBX, which again poses serious problems when PSAPs receive calls reporting bank robberies in progress or other emergencies at specific branches.

Other major problem areas noted in the APCO/NENA survey include college campuses, dormitories, mobile home parks, motels, hotels, apartment buildings and large office complexes.

We cannot overstate the message - nor the need for corrective action. Without accurate location information, the ability of emergency personnel to respond in a timely fashion is seriously impaired. Those who follow me will

discuss some of the specific solutions that are available, and that have already been proposed to the FCC. Others will describe current state efforts to address this problem.

APCO believes that the solutions exist, and that the Commission must act now to facilitate those solutions and preserve our ability to protect the safety of life and property.

On behalf of our membership, I want to thank the Commission for this opportunity to express our concerns, and thank you all for your attention.

**J. T. "Jack" Keating**

J. T. "Jack" Keating, currently serving as First Vice President of APCO INTL. Inc., has been Communications Director of the City of West Covina, California since July 1977. West Covina is a medium sized , (pop. 102,000) city in the east San Gabriel Valley section of Los Angeles County. As the Communications Department manager, he is responsible for both the operation of the City's E9-1-1 emergency communications center which handles all police, fire and ems calls for service, and the maintenance of all City owned electronic equipments and telephone systems. Prior to joining the City, Jack spent 20 years in the USCG, with over 13 years of that time as a commissioned officer in various communications management postions. A long-time member of both APCO and NENA, Jack holds a bachelors degree in business administration and a masters in public administration.

Confoot

FCC September 19, 1996 Presentation

# E9-1-1

And the Challenge of MLTS to Public Safety

FCC September 19, 1996 Presentation

## E9-1-1 Challenges:

Technological & Regulatory

- ✓ Wireless Networks
  (Cellular, PCS et al)
- ✓ Multi-Line Telephone Systems
  (MLTS, including PBX, KTS et al)
- ✓ Alternative LECs

FCC September 19, 1996 Presentation

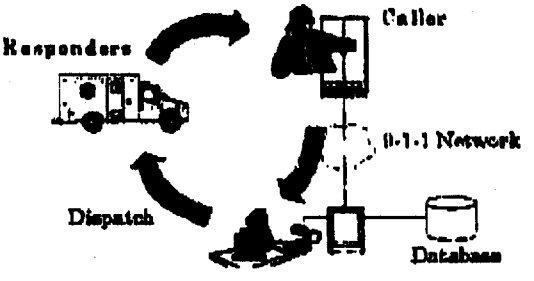
## MLTS Issue

Masking of Caller Identification

The instant trace-and-locate function of E9-1-1 depends on a calling party telephone number being coupled with a location data base.

FCC September 19, 1996 Presentation

The 3-corner Cycle of Response



FCC September 19, 1996 Presentation

## Available Solutions

Call Connection for Affected MLTS Users

- Conventional E9-1-1-Capable MLTS
- Upgrade MLTS to E9-1-1 capability
- Add Auxilliary Routing and Signalling Equipment
- Adapt ISDN MLTS to E9-1-1 network
- Distinct Dial Line per Location, with Internal Forwarding
- Operate an Internal Public Safety Answering Point (PSAP)

FCC September 19, 1996 Presentation

## Public Safety's Job

Job of Local Government Management

Provide quality public safety and emergency services.

Quality means suiting it to local needs and solving problems in provision of service.

## Emergency Response 'Misfires'

The Result of Caller Identification Problems

- City PBX
  - Repeated mis-routed responses
- Shared tenant PBX
  - Sequential building search for child
- Warehouse OPX
  - Cardiac response fatally delayed by mis-route
- Bank PBX/KTS
  - Holdup response mis-directed



## Scale of the Problem?

Data Sampling from Actual E9-1-1 Systems

| Category of Caller | Percent of Calls |
|---|---|
| Business Line | 20-60% |
| PBX | 10-15% |
| Mobile | 15-25% |
| Coin | 5-15% |
| Residential | 40-45% |

Data courtesy of Bellevue, Washington and Salt Lake City 9-1-1

The Washington state E9-1-1 PBX Workgroup reported that 19% of actual emergency callers from PBXs were uncertain of their location.



