Next Generation 9-1-1 Transition Policy Implementation Handbook

A GUIDE FOR IDENTIFYING AND IMPLEMENTING POLICIES TO ENABLE NG9-1-1

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4350 NORTH FAIRFAX DRIVE, SUITE 750
ARLINGTON, VA 22203 • 1-800-332-3911

FOR MORE INFORMATION

To learn more about the topic area meetings, or for information on how to become a member of the Next Generation Partner Program, contact Dr. Robert Cobb, program manager, at 1-800-332-3911 or via email at bcobb@nena.org.

Visit www.nena.org for a copy of this report and for additional information on the NG Partner Program.

I. Introduction and Objective of the Handbook

Transitioning our nation's legacy 9-1-1 system to a modern IP-based Next Generation 9-1-1 (NG9-1-1) system must be a major policy objective at all levels of government.[1] Demands from 9-1-1 leaders and the public to modernize 9-1-1 are increasing. Significant standards and technology developments are underway. However, without effective policy development in conjunction with technical and operational NG9-1-1 system development, the best system designs, architectures and plans will be just that—designs, architectures and plans. To actually implement an NG9-1-1 system requires effective overall policies, laws, and regulations that facilitate and fully support all aspects of NG9-1-1. In addition, stakeholders must work together to make sure that appropriate governance[2] structures are in place to enable the effective implementation and operation of an NG9-1-1 system.

What the Handbook Covers

This handbook is intended to be a guide for 9-1-1 leaders and government officials responsible for ensuring that federal, state and local 9-1-1 laws and regulations effectively enable the implementation of NG9-1-1 systems. It provides an overview of key policy, regulatory and legislative issues that need to be considered to enable the transition to NG9-1-1. Given the unique nature of individual federal and state policies, statutes and rules, and the different starting point for each state, the checklist does not make detailed suggestions for specific legislative language. Rather, it identifies major issues and key considerations that are applicable within any existing statutory or regulatory structure. The checklist topics illustrate examples of common policy and governance issues, but are not inclusive of every issue that may need to be addressed in any given jurisdiction.

It is important to note that most policy and governance issues should not be addressed by individual Public Safety Answering Points (PSAPs) or even individual 9-1-1 Authorities. Given the interconnected nature of NG9-1-1 systems, it is important for all 9-1-1 Authorities in a region or state, along with other related emergency response and government stakeholders, to jointly address policy and governance issues in a coordinated manner.

What the Handbook Does Not Cover

This handbook is limited to the policy arena and identifies major issues that may need to be addressed within current statutes, regulations, tariffs, and rules. There are other major considerations that individual 9-1-1 governing authorities will have to address as they transition to NG9-1-1, including important technology, system operations and contractual decisions. Moreover, evolving FCC regulations that will

1 It is assumed that the reader of this Handbook has a general level of understanding of the limitations of the current E9-1-1 system, as well as the need for and overall purpose of NG9-1-1 systems.

2 The term "governance" means the management of the NG9-1-1 system and the entire public safety emergency communications enterprise. The goal of any "governance" structure should be to determine the most inclusive, efficient and cost effective way to manage the systems from a technical and systems operation perspective.

impact, and may require in some instances, originating service providers (OSPs) and network providers to deploy and enable 9-1-1-capable services and applications for specific technologies (*e.g.* text messaging, mobile VoIP), including caller location identification capabilities for such technologies, will in large part drive the timetables for 9-1-1 systems to actually realize certain NG9-1-1 capabilities. These issues are beyond the scope of this handbook.

For additional information and references on these issues, please see Section V.

II. Learn the Issues and Get Organized

While a state or region may be prepared to transition to NG9-1-1, federal, state and/or local rules and regulations in their current form may hinder or not enable the transition. In some instances, regulations written for a voice-centric, telephone-based E9-1-1 system may actually prohibit certain aspects of NG9-1-1. At a minimum, current statutes and regulations may raise questions about the legality of some capabilities enabled by NG9-1-1 which could slow progress until such questions are addressed. Analyzing all current state and local statutes and regulations early in the transition process, and making modifications as necessary, is a critical step to ensure that plans to migrate to NG9-1-1 can occur in a timely manner.

