Texas 9-1-1 Newsletter

Commission on State Emergency Communications

Spring 2006

Mission Statement

To preserve and enhance public safety and health through reliable access to emergency telecommunication services.

CSEC
333 Guadalupe Street, Suite 2-212
Austin, TX 78701
Tel: 512.305.6911

NEXT GENERATION 9-1-1

Imagine the ability to exchange voice, data, text, photographs and live video through the 9-1-1 or emergency communications center. This would assist law enforcement, fire departments, and emergency medical services in tailoring their response to conditions at the scene of the emergency. There is no doubt that lives can be saved through the incorporation of these new call elements. Imagine also the ability to quickly and easily reroute emergency calls to another call center when the primary answering point is unavailable or overloaded. However, before this vision becomes a reality, changes will be required in the 9-1-1 infrastructure. The new infrastructure is being referred to as Next Generation Enhanced 9-1-1 or NextGen E9-1-1.

While the current 9-1-1 system has been a success story for more than thirty years, the existing 9-1-1 infrastructure is based on technologies and conventions that were established decades ago. The communications industry has adapted the infrastructure to meet public safety requirements over time, but it will not be able to support more advanced capabilities. Because the communications industry is moving toward packet data versus circuit switched communications, the existing infrastructure is a barrier to creating an integrated emergency call management infrastructure. The business models of emerging communications require innovative technology solutions and the 9-1-1 network must be able to adapt quickly in order to harness the added values these innovations offer for emergency response improvement. Fundamental and significant change is required to move toward such an infrastructure that offers enhanced capabilities and increased change capacity to accommodate both current and future emergency services operations.

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While the new infrastructure will make use of packet switched Internet Protocol (IP) technology, that does not mean that emergency calls will be carried on the Internet. Although some emergency calls may originate on the Internet, in order to provide the required reliability and security, most traffic will be carried on a new Emergency Services IP Network.

Implementing NextGen E9-1-1 presents both opportunity and challenge. The opportunity lies in the ability to enhance a vital public safety service. The challenge will be to marshal the resources required to effect the change. Many 9-1-1 industry professionals see the transition to IP technology occurring by 2010.

Next Generation Research Project

In the next few years, 9-1-1 is expected to go through a major transition from analog technology to digital. The Commission on State Emergency Communications (CSEC) has joined a number of interested groups in co-sponsoring a research project to explore the future of 9-1-1. Texas A&M University, Columbia University, and the University of Virginia, along with selected Public Safety Answering Points (PSAP) in Texas and Virginia are conducting the research under a $570,000 grant from the National Telecommunications and Information Administration. Other sponsors include the state of Virginia, the Internet2 Consortium, the National Emergency Number Association (NENA), Cisco, and Nortel.

In the project, a prototype Internet Protocol based architecture developed by Dr. Henning Schulzrinne at Columbia University is being extended into PSAPs in Bryan-College Station and Charlottesville as a proof of concept. Texas A&M University is doing additional development and coordinating field work under the direction of Dr. Walt Magnussen. Requirements developed by NENA will be used as the basis for evaluation. Call takers at each PSAP will participate in the testing and provide feedback for the evaluation portion of the project.

In addition to demonstrating the ability to handle emergency calls from devices using new technologies like Voice over Internet Protocol (VoIP), the project is expected to demonstrate the value of sending additional data along with emergency calls. The project is also expected to demonstrate the ability to transfer calls between distant PSAPs and explore the use of off-the-shelf equipment in PSAPs. Results of the project will be shared with the public safety community as well as industry and the public.

NEXT GENERATION 9-1-1 LINKS

NENA
National Emergency Number Association
www.nena.org

NRIC
Network Reliability & Interoperability Council
www.nric.org

Congressional E911 Caucus & E911 Institute
www.e911institute.org

ITS
Intelligent Transportation Systems,
Dept. of Transportation
www.its.dot.gov/ng911

PSAP Disaster Recovery

During the last year, various public safety answering points (PSAPs) in the CSEC program have directly experienced the effects of natural disasters on their call centers. Hurricane Rita hit hard in the South East and Deep East regions, while the more recent wildfires have ravaged the West Central and Panhandle regions. The 9-1-1 programs of the regional planning commissions (RPCs) have provided valuable assistance to the PSAPs during these disasters. Pre-established contingency routing plans allowed for the smooth transition of calls to alternate PSAPs that were less impacted. Call takers worked many overtime hours to meet the increased call volume and to supply a calm voice and directions to citizens. Addressing and mapping departments provided maps and location information to the various emergency departments.