## Local Government Will React

Regulatory Tools are Brought to Bear

- City & County Ordinances
- Fire & Building Codes
- State Law



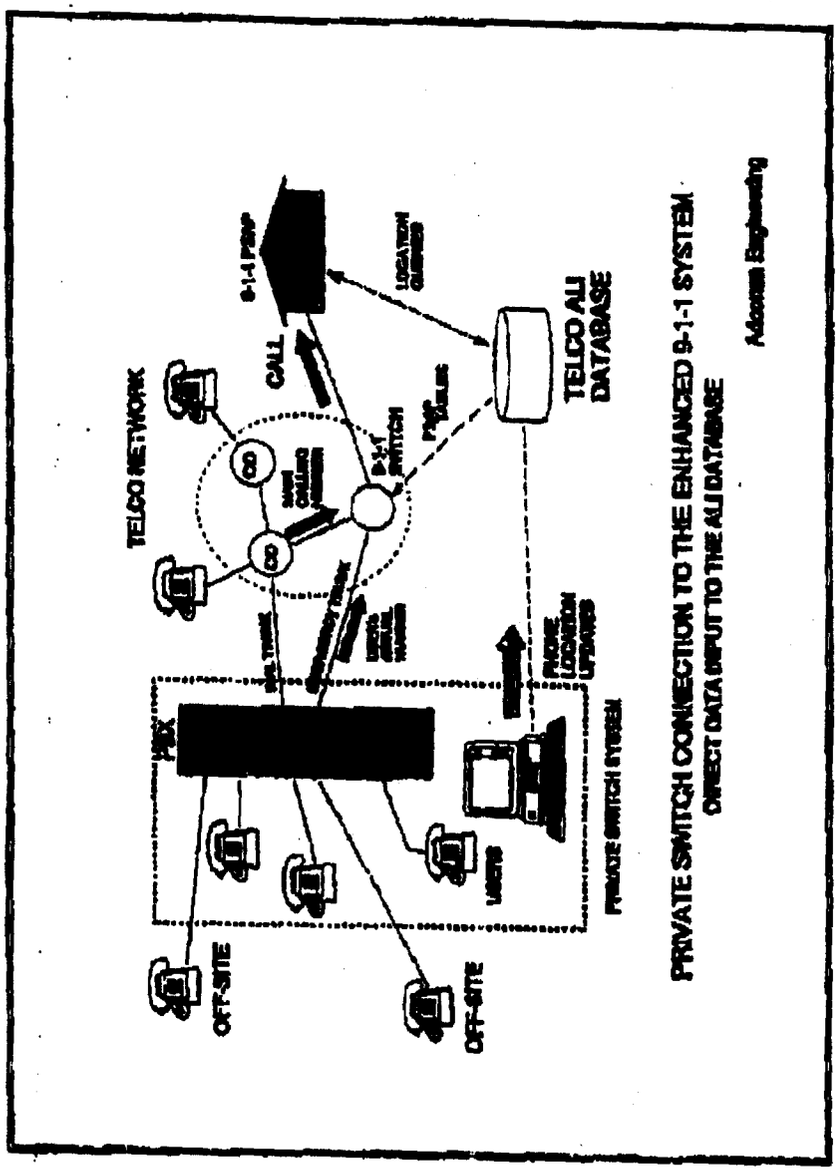
## Washington State Law

SSB5089 Prompted by E9-1-1 Workgroup Report

Immediate SSB5089 Target:
- Shared Tenant Services (business & residential)
- Schools

Monitored by state E9-1-1 office for progress:
- Businesses and others

Implementation by fire chiefs and marshals per the Fire Protection Policy Board, by the end of


