

## **9-1-1 in a Mobile World: NENA-DOT Project to Speed Wireless Implementation**

*By Jim Goerke, NENA Wireless Implementation Director*

*EDITOR'S NOTE: To accelerate the deployment of wireless location technology throughout the country, NENA has entered into a contract with the US Department of Transportation (USDOT) which will help support a long-standing public safety priority of USDOT, and a current national priority of Secretary of Transportation Norman Mineta. The sidebar at the end of this article details the tangible items PSAP managers will gain from this project. Jim's article explains the history and purpose behind the NENA-DOT project, as well as the project steps NENA will be responsible for and the benefit to NENA members and 9-1-1.*

Transportation and public safety are firmly linked—a linkage reflected in national transportation policy for many years. Indeed, the National Highway Traffic Safety Administration (NHTSA) was established by the Highway Safety Act of 1970 as the successor to the then existing National Highway Safety Bureau. As part of the US Department of Transportation (USDOT), NHTSA's mission is to “save lives, prevent injuries, and reduce traffic-related health care and other economic costs.”

The application of new information and communication technologies to improve the efficiency and safety of our transportation systems has been around for over a decade, and is now embodied in USDOT's Intelligent Transportation Systems (ITS) program. In 1994, USDOT established the ITS Joint Program Office (JPO), and housed it in the Federal Highway Administration (FHWA). The objectives of the JPO include:

- ✍ Providing strategic leadership for ITS research, development, testing, and deployment;
- ✍ Guiding departmental wide ITS policy coordination; and
- ✍ Ensuring resource accountability for the program activities involved.

Public safety, of course, is right in the middle of these activities. As NHTSA observes in its current agency Strategic Plan, “injury is the leading cause of traumatic death for all ages from one to 44, and motor vehicle injury is the number one cause of death from injury (accounting for almost one-third of the deaths each year).” And, as we know, transportation systems support the emergency movement of public safety resources to incident sites—a process, in itself, that involves traffic operations and management.

Applying information and communication technologies to incident detection, response, and management is key to not only an efficient and safe transportation infrastructure, but the cornerstone of E9-1-1 as well. Our business has always been about providing the right information at the right time in order to contribute to efficient and beneficial

emergency response. That is what the ITS public safety initiative is all about, and why our public safety community is an active partner with USDOT in these efforts.

Working through the JPO, the above USDOT program is focused on several areas, including prevention, detection and notification, response, on-scene operations, and transportation to care and trauma facilities. The envisioned benefits include:

- ✍ Improved emergency injury and illness treatment due to faster response times and better communications links to medical centers;
- ✍ More efficient deployment of public safety personnel and equipment; and
- ✍ Reduced traffic congestion and hazards stemming from incidents and emergencies.

Current program activities of the office include efforts to facilitate wireless E9-1-1 implementation, automated crash and incident detection, notification and response, coupled with leadership, coordination and outreach to the public safety community.

### **Wireless E9-1-1**

Wireless E9-1-1 is obviously a key part of this initiative. The ubiquitous implementation of Phase II will certainly benefit incident detection and notification, and may help manage an incident as well. As a result, Transportation Secretary Norman Mineta has made Phase II implementation one of his departmental priorities. In response, the JPO has initiated several activities, including a statewide demonstration in New York to identify institutional barriers to wireless E9-1-1, and the development of technical strategies, and targeted implementation assistance to facilitate the process. This is where NENA became involved.

Recognizing the joint interest in these matters, NENA submitted a proposal to USDOT in summer 2001. The proposal outlined a comprehensive plan to accelerate the deployment of wireless location technology in all 50 states. The plan identified a number of institutional, technical, and regulatory barriers to deployment, and suggested program approaches to address those issues with USDOT coordinated support. The result is a contract between NENA and USDOT to develop the necessary tools, technical guidance, and training and outreach materials to facilitate implementation of wireless E9-1-1.

Included in the NENA-DOT project are the following project elements:

#### The Provision of Operational and Technical Assistance

The first part of this project element calls for NENA to develop and maintain a fundamental resource knowledge base, along with the establishment of a national clearing house of legal contracts, forms and trends inherent in the implementation process. The emphasis will be on those contracting processes necessary for PSAPs to enter into service agreements with the wireless companies in their jurisdictions. Technical assistance will also be provided, as necessary and appropriate, to help facilitate contract negotiation.