Related to policy issues is the need to examine current 9-1-1 and emergency communications governance structures to determine how well they will facilitate NG9-1-1. Governance structures that exist for current E9-1-1 systems may not be effective in an NG9-1-1 environment and may require modification. This is the case for three primary reasons: (1) in many states, the state-level governance structure and authority for state-level 9-1-1 entities, if such a structure exists, is largely based only on collecting and distributing 9-1-1 funds to localities, rather than administering and managing an overall state-wide 9-1-1 system; (2) many parts of the architecture and functions of NG9-1-1 systems may be more efficiently managed at a regional, state or even multi-state level (while the 9-1-1 call-handling operations and response will remain primarily local), and (3) the increased information sharing capabilities of NG9-1-1 systems means that 9-1-1 and emergency communications systems will be much more interrelated in a next generation environment, calling for more coordinated and cooperative governance of the entire emergency communications enterprise.

Understand the Issues: Impact of NG9-1-1 on current policies and rules

There will be numerous capabilities and functions that are possible with NG9-1-1 that are not possible with the E9-1-1 system, or that are provided in a new way. For each of these capabilities and functions that are new or provided differently, 9-1-1 leaders should ask themselves whether current laws, regulations, tariffs and overall policies allow and enable such new system features. For example, are current funding methods and levels sufficient to pay for initial and recurring costs, particularly during the transition from E9-1-1 to NG9-1-1? Are unregulated entities permitted to play the role of the 9-1-1 System Service Provider (SSP), and if so, what is the process that governs service provision in an unregulated IP-based world? During the transition from E9-1-1 to NG9-1-1 when new and legacy systems

must be able to interoperate, are regulations/tariffs that were only written for telephone-based E9-1-1 systems going to slow the transition and cause confusion?

Understand the Issues: Impact of NG9-1-1 on current governance structures

The infrastructure and components of NG9-1-1 systems are not intended to be closed systems only useful for 9-1-1. Rather, NG9-1-1 enables shared systems comprised of 9-1-1 and other emergency services entities that can leverage the overall system. 9-1-1 will be only one part of a much larger system shared with general government, private sector entities and other public safety services and agencies. The amount and type of information (voice, text or video) received by PSAPs and shared with emergency response agencies will greatly surpass current E9-1-1 systems. For example, NG9-1-1 makes it possible to transmit video, still images, medical information and a host of other data with a 9-1-1 call. Additionally, the architecture of NG9-1-1 systems will significantly increase the amount of information, equipment and services contained in shared databases and networks. For example, the same emergency services IP network (ESInet) over which all forms of voice, video and data are delivered to PSAPs could be shared with other emergency response entities to enable IP-based voice and data applications utilized by first responders (e.g. Push-to-Talk (PTT) radio communications over IP).

With the increased amount of information that will be made available by NG9-1-1 systems and the shared databases and networks among an increasing number of emergency response entities, existing governance structures may not be effective. Analyzing current 9-1-1 and emergency communications governance structures at the state, regional and local level, and making modifications as necessary, is a critical step to ensure the effective and orderly transition, and operation of, NG9-1-1 systems. The goal of any governance structure should be to determine the most inclusive, efficient and cost-effective way to manage the overall NG9-1-1 system, from a technical and systems operation perspective, while maintaining the ability of local authorities to determine local call processing and information sharing policies.

