Broadband USA Applications Database

Applicant Name: NATIONAL EMERGENCY NUMBER ASSOCIATION

Project Title: Increasing Public Safety Broadband Demand by Enabling Multi-State Next Generation 9-1-1 Capabilities

Project Type: Sustainable Broadband Adoption

_______________________ Executive Summary _____________________

Achieving integrated and interoperable emergency response systems requires that public safety has access to broadband, public safety networks are interoperable and interconnected, and most importantly, the right data and applications can be transmitted over broadband-based networks. As 9-1-1 is the cornerstone of emergency communications, the National Emergency Number Association (NENA) recognizes that a major step forward can occur with the implementation and demonstration of Next Generation 9-1-1 (NG9-1-1) capabilities that interconnect public safety answering points (PSAPs) using broadband services to allow for voice, video and data/text communications. NENA's proposal seeks to implement several national elements called for in NG9-1-1 standards that are common to all NG9-1-1 deployments. This is an important step in improving public safety and increasing public safety broadband demand nationwide. Advancements in modern communications technology have created the need for a more advanced system to access emergency care. While the existing 9-1-1 system has been a success story, it is now being stretched to its limit as technology advances. Many PSAPs rely on outmoded technology and, unlike the rest of the economy, they do not sufficiently take advantage of broadband technologies. To complicate this problem, new wireless and IP-based communications devices are being developed at a rapid rate, offering capabilities such as text and video communications. These technologies are particularly useful for individuals with disabilities. Unfortunately, the current 9-1-1 system was never intended to receive calls and data from these new and emerging technologies, let alone be able to pass this information on to first responders. The results are a public that cannot communicate with 9-1-1 in the way that they are used to communicating with others, and responders without critical information necessary to respond to an emergency event. Obviously, the new NG9-1-1 environment will differ considerably from the current 9-1-1 environment as it requires an overhaul of all aspects of 9-1-1 from governance to the delivery of services. It will establish the foundation for emergency communications services in a wireless mobile society. The public will be able to make voice, text, or video emergency "calls" from any communications device. And, the PSAP will be able to receive data from personal safety devices such as Advanced Automatic Collision Notification systems like OnStar, medical alert systems, and sensors of various types and transmit it to any entity involved in the emergency event. The success of NG91-1 relies on a number of common elements that must be developed at the national level, standardized and then replicated across states and regions as they deploy NG9-1-1 systems. This is the focus of NENA's proposal. During NENA's 2-year project, it intends to: develop the architecture and demonstrate a national-level Emergency Services IP Network (ESInet) necessary for a multi-state, interconnected, broadband enabled NG91-1 system ('Internetwork');
develop and implement national-level elements called for in NG9-1-1 standards; Develop and demonstrate interoperability enablers (core services) such as an agency locator and identity management and access control service; develop best practices for NG9-1-1 governance; design and disseminate training materials for the new broadband-based environment; and, ensure that the public, government officials, and responders become aware of the capabilities and benefits of NG9-1-1. Conventional approaches to 9-1-1 and emergency communications tend to focus primarily on expanding broadband infrastructure, which addresses only a part of the problem for public safety, and doing so at a local level. Our innovative proposal is focused on a multi-state effort to stimulate robust use of broadband by our nation's 6,183 PSAPs. The focus is on software services to harness broadband infrastructure, not infrastructure alone, and a replicable multi-state effort, not a stand-alone local project. Our project will create a significant reason for 9-1-1 leaders to demand and use broadband by enabling substantially improved emergency communications capabilities. These public safety benefits cannot be obtained by focusing only on infrastructure or only on local projects but by taking a broader multi-state approach exemplified in this project. While many states are implementing NG9-1-1, many are holding back, waiting for the technology to mature. This project will remove that barrier and provide the impetus for moving forward. To ensure multi-state compatibility, NENA will be partnering with six states/regions; Alabama, Connecticut, Minnesota, the Counties of Southern Illinois, Texas, and Washington. There are 1,226 PSAPs, 20% of total PSAPs in the US, in our project area, as well as 20,000 first responder organizations, each with demands for use of broadband networks, equipment, and applications. These organizations as well as the populations they serve will be the beneficiaries of NENA's project work. In addition, recognizing the need to create an entity comprised of leading public safety organizations, NENA formed the next Generation Safety Consortium (NGSC) to coordinate the deployments of regional and state ESInets. NGSC is an integral part of the NENA project and will help to ensure public safety support and buy-in for this project. This unique mix of project partners has a wide geographic reach and valuable expertise in public safety communications that will allow for continued work and sustainability beyond this project. NENA and its skilled management team are well prepared to launch the program activities detailed in this grant application as soon as funding is made available. NENA's management partner, L.R. Kimball, has managed numerous projects of comparable size and complexity for federal and state government agencies, including the Department of Transportation and Department of Defense. Further, NENA and Kimball have previous collaborative experience on multi-million dollar, multi-year projects related to next generation, IP-based emergency communications. While NENA is submitting this application, with Kimball as a project management partner, NENA members and supporting state/regional government partners will be instrumental in completing project deliverables and sustaining broadband use long term. Our proposal directly addresses multiple BTOP statutory purposes. It will profoundly improve the use of broadband by public safety entities, and thus increase demand for access to broadband and the applications enabled by broadband, not only by PSAPs, but by the agencies wishing to exchange information with them. Since safety agencies exist in all communities, our demand creation will help support the provision of broadband to unserved areas and improve the quality of broadband in underserved areas. It will provide education, awareness, and training for public safety agencies. Today, there are currently 6,183 PSAPs in the United States with approximately 100,000 9-1-1 call takers. As NG9-1-1 is rolled out, these call taker jobs will change requiring NG9-1-1 training programs so that call takers can upgrade their skills. In addition, training will
be required for other public safety personnel who routinely interface with 9-1-1. The NENA initiative will lead a comprehensive training effort with 9-1-1 and public safety leaders in the project area. Through interconnected NG9-1-1 systems, access to 9-1-1 and emergency services for individuals with disabilities will dramatically improve, thus enhancing these capabilities for a traditionally vulnerable population. Finally, this project will stimulate economic growth and job creation. In the short term, new jobs will be needed to support and maintain this advanced technological environment and train personnel on the new NG9-1-1 environment. In the long term, jobs will be created as new products and services utilizing NG9-1-1 systems are developed, introduced, and used. The total cost for this project is $15,000,000. This cost includes requested BTOP funds of $6,831,458, and matching funds of $8,168,542, a nearly 55 percent match from states, multi-county regions, and others who will be working on the project.