While the RPCs and PSAPs have done an excellent job of implementing contingency plans during recent natural disasters, they are limited by the structure and age of the existing 9-1-1 telecommunications network. In the current environment, rerouting calls is a mostly manual process that is contingent upon many individuals associated with the RPCs, the PSAPs and the telephone companies. The CSEC is exploring network and equipment options that would transition the 9-1-1 network to a digital, Internet Protocol-enabled (IP-enabled) network. A more intelligent digital network would provide greater reliability, redundancy, and the ability to automatically reroute calls.

Poison Control Centers Set To Upgrade Equipment

The Commission on State Emergency Communications (CSEC), in partnership with the Department of Information Resources (DIR), is preparing to replace call taker equipment at all of the centers in the Texas Poison Control Network (TPCN), and to transition the TPCN to an Internet Protocol-enabled (IP-enabled) network. Funding for this project is provided via contingent revenue riders contained within the CSEC FY 2006 - 2007 appropriation. The Comptroller of Public Accounts has certified that sufficient revenue will be generated to support these appropriations.

The TPCN is comprised of six regionally located poison control centers as required by Health & Safety Code Ch. 777. The poison control centers for the state are as follows: The University of Texas Medical Branch at Galveston; Parkland Memorial Hospital in Dallas; The University of Texas Health Science Center at San Antonio; R.E. Thomason General Hospital in El Paso; Scott & White Memorial Hospital in Temple; and Texas Panhandle Poison Center in Amarillo.

The TPCN is an emergency public health service provider. Network sustainability and equipment reliability is essential for the citizens of Texas to reach these services. The DIR will support the TPCN over its advanced IP-enabled telecommunications network. CSEC is working closely with DIR to utilize and leverage its network that currently supports the delivery of 2-1-1 calls to regional call centers. This IP-enabled network is a secure, dedicated network with no public internet interface.

The call taker workstations and other on-site equipment will be provided through a DIR-contracted seat management vendor. CSEC plans to begin the equipment replacement and network transition before the end of FY 2006.

VoIP 9-1-1 Update

The CSEC, 9-1-1 Home Rule City (HRC) Municipalities and Emergency Communications Districts (ECDs) have been working closely with the interconnected VoIP Service Providers (VSPs) to implement enhanced 9-1-1 for VoIP telephone customers in Texas. Major providers of this service report deployment of E9-1-1 service to over 200 of Texas' approximately 600 public safety answering points (PSAPs).

The Federal Communications Commission (FCC) has mandated that all interconnected VSPs implement enhanced 9-1-1 service for their customers. With the deployment of enhanced 9-1-1 service, the VoIP 9-1-1 call is routed to the correct PSAP, along with the caller's telephone number and address This information displays at the PSAP and can be used to dispatch emergency responders.

Contingency Funding

On January 26, 2006, the Comptroller of Public Accounts notified the CSEC that sufficient surcharge and service fee revenues would be generated during the 2006-07 biennium to fund contingent appropriations provided in Rider 5 and the majority of Rider 4 contained in the General Appropriations Act approved by the 79th Texas Legislature. These appropriations will be used as directed by the Legislature to enhance the CSEC 9-1-1 and Poison programs.

The contingent appropriation will be allocated according to statute and Commission policy to increase 9-1-1 budget authority of the regional planning commissions (RPCs), which will allow for subscriber growth, equipment replacement, wireless Phase II mapping, and increased network reliability. In the Poison program the appropriation will be used to maintain call taker salary increases appropriated in the last biennium and to fund poison center call taker equipment upgrades.

Texas 9-1-1 Newsletter is an external publication of the Commission on State Emergency Communications. We want to hear from you. E-mail your questions and comments to the newsletter editor at: info@csec.state.tx.us.

CALENDAR AT A GLANCE

Commission Meeting	**May 18**
Telecommunicator Nominations Due	**May 25**
Commission Meeting	**July 20**
TX-NENA/CSEC Conference & Awards	**August 28 - 30**

For the 18th year, the CSEC will present awards to outstanding 9-1-1 call takers at the annual Telecommunicator Awards Luncheon on August 30, 2006, in Austin.

The nomination deadline for the 2006 Public Safety Telecommunicator Awards is May 25, 2006. Every PSAP in Texas is encouraged to participate. For nomination instructions, send an e-mail to: robert.gonzalez@csec.state.tx.us.

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333 Guadalupe Street
Suite 2-212
Austin, TX 78701

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