Get Organized

At the outset, it is critical to establish a regional and/or state NG9-1-1 plan.[3] Creating a state (or regional) NG9-1-1 plan, including the need to address policy changes (the focus of this handbook), will require an inclusive organizational structure. As part of an effort to develop a state plan, or as a separate effort, appropriate stakeholders should form a working group whose mission is to (1) research and analyze all current state/local rules and regulations (including tariffs) and (2) address NG9-1-1 system governance issues. The working group should consist of individuals who understand the features that will be possible with the NG9-1-1 system and also individuals with experience in analyzing, drafting and implementing

3 More information on effective steps for establishing a model state plan can be found in the National Association of State 9-1-1 Administrators *Model State 9-1-1 Plan,* July 2008, available at http://www.nena.org/sites/default/files/NASNA_Model%20State%209-1-1%20Plan.pdf.

new statutes and regulations. The working group should be very inclusive of all 9-1-1, emergency response, government and industry groups that have a stake in the transition to NG9-1-1. Industry participants should include representatives of 9-1-1 system service providers, vendors of 9-1-1/PSAP equipment/service, and originating service providers of all types (wireline, wireless, IP). A goal of the working group should be to examine rules and regulations that cover every possible aspect of the NG9-1-1 system and to highlight which rules need to be modified or areas where new regulations may be needed. While such an effort is a state-focused endeavor, participants should also be aware of any related federal statutes and regulations that may impact activities at the state, regional, and local level, including what changes, if any, may need to be made at the federal level to enable NG9-1-1 deployment within the states.

An additional goal of the working group should be to research current governance structures at the state, regional, and local levels for 9-1-1 and public safety communications systems. On this subject, it is essential that the working group consist of individuals from all organizations (public and private) involved in 9-1-1 and emergency communications within the area for which the system is being designed. At a state or regional level, 9-1-1, emergency response and government leaders should come together with appropriate officials from departments that include the state 9-1-1 program, homeland security/ emergency management agency, public utilities commission, state information technology office, state police and others.

Once a working group has been formed, the group should develop a target list of all the issues they plan to analyze in current rules and regulations. Research should be done to determine where all 9-1-1 and relevant emergency communications related rules can be found in statutes, regulations (from a state Public Utility Commission (PUC) or State 9-1-1 Agency) or tariffs. Once all rules and regulations have been identified, a plan with specific deliverables and deadlines should be developed. A few common themes within most statutes and regulations that may need to be analyzed, and questions to be asked, include, but are not limited to, the following:

- State Level Leadership and Coordination
- Funding
- Establishing State-Wide Emergency Services IP Networks
- Addressing Transitional Regulation/Legislation/Tariff Modifications to Enable Next Generation 9-1-1 Deployment
- Confidentiality, Disclosure and Retention of 9-1-1 Call and Other Emergency Information
- Liability

Each of these subjects is discussed in detail in Section III.

III. Review Existing Statutes, Regulations, and Rules

This section of the handbook provides a list of subjects that should be reviewed to enable an effective and efficient transition to NG9-1-1. There may be additional issues that need to be addressed in a particular state, and there are very likely more detailed sub-issues that will emerge within each of the topics identified below. This list is meant to be a starting point, but it is not inclusive of every issue that may need to be addressed in a given state. Each *NG9-1-1 Transition Policy Issue* provides background information on a particular subject, proposes actions that should be taken to address the issue, and includes an implementation checklist with questions intended to ensure all necessary steps to address an issue have been taken.

NG9-1-1 TRANSITION POLICY
ISSUE NUMBER: ONE

SUBJECT: State-Level 9-1-1 Leadership and Coordination

OBJECTIVE: Establishment of a state-level organization to plan, coordinate, and implement a ubiquitous Next Generation 9-1-1 system

BACKGROUND: The level and manner of coordination of 9-1-1 varies widely from state to state. In some states, 9-1-1 is strictly a local matter. A number of states have centralized the 9-1-1 program function or have otherwise established a state-level coordination mechanism, although their circumstances and authority vary widely due to the way state laws and regulations conceive and define the state-level function. For example, some states have a central, state-level 9-1-1 program, but it is primarily focused on cost reimbursement. Some states have centralized the 9-1-1 oversight function, but it is focused exclusively on wireless. Some states have centralized the 9-1-1 oversight function and provided it with broad authority and adequate resources to oversee all aspects of 9-1-1. And some states have elected to combine local autonomy and state level coordination. The ability to manage both interstate and intrastate coordination of NG9-1-1, and to coordinate it with other emergency communications, will be a key factor in the success of NG9-1-1.

