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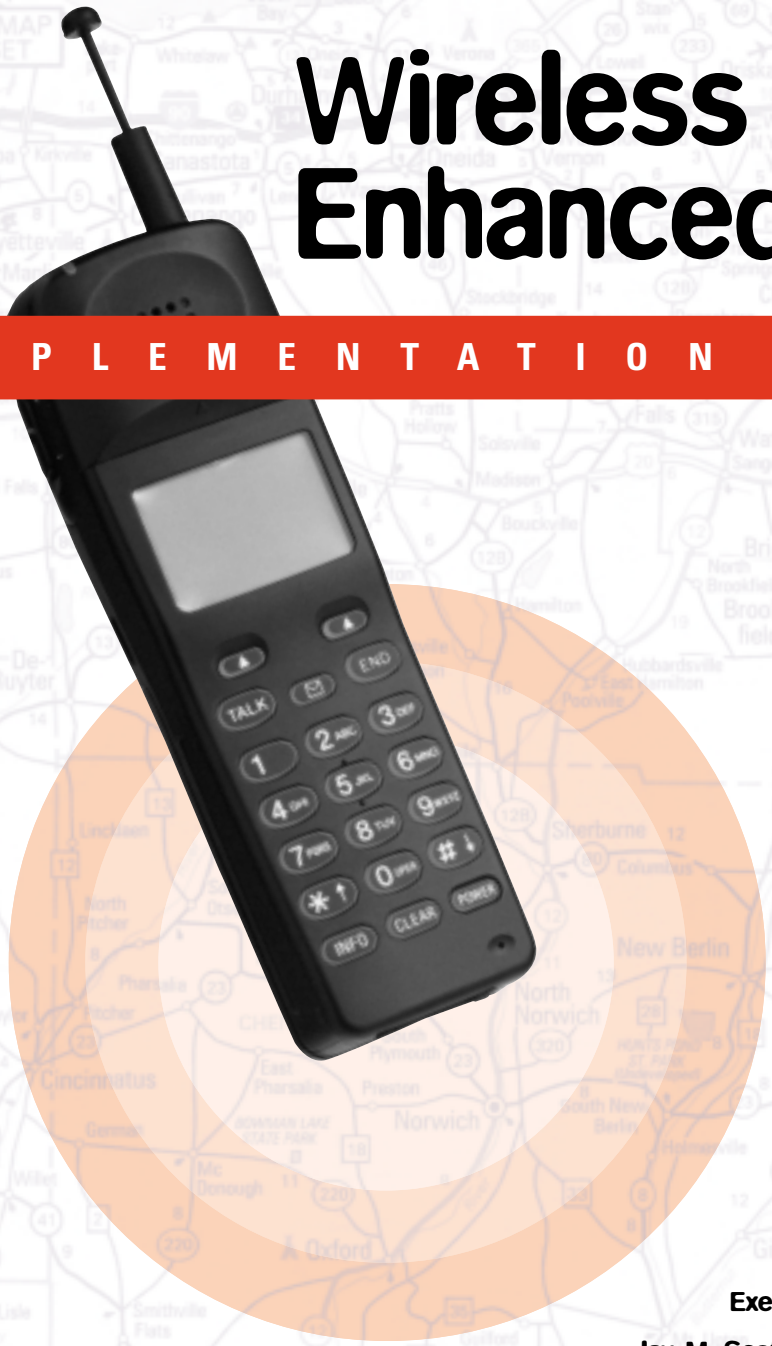
*enhanced 911 for cellular phones*

NEW YORK STATE

# Wireless Enhanced 911

## IMPLEMENTATION GUIDE

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This project funded by a grant from:


C911ular NYS EMERGENCY CALL LOCATOR PARTNERSHIP

State University of New York Upstate Medical University

ITS U.S. Department of Transportation

NHTSA People Saving People www.nhtsa.dot.gov

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NEW YORK STATE

# Wireless Enhanced 911

## IMPLEMENTATION GUIDE

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# Executive Summary



## Background

Enhanced 911 service is the backbone of the emergency communications system in this country.[1,2,3] When citizens are in need of an emergency response due to injury, illness, fire or crime, they can dial 911 from their wire-line telephone and know that the emergency dispatcher taking their call will automatically receive their name, address and phone number.[4,5] This enhanced 911 (E-911) system has been shown to reduce response times of police, fire and EMS services in times of crisis even if the caller is unable to communicate. [6,7,8]

