Proposed NTIA VoIP PSAP Project
Texas A&M University
March 2004

Executive Summary

It is widely held that all voice services will be transported over a converged voice, data and video network in the relatively near future. This converged network will not only reduce operational and maintenance costs, but it will also enable advanced features that have been difficult to support in a circuit switched environment. While the benefits of the converged network are immense, they will not be fully realized until we overcome some obstacles that are a function of the fact that this is an emerging technology.

There are three significant factors that are impediments in the deployment of Voice over IP. They are 1.) packet based network reliability issues, 2.) providing network based power for the telephone instruments and 3.) processing emergency E-911 calls. This project proposes to advance the resolution of the third issue by developing a standard method for making and handling VoIP 911 calls and demonstrating that process in a working VoIP PSAP.

The proposed PSAP would allow the participating Universities to make emergency calls from VoIP based telephones to the PSAP without any of the traditional conversion to analog CAMA trunks. The calls would contain the location information utilizing a process proposed in a recent draft RFC authored by Dr. Henning Schulzrinne of Columbia University.

Participants

Texas A&M University – Academy for Advanced Telecommunications and Learning Technology (AATLT). Texas A&M would take the lead role by writing the grant and coordinating the project. TAMU would be responsible for the implementation portion of the PSAP deployment.

Columbia University. Columbia University, under the direction of Dr. Henning Schulzrinne, would provide leadership in the development of the proposed standards as well as develop the first working prototype PSAP terminals.

Virginia University to be named. A Virginia University would work with a local PSAP in demonstrating the capabilities of forwarding packet based E911 emergency calls to a remote PSAP.

Brazos County E911 District PSAP. The Brazos County E911 District would provide a working PSAP close to Texas A&M University that would demonstrate the call routing capabilities.

City of College Station PSAP. The City of College Station PSAP would demonstrate the capability of rerouting emergency calls in the event of a PSAP failure.

State of Texas Commission on State Emergency Communications (CSEC). The CSEC will establish PSAP requirements, provide E-911 vendor liaison services and provide partial funding support.

State of Virginia Commission on State Emergency Communications (CSEC). The CSEC will establish PSAP requirements, provide E-911 vendor liaison services and provide partial funding support.

National Emergency Number Association (NENA). NENA will provide interstate coordination and act as a liaison with the Federal Communications Commission (FCC).

Timeline

The NTIA grant request is due on April 27, 2004. All commitments must be documented and received by Texas A&M University no later than April 15, 2004. If awarded, the grant project should commence in the Fall of 2004 and it is a two year grant.