DISCUSSION: The principle of state-level coordination for 9-1-1, and of overall emergency communications, is not new. It is explicitly articulated in the Wireless Communications and Public Safety Act of 1999[4], in which Congress encouraged states to implement seamless, end-to-end emergency telecommunications services and found that efficiency in deploying such services "requires statewide coordination of the efforts of local public safety, fire service and law enforcement officials, emergency dispatch providers, and transportation officials; the establishment of sources of adequate funding for carrier and public safety, fire service and law enforcement agency technology development and deployment; the coordination and integration of emergency communications with traffic control and management systems…" Furthermore, Congress directed the FCC to help make this happen by encouraging the development and implementation of "coordinated statewide deployment plans, through an entity designated by the governor" that should "include representatives of the foregoing organizations and entities in development and implementation of such plans." The principle of statewide coordination and planning under the auspices of a designated state-level entity is reinforced in the ENHANCE 911 Act of 2004[5] and is a specific eligibility criterion for PSAP grant funding under the Act. Similarly, statewide planning and coordination for use of homeland security communications grants is being required, and gradually expanded from solely first responder voice communications to include all emergency organizations and all types of emergency communications.

The link between these principles and the vision of NG9-1-1 is clear. Many key features and functions NG9-1-1 will require an effective state-level leadership and coordination

4 Pub. L. No. 106-81, October 26, 1999.
5 Pub. L. No. 108-494, December 23, 2004.

mechanism to be in place. NG9-1-1 and next generation emergency communications generally, as an "interconnected system of local and regional emergency services systems (system of systems)"[6] that ultimately becomes "…a nationally interoperable emergency services internetwork" [7] with the coordinated involvement of all state, regional and local stakeholders is what will finally achieve the vision of the 1999 Act.

Although the staffing of PSAPs and handling of 9-1-1 calls (and associated emergency response) will generally remain a local function, subject primarily to local decisions, aspects of NG9-1-1 will require state-level planning and implementation coordination. For example, network and related information delivery functions will no longer be agency specific, but will be shared by all authorized emergency agencies. Such shared Emergency Services IP Networks may be developed and managed locally or regionally, but need strong state level leadership and coordination, to ensure both operability and interoperability of state, local and regional ESInets, and to ensure they conform to applicable policies and industry-based standards. Further, coordination with national entities to ensure statewide compliance with required standards, federal policies and the like is best accomplished when coordination occurs at the state level.

ACTION PROPOSED TO RESOLVE ISSUE:

- Each state needs to have an organization, with appropriate authority, responsible for planning, coordinating and implementing the NG9-1-1 system, that reflects the following:
  - State-wide scope;
  - Coordination within the state and with adjacent states and federal authorities;
  - Coordination with other emergency service functions and other relevant stakeholders involved in the development and implementation of seamless, end-to-end Next Generation emergency communication services;
  - The appropriate adoption of industry-based standards, rules, policies and procedures by stakeholders necessary to support such deployment
  - Adequate funding to support state and local planning and implementation of NG9-1-1
- Each state needs to have an organization, with appropriate authority, responsible for planning, coordinating and implementing a seamless Next Generation end-to-end emergency communication system, including 9-1-1.

IMPLEMENTATION CHECKLIST:

☐ Is there an existing state-level agency that will be responsible for the coordination, oversight, and/or management of the NG9-1-1 system(s) within the state and responsible for coordination with other

6 U.S. Department of Transportation, "Next Generation 9-1-1 (NG9-1-1) System Initiative: Concept of Operations" at 12 (April 2007), available at http://www.its.dot.gov/ng911/pdf/NG911ConOps_April07.pdf.