Unfortunately, the rapid proliferation of wireless phones has reduced the efficacy of the E-911 system, as they do not currently provide emergency dispatchers with automated caller location or identification information.[9] This has lead to dramatic and detrimental outcomes for some users who were unable to describe where they were or were physically unable to communicate. If systematic improvements aren't made soon, the life-saving capabilities of our emergency communications system will be severely limited. [9,10]

In September 1999, the Department of Emergency Medicine at SUNY Upstate Medical University in Syracuse, New York, was awarded a three-year grant from the US Department of Transportation's National Highway Traffic Safety Administration (NHTSA) and Intelligent Transportation Systems (ITS) Joint Program Office, to facilitate the development of a wireless enhanced 911 (WE-911) implementation guide for New York State. Further, NHTSA hoped to determine whether the application of a medical leadership approach would help to resolve barriers to implementation within New York.

**If systematic improvements aren't made soon, the life-saving capabilities of our emergency communications system will be severely limited.**

Early in the project, key stakeholders were gathered to define barriers to implementation, identify key resources and develop strategies that use resources to overcome implementation barriers. At their first meeting, this group of stakeholders formed the New York State Emergency Call Locator Partnership, a coalition of interested stakeholders dedicated to resolving key issues in New York. Driven by the altruistic dictum, "consider first the well being of the patient", the partnership rallies to a common theme, "We all agree to do what is best for any current or potential victim of injury, illness, fire or crime".

## Barriers

Three key barriers to implementation were identified early in this process. They include wireless 911 call routing, funding for necessary systems upgrades and closest car (mutual aid) concept. Other barriers include lack of universal Public Safety Answering Point (PSAP) readiness, confidentiality concerns, technological interoperability, political issues and legislative issues.

Funding for technological upgrades remains the most pressing barrier in New York. Legislation is required to change the flow of wireless surcharge funds so that county PSAPs may make use of them.

**Funding for technological upgrades remains the most pressing barrier in New York. Legislation is required to change the flow of wireless surcharge funds so that county PSAPs may make use of them.**

## Solutions

The majority of counties are moving forward with hardware and software upgrades despite the lack of financial support. Most of these have declared readiness for WE-911 data and are negotiating with the wireless carriers for service. More effort should be put forth in assisting the local, county, regional and state PSAPs as they prepare to receive enhanced 911 data from wireless telephones.

The financial resources needed to prepare for WE-911 are significant. Included in the fiscal year 2002–2003 New York State budget are provisions for funding assistance for municipal and county PSAPs based on per capita distribution. PSAPs would also be able to apply for grants or participate in bonding programs for reimbursement of eligible 911 expenses. The New York State Assembly feels that this funding will expedite the roll-out of a WE-911 emergency system as quickly as possible.[21]

## Stakeholders

The stakeholders involved in the WE-911 implementation process for New York State all anticipate significant investments in equipment and supporting software, personnel, training and infrastructure. They share a uniformity of purpose and cite the need for improved emergency service (police, fire, EMS and transportation) and emergency communications as their primary motivation. However, even seemingly minor changes in policy and procedure have profound effects on the stakeholder groups in New York State.