The second part of this project element will be the development of an Internet-based Wireless Deployment Profile, supported by a tracking system that accurately depicts the

current status of wireless E9-1-1 implementation throughout the nation. Access to this information will be provided through a point-and-click map of the nation, with state and county boundaries. This kind of dynamic deployment inventory will be essential to drawing attention to key roadblocks in the implementation process.

Finally, in cooperation with other public safety resource providers, this element also includes the development of a technical assistance component that can directly assist stakeholders in moving forward with wireless implementation. The component will be designed to rapidly and effectively deploy assistance as appropriate and necessary. State-oriented wireless legislation around the country, for example, commonly includes the establishment of a state funding board charged with the responsibility of determining how wireless funds are collected and distributed in that state. Sharing that information, along with key success stories, will be valuable.

#### The Technical Analyses and Evaluation of Wireless E9-1-1 Implementation Approaches and Performance Issues

This project element calls for NENA to analyze and evaluate various wireless location technologies and their unique characteristics, with the intent of providing related technical assistance to the PSAP community, to the government, and other stakeholder organizations as appropriate. The result will include recommendations and advice for expediting implementation of national wireless E9-1-1 services. Also included in this analysis are the deployment and interface of telematics and similar devices and services with PSAPs, and their potential impact on PSAP operations.

#### The Development and Provision of Educational Outreach Programs

This project element includes the production of training and outreach materials to support wireless implementation. These resources will include instructional videos for PSAP personnel and other stakeholders, white papers, and presentation materials to be used at various educational forums. Part of this element's strategy includes the sponsorship of educational sessions at stakeholder conferences to share information and coordinate activities.

Much of the development work for all the above elements will occur over the next six to 12 months, and will require a great deal of support from NENA members and committees, other public safety organizations like APCO (who is a subcontractor to NENA in this project) and NASNA, as well as providers, vendors and others involved in the process. The deployment profile, alone, will require input from the entire PSAP community, but is essential in gauging and monitoring progress towards nationwide service.

All of this has taken on added meaning following September 11, 2001. The events of that day tragically add a footnote to the importance of moving swiftly through this process. The kinds of tools that ITS and wireless E9-1-1 offer will play an essential role in preventing and responding to homeland security challenges, particularly on our nation's highways. ITS America recently published its "National Intelligent Transportation

systems Program Plan: A Ten-Year Vision.” The Plan was prepared in cooperation with USDOT, and comments that:

*While all terrorist attacks cannot be prevented, the technologies of Intelligent Transportation Systems can offer great promise for preventing attacks . . . Should an attack occur [however], many of the technologies and the communication networks being used today to better manage transportation systems can be utilized to assess the extent of damage and facilitate the movement of traffic for recover, evacuation or quarantine.*

9-1-1 is part of that team—perhaps even a key part. This kind of partnership between NENA and USDOT will play an important role in providing the public safety community with the tools to quickly and effectively implement wireless E9-1-1. The process is not an easy one. But, by working together, we can make it easier. The result will be safer roadways, and a more secure homeland.

#### SIDEBAR:

##### DOT Program Benefit to PSAP Managers

The NENA-DOT project will feature a number of deliverables that will be a direct asset to NENA members and PSAP members. The list below details the specific deliverable components of the project. As components are completed, NENA will publicize their availability through our publications and the NENA web site.

##### National Clearinghouse

--Legal contracts, forms, procedures, and how-to procedures for implementing wireless Phase I and Phase II services, the Clearinghouse will provide valuable insight for trends occurring in the nation.

##### Wireless Deployment Profile

--Internet-based profile at the national, state and county level. This web-based profile will allow PSAP managers and all other wireless stakeholders to view the progress of Phase I and Phase II implementation in the United States.

##### Workshop Meetings for State Funding Boards

--Meetings for representatives of state funding boards to adopt model and streamlined practices and procedures.

##### Report on Location Technologies

--Technical analyses and evaluation report on wireless location technologies.

##### White Papers

--On issues related to telematics and non-traditional access to 9-1-1.

--On product development, services and technical issues associated with Phase II implementation.

Instructional Videos

- Instructional video for 9-1-1 managers on implementing wireless Phase I and Phase II.
- Informational video for Legislators and Stakeholders on the Wireless Implementation effort.