7 Ibid.

local, state, interstate, and federal authorities? If not, has a recommendation been made to establish an appropriate entity for this function, whether this involves modifying the authority of an existing entity or creating a new entity?

- ☐ Does the state-level agency have the appropriate authority and technical resources available to undertake the activities necessary for the coordination, oversight, and/or management of the appropriate state-level NG9-1-1 functions within the state, which could include funding, access to and use of the system, maintenance and security of the system, and other technical and system operations issues? If not, are steps being taken to provide that authority?
- ☐ Has the role of the state public utilities commission (PUC), in support of the above state-level agency's Next Generation 9-1-1 effort, been identified? As the 9-1-1 system moves to a more competitive environment with many functions of the system provided by IP-based, non-tariffed and unregulated communications providers, PUC and FCC regulations may need to be modified (*See Brief #4)*.
- ☐ Is coordination between the state-level information technology agencies and the state-level agency overseeing the NG9-1-1 system required? Are steps being taken to facilitate this relationship? Are there state-level information technology and/or information technology procurement requirements in place that may impact the provisioning of NG9-1-1 facilities and services at the state level?
- ☐ Do current organizational structures within the state facilitate the sharing of resources among various government agencies that can benefit from shared networks and applications envisioned in an NG9-1-1 system?
- ☐ NG9-1-1 systems can allow increased security of information through role-based access control and data rights management that limits access to information only to authorized entities. Is there an existing state-level agency responsible for overall security of the NG9-1-1 system and for developing, implementing and enforcing policies that govern information sharing and overall information management within the system?

NG9-1-1 TRANSITION POLICY
ISSUE NUMBER: TWO

SUBJECT: Funding the NG9-1-1 System

OBJECTIVE: Ensure sufficient resources are made available to implement and operate the NG9-1-1 system.

BACKGROUND: Existing legislation regarding funding and the authority of state and local 9-1-1 governing bodies is functionally tied to the architecture of the Public Switched Telephone Network (PSTN). The current 9-1-1 system is funded through a combination of special-purpose dedicated 9-1-1 fee/surcharge revenues and general fund revenues. For the foreseeable future, the system will continue to rely on these funding sources. It is important that planning is done to ensure that sufficient revenues are made available to enable the transition to NG9-1-1. Existing laws or authority may not take into consideration NG9-1-1. However, 9-1-1 funding legislation must allow for the provisioning of all necessary elements for NG9-1-1

DISCUSSION: The 9-1-1 system and other emergency communications functions are funded by different and disparate funding sources. Those funding structures are used, and indeed are typically required to be used, to create separate and distinctly different systems (*e.g.* 9-1-1; interoperable Police/Fire/EMS radio systems; public health alert networks, poison control centers). Absent significant inter-governmental cooperation, this form of planning and funding may not lead to economies of scale that will enable parity of emergency services capabilities, interoperability, increased efficiency or cost savings within all aspects of emergency communications. More so than today, the Next Generation System will be a shared system comprised of multiple entities and components, including 9-1-1, the support of which will require coordinated planning and funding. Therefore, funding mechanisms and authority for all emergency services, including 9-1-1, should reflect and enable the shared network/services environment of Next Generation 9-1-1 and emergency communications.

ACTION PROPOSED TO RESOLVE ISSUE:

- State and local governments should examine funding, operations, and legislation to ensure they promote the needed ESInets and multi-jurisdictional cooperation, including interstate ESInets and NG9-1-1 in general.
- Any fees assessed on end users or devices of any service with the ability to access 9-1-1 (potentially including fees assessed on network access providers instead of, or in addition to, originating service providers) should be reasonable, equitable and nondiscriminatory.
- Fee remittance should be made for deposit into a dedicated fund and the allowable uses should ensure the provision of the needed services for NG9-1-1 and prohibit diversion of funds to other non-allowable purposes.
- Establish a maximum fee, providing the 9-1-1 authority with the ability to adjust the fee rate based on the cost to provide service.
- It is possible to pay for NG9-1-1 services as part of a shared NG emergency services network in which multiple emergency services functions will pay a portion of the network costs and policy makers should explore and examine this possibility.
- State and federal legislation and grant programs should reflect the growing convergence and integration of emergency response technology and agency interaction. State interoperability

plans and federal funding in support of them must be for overall next generation emergency communications, including NG 9-1-1.