# Introduction

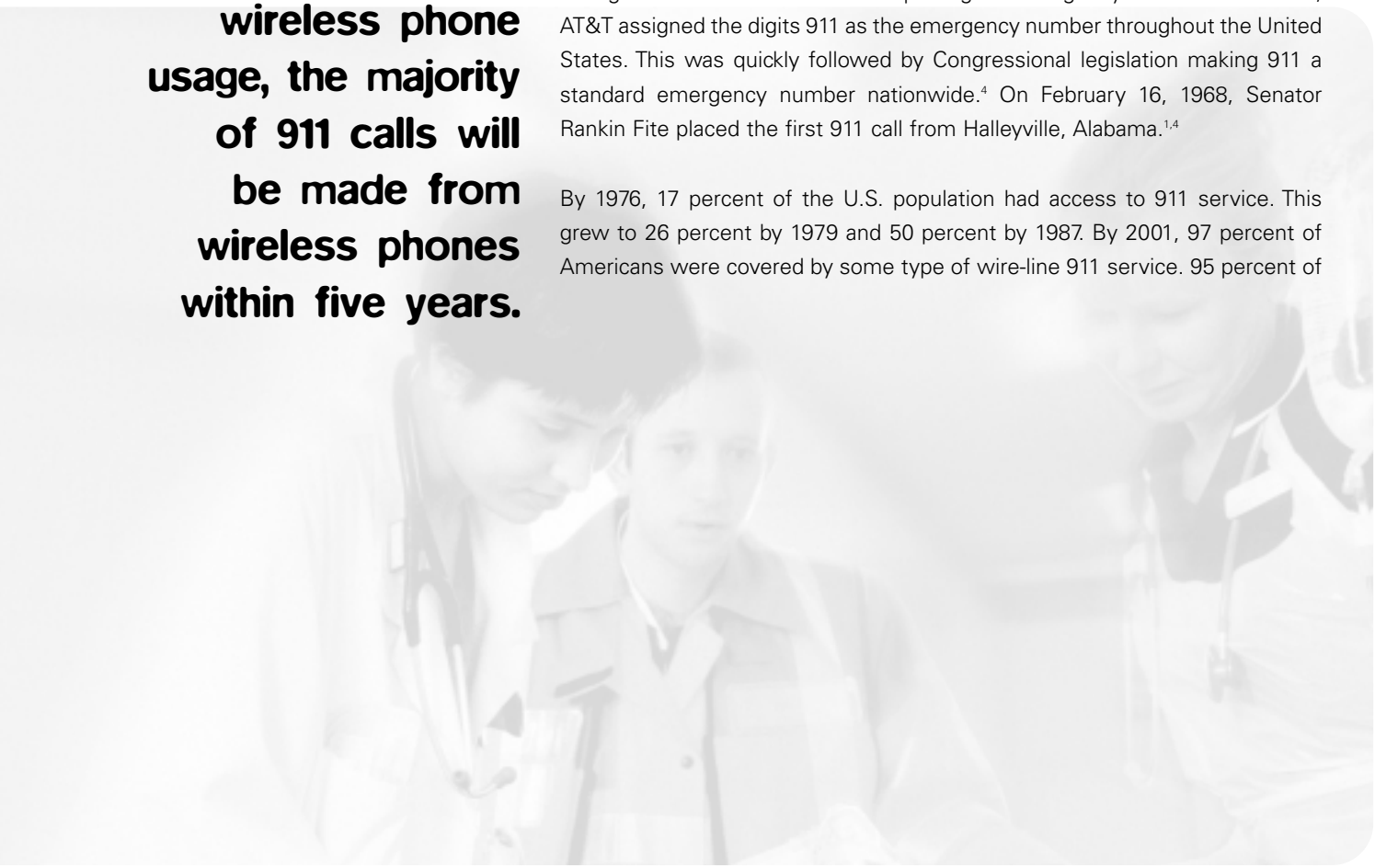


911 is the three digit telephone number assigned throughout the United States as the universal number to call for emergency assistance.[1,2,9] This number provides direct access to the local/county/state Public Safety Answering Point (PSAP) responsible for the appropriate dispatch of emergency resources for individual calls for emergency assistance. Basic 911 provides only a voice connection to a predetermined PSAP. Emergency responders do not gain any information other than what is provided by the caller. Enhanced-911 automatically directs a call to the appropriate PSAP and identifies a caller's location and originating number in times of crisis.[5]

**Based on the projected rate of increase in wireless phone usage, the majority of 911 calls will be made from wireless phones within five years.**

The push for a nationwide emergency telephone number first came in 1957 when the National Association of Fire Chief's recommended the use of a single number for reporting fires. Ten years later, the President's commission on Law Enforcement and Administration of Justice recommended designating a single number nationwide for reporting all emergency situations. In 1968, AT&T assigned the digits 911 as the emergency number throughout the United States. This was quickly followed by Congressional legislation making 911 a standard emergency number nationwide.[4] On February 16, 1968, Senator Rankin Fite placed the first 911 call from Halleyville, Alabama.[1,4]