TELCO NETWORK
9-1-1 PSAP
CALL
LOCATION QUERIES
TELCO ALI DATABASE
9-1-1 SWITCH
PBX
OFF-SITE
OFF-SITE
PRIVATE SWITCH CONNECTION TO THE ENHANCED 9-1-1 SYSTEM
DIRECT DATA INPUT TO THE ALI DATABASE
Adcomm Engineering

Greater Harris County 9-1-1 Emergency Network

*STATEMENT BEFORE THE COMMON CARRIER BUREAU*
*EX PARTE MEETINGS ON WIRELINE PORTION OF ENHANCED*
*9-1-1 RULEMAKING*
*September 19-20, 1996*

*My name is Dave Pickett; I am Director of Operations of the Greater Harris County (Texas) 9-1-1 Emergency Network. I am here today to relate my experience in assisting Private Switch Providers to build and integrate their services to the existing 9-1-1 Network. The Network went on line in 1986 and serves approximately 3 million citizens. A certain multi tenant newsletter forecasts there will be over 50 million residents behind privately owned PBX's by the year 2003.*

*There are approximately seventy apartment complexes with PBX's on line in Houston/Harris County, Texas as of today. Approximately thirty more will go on line before year end. In each complex usually one-half of a three hundred apartment complex will buy the PSP offering. It appears nearly 250,000 people will be served by the PSP's in Houston by the year 2003, or one in six persons.*

*In 1994 the Network contracted an outside inspector source to utilize a document simply called "Inspection Report." I have provided sample handouts. These have been used for each site. Further, we require the PSP to have the facility examined by a state licensed electrican prior to any testing.*

*The inspection document is used for each facility, regardless if it is a node or a stand alone switch. For the sake of time I will state the critical items and steps we examine.*

1. *Power, UPS and Air Conditioning.*
2. *Grounding meeting IEEE standards.*
3. *Trunk testing on each trunk.*
4. *Fifty (50) test call per trunk.*
5. *Rollover capability of the PBX to the message network in the event of 9-1-1 CAMA trunk failure.*

*Effective December 1, 1995: Phone (713) 625-9911 Fax (713) 864-9911*

*602 Sawyer, Suite 710 Houston, Texas 77007 (713) 863-9911 Fax (713) 864-9911*

*While this appears simple enough, you can see in my second handout the number of failures that occured until the PSP learned to do it right.*

*The need for comprehensive regulations is imperative to keep the standards at the highest level possible.*

*Fortunately (yet with significant delay) the Network has insisted that each Provider make the switch perform at the levels listed above. At this time there are software "fixes" on the following switches as a result of the Network's efforts:*

*Fujitsu, Hitachi, NORTEL Meridian Series, and NEC.*

Tests Performed @ _____ for:

## OPERATIONAL TEST.

- Notify 9-1-1 Supervisor (Dorothy) that testing is beginning. Provide your name, apartment name and address. (713) 787-7900 (w/ 300 DID numbers)

I. A. Dial 911 using (DID) extensions with all current ALI information.

✓

B. Capture 911 information on PBX and PC log file for verification of data integrity across all systems.

✓

C. Contact PSAP to verify that call was received and ALI information plus audio is correct.

✓

*D. Verify that local pager receives correct data in alphanumeric format.

N/A at this site

*Turn off pager sending unit.
Turn off print option.

E. Repeat every hundredth number to verify data base integrity.

✓

Repeat procedure "I" above with three (3) simultaneous calls. Verify correct logging to PBX, PSAP and PC for two (2) calls and overflow of audio for third call.

Perform 50 simultaneous calls. ✓

II. a. Repeat above procedures A, B & C with one PBX digital port disconnected to verify operation with PSAP. ✓

b. Repeat above procedures A, B, & C with both PBX digital ports disconnected to verify audio connection with PSAP. ✓