By 1976, 17 percent of the U.S. population had access to 911 service. This grew to 26 percent by 1979 and 50 percent by 1987. By 2001, 97 percent of Americans were covered by some type of wire-line 911 service. 95 percent of



that coverage is enhanced 911.[1,6,8] Since it automatically routes the call to the correct PSAP and identifies a caller's location, enhanced service has reduced the amount of time emergency dispatchers and emergency responders must spend locating specific calls for help.[3,5,6,7,8]

Over the years local, state and federal agencies and the public have shown intense interest in the concept of E-911. This is due in part to concern over the increase in crimes, accidents, and medical emergencies, inadequate emergency reporting methods, the continued growth and mobility of the population and the need for improved homeland security. The concept of a single emergency number received at a central reporting agency has been well accepted and proven to be an effective component of the total emergency response system in many countries.[1,5]



46 thousand new wireless phone subscriptions are made each day.[5,12] The majority of wireless phone subscribers buy their phones for safety reasons.[12] Unfortunately, wireless phones are not currently capable of providing emergency dispatchers with specific enhanced-911 information (automatic location and number identification) like wire-line phones do.[3,5] More than 30 percent of 911 calls are now made from wireless phones. Based on the projected rate of increase in wireless phone usage, the majority of 911 calls will be made from wireless phones within five years. Of the 150 million calls made in the year 2001, 43 million were made from wireless phones.[5,12] This represents a ten-fold increase in wireless 911 calls from just ten years ago. By 2005, reduction of the wire-line enhanced 911 system call volume will render it inadequate. The proliferation of wireless phones without the implementation of wireless enhanced 911 service is eroding the ability of emergency services to locate the caller and insure the timely arrival of help.[8,9] This decreased functionality due to the increasing percentage of non-enhanced wireless 911 calls can be considered a critical degradation of our enhanced-911 system. Further, non-enhanced wireless 911 calls overtax the resources of dispatch centers because they require extensive time, effort and personnel to attempt to identify the caller's location through unconventional means.

**Unfortunately, wireless phones are not currently capable of providing emergency dispatchers with specific enhanced-911 information (automatic location and number identification) like wire-line phones do.**

We cannot fully assess the effect of wireless telephone growth on the emergency health care system because we are not able to statistically analyze call routing or dispatch time intervals. However, each layer of human intervention in the dispatch process causes delay and every delay is potentially detrimental to patient care. An enhanced 911 system for wireless phones will allow the emergency communication system of this state to immediately identify a caller's location, route their 911 call to the appropriate local/county/state PSAP, and most efficiently dispatch the appropriate emergency resources.

The Federal Communications Commission (FCC) mandated a two-phase plan for implementing wireless 911 in this country. **Phase I**, to have been implemented by April 1998, requires call-back numbers and cell site sector information about each incoming wireless 911 call.[5,13,14,15,16] This system would provide a general indication of the caller's location, although the area may be as large as 100 square miles. **Phase II**, to have been implemented by October 2001, required wireless carriers to provide PSAPs with automatic location identification (ALI) for each wireless 911 call.[5,13,14,15,16] The wireless location must provide an accuracy radius of 125 meters or better.[13] Phase II will enable immediate response to emergencies because automatic location data will

be displayed within seconds on the dispatcher's computer mapping terminal for all wireless and wire-line 911 calls.[5,13]

Provision of the Phase I and Phase II data as mandated by the FCC is dependent upon the local/county/regional/state PSAPs declaring themselves "ready" to receive the data.[5,14] PSAP readiness declarations are dependent on several technologic upgrades to software and equipment.[1,5,13] Once a PSAP has declared readiness, the FCC mandates that wireless carriers have six months to provide enhanced 911 data unless a waiver is granted to the wireless carrier for an extension of the FCC deadline.[13] To date, several of the wireless carriers have applied for extensions so that they may integrate enhanced services into their coverage areas. It is clear that provision of WE-911 services is dependent on the readiness of PSAPs to receive data in the specified format.



Changes to our state's PSAPs will be driven by technological changes as well as legislative changes. The changing demographics of wireless phone use in New York has necessitated changes to PSAP capabilities.

While Long Island and the counties of New York City use local dispatch centers to answer 911 calls, wireless 911 calls from the majority of New York State's land mass are routed to the New York State Police (NYSP) dispatch system and screened prior to being forwarded to local or county PSAPs. This routing mechanism began almost two decades ago as the vast majority of wireless 911 calls came from vehicle mounted wireless phones on the state's highways.[17] The NYSP were the logical recipients of those calls as they were the agency primarily responsible to provide service to the highways. The rapidly growing popularity of hand-held wireless phones has caused a dramatic shift in the nature and types of calls received by the state's PSAPs. In response to this shift, many people have advocated for a change in the call routing patterns to enable the local/county PSAPs direct receipt of calls originating in their jurisdiction.[17] Such a change in routing patterns could reduce police, fire and EMS response times to those calling for help by reducing:

- The time needed to route a call to a PSAP.
- The number of call screenings that occur.
- One or more layers of human interface.
- The "time to dispatch" interval.
- The "time to pre-arrival instruction" interval.

Although legislation is pending in New York that would allow for direct call routing to the county PSAPs, wireless carriers should be notified early in the process if the county or municipality desires to have wireless calls routed directly to the PSAP.[1,14] While many individual counties have passed resolutions requiring direct routing from wireless carriers, there is the question as to whether or not these resolutions can supersede NYS law.[18]

The majority of citizens of this state are still largely unaware that their wireless phones do not provide enhanced 911 features. They are dependent on the public safety community to improve the emergency communications system. The provision of enhanced 911 services for wireless phones will ensure that our communications safety net remains intact.

# Implementation

This country's 6,800 PSAPs are now facing the challenge of implementing WE-911 technology. This is not an easy task considering the fact that no uniform implementation plans currently exist. Every wireless switch in the nation is Phase I capable but few PSAPs are able to utilize the information.[19] In 1994, the FCC adopted an aggressive deployment schedule to include all cellular and enhanced specialized mobile radio service licensees. In response to the FCC mandate, the nation's PSAPs must now technically upgrade their centers, negotiate with wireless carriers and Licensed Exchange Carriers (LECs) and implement WE-911 without the benefit of a standardized strategy.[13]

**It is clear that deployment of wireless E-911 will require mutual cooperation and dedication to satisfy the expectations of Congress, the FCC and most importantly, the public.**

It is important to consider that the FCC does not mandate PSAPs to acquire WE-911 capability. However, current sales and usage trends as discussed earlier, clearly indicate that PSAPs that do not acquire this technical capability will have difficulty providing emergency dispatch consistent with public and industry expectations. Local/county/state PSAPs that are not prepared to accept call data in this format could potentially face increased liability.

Since each county or 911 service area is unique demographically, technological and financial needs will vary depending on the size of the service area, call volume, and PSAP. However, the fundamental technological and structural needs of each are universal. The basic building blocks required to make wireless enhanced 911 (Phase I and Phase II) operations functional are applicable to each PSAP.

The scheduled, systematic implementation of WE-911 with the considered cooperation of wireless carriers and LECs is a necessary and achievable goal.[19] In a letter to the boards of directors of the National Emergency Number Association (NENA) and the Association of Public-Safety Communications Officials (APCO) President and CEO of the Cellular Telecommunications and Internet Association (CTIA) Thomas Wheeler stated:

"It is clear that deployment of wireless E-911 will require mutual cooperation and dedication to satisfy the expectations of Congress, the FCC and most importantly, the public."[19]

Mr. Wheeler's comments are especially applicable to the negotiation process that is necessary for PSAP administrators and county executives to undertake as they begin the process of planning for implementation.

## Local Needs

As local and county PSAP administrators prepare for the implementation of WE-911 service, it is important that they convene a committee of stakeholders that will help them identify needs, barriers and available resources. Key issues addressed by this committee will include finance, technological compatibility and interoperability, equipment needs, software needs and service expectations. Minimally, committee members should include:

- The county executive or his/her designee
- The county's chief financial officer
- The PSAP administrator (911 commissioner)
- Representatives from each of the wireless carriers
- A representative from the PSAP Licensed Exchange Carrier(s).
- At least one dispatch manager
- A representative from the medical community such as the PSAP medical director.
- Representatives from police, fire and EMS agencies.

Prior to establishing the committee, PSAP officials should forward letters to their wireless carriers and their LEC(s) requesting wireless Phase I and Phase II service. A sample letter, distributed by APCO can be found on the APCO website at <www.apcointl.org>. Individual counties should base their requests for negotiations and service on their PSAP size, structure and needs.

## Local Negotiations

Once the planning committee has been established, several items must be addressed:

- The method of call delivery must be established and agreed upon by all participants.
- Establish how the number of trunk lines from each wireless carrier to the selective routing tandems will be determined.

Wireless carriers are responsible for determining how many trunks are required to provide Phase I service to their coverage areas and how they will transmit that information to the PSAP.[5] It is important for the PSAP administrator to understand the flow of 911 calls into the PSAP and what alternate plans for system failure might exist.

**The wireless carriers will be providing a service to the PSAP and will, in most cases, expect/require reimbursement.**

Other negotiations with the wireless carriers will include their fees for providing wireless-911 call information for the PSAP.[5] The wireless carriers will be providing a service to the PSAP and will, in most cases, expect/require reimbursement. The specifics of the cost-per-call and cost-for-service fees should be detailed early. Final decisions on the financial structure of cost-of-service must be made with the consensus of the county administrators, county finance office, the PSAP administrator and the wireless carriers. Similarly, negotiations about the cost to upgrade the LEC trunk line(s), if necessary, should begin at this time. Based on FCC recommendations, the cost to upgrade the trunk line(s) will be borne by the PSAP. [13,19]

The wireless carriers who provide cell coverage in a given service area must begin discussions with appropriate LEC(s). It is important that they understand each others' role and begin to communicate regarding the ordering of trunk lines and database access. The PSAP administrator needs to facilitate conversations and foster a strong working relationship between these groups. This is also an appropriate time to include the CAD and mapping software vendors in the discussions. All involved parties should understand how the CAD and mapping systems would interface with wireless 911 calls. One may find that the CAD and mapping systems will require upgrades or replacement. The PSAP administrator is responsible to insure that all such systems are compatible with the selected mode of data transmission and capable of displaying Phase I and Phase II information.

**Written mutual aid plans that allow for the most efficient use of all emergency response agencies are essential to the efficient operation of any PSAP.**



After his Veto Message 32 concerning Bill Number 11379 entitled "An Act to Amend County Law in Relation to Wireless Telephone Service and Repealing Certain Provisions of Such Law Relating Thereto," Governor Pataki charged the Division of Criminal Justice Services (DCJS) to study the handling of wireless 911 calls in New York and make recommendations as to how the calls should be handled in the future.[17] Based on a five-month study, Commissioner Katherine Lapp submitted her report to Governor Pataki on March 1, 2001. As part of her report, Commissioner Lapp recommended required adherence to mutual aid protocols by all PSAPs in the dispatching of all emergency services, including law enforcement. Mutual aid protocols are designed to make the best use of all available public safety resources in a region by specifying how each agency can contribute to the most timely and appropriate response to an emergency.[17]

PSAP administrators are responsible for developing and maintaining written mutual aid plans for all departments and agencies that it dispatches. If complete mutual aid plans are not in place to include all law enforcement, fire and EMS agencies, negotiations to establish such should begin immediately. Written mutual aid plans that allow for the most efficient use of all emergency response agencies are essential to the efficient operation of any PSAP. EMS agency mutual aid plans, mandated by Article 30 of the NYS Public Health Law, exist to insure adequate service in times of peak call volume or unusual patient load when EMS agencies are likely to be overwhelmed. The NYSP have established several mutual aid agreements with Municipal Police and Sheriff's Departments. PSAP administrators can contact their local NYSP, Municipal Police and County Sheriff representatives to discuss such plans if they do not already exist.

## PSAP Needs

Deployment of WE-911 will require technical expertise and training. PSAP administrators must be prepared to carefully detail the physical structure of the PSAP, the number of staff needed to handle average and peak call volumes, the most appropriate computer equipment and software based on area demographics, and a training schedule that will allow all the PSAP personnel to be sufficiently trained on new equipment while keeping training and overtime costs to a minimum.

PSAP administrators should perform a self-assessment regarding their readiness to receive Phase I and Phase II data. Determinations of compatibility of CAD and mapping software systems should be made early in this process. It may be necessary to upgrade, replace or purchase CAD and integrated mapping software that will adequately service all of the PSAPs terminals. Similarly, it will be necessary to assess the ability of computer system(s) to process data-rich wireless 911 calls. As wireless phones grow in popularity, so will wireless 911 call volume. PSAPs must prepare now for the eventuality of expanded call volume over the next several years. In order for WE-911 to work the following equipment is required:

- A computer system sufficiently powerful to process combined CAD and integrated mapping software.
- Computer terminals capable of displaying X and Y coordinates along with CAD-specific information.
- Integrated CAD and mapping software systems.
- Station telephones capable of accepting more than ten numerical digits.
- Upgraded LEC trunk line(s) capable of transmitting more than ten numerical digits.
- Interoperability between all agencies within its jurisdiction.

**As wireless phones grow in popularity, so will wireless 911 call volume. PSAPs must prepare now for the eventuality of expanded call volume over the next several years.**

As PSAP managers and administrators prepare to upgrade their dispatch systems, they should also make plans to upgrade the capabilities of dispatch and call-taking personnel. Some areas of the country have experienced a sharp increase in call volume over the last several months. Some of the increase is due to call duplication from multiple wireless users witnessing the same event. Independent of the reason, increased call volume means increased workload. In some areas, additional staffing may be necessary to accommodate increase volume and call processing time. Additional stress will be added to personnel as implementation of changes to or introduction of new CAD and mapping software is undertaken. It is important in dealing with these changes to devote adequate resources to training and personnel. Personnel will likely display greater acceptance of the changes in operating procedures if they are well prepared.

Priority dispatching protocols, such as Emergency Medical Dispatch (EMD), as well as Emergency Police Dispatch (EPD) and Emergency Fire Dispatch (EFD) protocols have become significant, integral components of our emergency communications system.[21,22] If not already using EMD, EPD, EFD or similar protocols, one should begin to determine the costs of implementing priority dispatch protocols. There are several versions of priority dispatch programs such as APCO's EMD Training program, Medical Priority Dispatch, NHTSA's EMD training program, etc. Great care should be taken to research and chose the priority dispatch program that best meets the needs of the PSAP.

## Wireless Carrier Needs

In preparation of wireless enhanced 911 service, the wireless carriers need to upgrade or install equipment that allows for accurate data transmission. Individual carriers were directed by the FCC to select the method they would use to provide Phase I and Phase II coverage. Depending on their solution, either network or handset, a subset of equipment is necessary to enable deployment. This equipment includes:

- Selective routers
- Tandem switches
- An Automatic Number Identification (ANI) database
- An Automatic Location Identification (ALI) database
- Upgraded wireless towers
- Additional tower sites in some areas

Wireless carriers have been given the opportunity to implement their own solutions. Those solutions are essentially transparent to the PSAP as long as the data received is compatible with PSAP operations.

## State Needs

In addition to implementation steps taken by local and county entities, several steps must be initiated at the state level to allow deployment of an WE-911 infrastructure. These steps include:

- Provision of funding mechanism(s) to assist stakeholders in making wireless 911 upgrades.
- Resolution of routing issues so that wireless 911 calls go immediately to the closest, appropriate dispatch center in relation to the location of the call origin. Ideally, calls should be routed to the PSAP responsible for dispatching emergency services to the area from which the call originated.
- Establishment of mutual aid requirements for all emergency agencies not already covered by existing statute.
- Provision of resources, assistance and leadership toward implementation, voluntary accreditation, and development of training and staffing standards.
- Ensuring that medical oversight is provided for individual municipal/county-based EMD operations.
- The formation of a state 911 commission to provide continuous evaluation of the 911 system and assistance to local/county/state PSAPs where applicable.

## Federal Needs

It is clear that the federal government places a high priority on wireless enhanced 911 issues. Involvement of the FCC, DOT, ITS and NHTSA on this issue indicates a strong commitment to resolve barriers to implementation. However, it must also be understood that the role of federal agencies is limited in individual states. Federal programs, such as the NHTSA and others, are not allowed to participate in, or attempt to sway state political initiatives.

Federal agencies are able to provide funding to study particular issues within a state but are not allowed to take an active stance on issues that will effect state politics such as supporting legislation that would change routing and funding patterns thus effecting private, state and municipal stakeholders.

While limited to some degree, the value of support of programs such as NHTSA, DOT, ITS and the FCC cannot be understated. They are critical in establishing national policy in regards to WE-911.

### General Public Needs



**The Cellular Telephone and Internet Association estimates that about one third of wireless telephone customers...are using their wireless phones exclusively.**

The citizens of New York State require a reliable, dependable enhanced 911 system that works with all types of personal wire-line and wireless communications devices. The majority of wireless phone customers purchase their phones to enhance their personal safety.[1,5] Few however, realize that the current 911 system does not allow for the transmission of automatic location or number identification information.[1,5,8,9]

The Cellular Telephone and Internet Association (CTIA) estimates that about one third of wireless telephone customers have eliminated their wire-line home telephones and are using their wireless phones exclusively.[1,14] The growth and continuance of this trend will increase the percentage of non-enhanced 911 calls coming into our nations PSAPs further degrading the enhanced 911 system.

Public Safety officials and other interested stakeholders have been hesitant to educate the public about the shortfalls of wireless 911 calls. They are fearful that increased public awareness could equate to an increase in false 911 calls such as school bomb threats. There is also fear that an enraged public will be critical of stakeholders and drive them away from positive involvement in the planning process. Either of these would negatively impact the general public.

### Finance

New York State counties are currently faced with administering multiple changes to their dispatch centers. Each of these changes requires the dedication of financial resources. As local and county officials and PSAP administrators begin the negotiation process they must also begin to itemize costs for the following:

### Equipment

- Computer hardware to service all dispatch and call taking positions that is expandable and has sufficient processing capability to handle CAD and integrated mapping functions.
- The FCC J Standard 36 states that the PSAP must have the ability to display X and Y coordinates and does not specifically require mapping software. However, we highly recommend the addition of mapping software as it significantly enhances the ability of dispatchers to rapidly identify locations and allocate resources.
- Phone service capable of accepting more than ten numerical digits.
- LEC trunk line(s) capable of transmitting more that ten and possibly up to 40 numerical digits.

## Personnel Costs

- Training all dispatch personnel in new data and computer software formats.
- Implementing EMD if it does not already exist.
- Appropriate on duty staffing to adequately meet PSAP needs.

## Recurring Costs

- Monthly fees to wireless carriers and LECs for 911 service.
- Maintenance and depreciation of equipment.
- Service contracts for phone systems, computer hardware and software, etc.
- Insurance



## Potential Funding Sources

There are potential funding sources that may be used to aid the PSAP with their implementation plans. Those include:

- The county general fund
- State funds
- State grants
- Public and private foundations
- Federal grants
- NYS Department of Health, Title 10
- County and state ear-marked funds

# Summary



The reader should be aware that there are many contingencies that cannot be accounted for in this document. Local/county/state PSAPs, wireless carriers, public safety agencies and other stakeholders have individual needs and issues that must be addressed. However, the authors have outlined common needs to stakeholder groups that must be addressed as implementation progresses in New York State.

The reader must also be aware that the resolutions to WE-911 implementation barriers in New York are complex and multi-faceted. The intent of this document is not to assign responsibility for barriers but rather to detail necessary components of the implementation process. By the very nature of their work, stakeholder groups are sensitive to even minute changes in their policies and procedures. This sensitivity can sometimes be misunderstood or misinterpreted. The reader should remain aware that suggested resolutions must be carefully weighed and considered before system-altering changes can be introduced.

The continuing erosion of the wire-line enhanced 911 infrastructure is a growing public health crisis for New York and the rest of the nation. The crisis can only be addressed if all the stakeholders come to the table and agree to decisions that are appropriate to ensure the safety and well being of the general populous. The authors appreciate the efforts of stakeholder groups in New York who continue to work diligently toward making WE-911 a reality for this state.

**The continuing erosion of the wire-line enhanced 911 infrastructure is a growing public health crisis for New York and the rest of the nation.**

The authors hope that this document will be used as a reference guide to facilitate and accelerate implementation of WE-911 throughout New York State. We have made every effort to ensure that it accurately represents the thoughts and ideals of New York State stakeholders interested in the implementation of WE-911.

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