- Federal and state interoperability and Next Generation 9-1-1 definitions need to be more comprehensive and inclusive (*e.g.,* all emergency response agencies, including 9-1-1, and all forms of emergency communications). As state and federal policy officials review and modify current 9-1-1 related policies, all definitions should be reviewed to align with next generation technology.
- Funding legislation should encourage parity of emergency services capabilities, interoperability, increased efficiency or cost savings within all aspects of emergency communications.
- Fees should be based on sound planning that includes short- and long-term projections of recurring and non-recurring costs and revenues.
- Service provider fee remittances should be audited for accuracy, and the 9-1-1 authority or PSAP should be audited or monitored for use of funds in compliance with legislative and authorized intent.

IMPLEMENTATION CHECKLIST:

☐ If there is a state-level 9-1-1 coordinator/agency in your state, is statewide funding coordinated through this office? Is the 9-1-1 system planning/operations function coordinated through that same office?

☐ Are there funding mechanisms to ensure sustainable funds to support current E9-1-1 operations as well as investments for NG9-1-1?

☐ Are definitions/requirements clear in statutes and regulations concerning which communications devices/services are required to remit 9-1-1 fees? For example, has legislation been enacted in your state to generate revenue from all devices capable of calling 9-1-1, including automated sensor-initiated calls?

☐ Are elected leaders in your state in compliance with federal statutes that authorize the imposition and collection of 9-1-1 fees provided that such 9-1-1 fee revenues are used for the intended purpose of the fee, rather than being diverted to other purposes?

☐ Do the allowable uses of 9-1-1 fee revenues explicitly allow for capital expenditures to support NG9-1-1 in addition to current E9-1-1 systems?

☐ Have you estimated costs (initial one-time as well as recurring) associated with the migration to NG9-1-1? Have you estimated transition costs? Have you estimated any potential savings once NG9-1-1 is in place? Do you have a Funding Plan beyond the current year? Do state/local 9-1-1 funding provisions reflect these reasonable budget estimates?

☐ Do your state 9-1-1 policies allow for 9-1-1 funding contributions from sources other than fees/surcharges imposed by statute (e.g. voluntary contributions, federal grants)?

☐ In an environment where services will be shared by numerous entities, does the current policy framework allow for cost sharing? Is there a mechanism for determining the relative share that each entity pays to fund and maintain the shared services?

☐ Has a group been formed within the state and/or sub-state regions to examine shared services?

NG9-1-1 TRANSITION POLICY
ISSUE NUMBER: THREE

SUBJECT: Addressing Transitional Regulation/Legislation/Tariff Modifications to Enable Next Generation 9-1-1 Deployment

OBJECTIVE: Modify and update current legislation, regulations and tariffs to ensure a competitive E9-1-1 environment and a transition to a full NG9-1-1 system

BACKGROUND: Today, the Incumbent Local Exchange Carriers (ILECs) are the predominant 9-1-1 System Service Providers (SSPs). In the NG9-1-1 marketplace, however, it is anticipated that there will be multiple providers offering a variety of service capabilities and options, thereby providing greater choices for 9-1-1 governing authorities. As we transition to a full NG9-1-1 system, it is also expected, and is indeed a policy objective, that competitive alternatives for current E9-1-1 services will emerge as well. Some of these SSPs will not be telephone companies and may not even be regulated at the state level, or regulated at the federal level unless required by the FCC or Congress. An open, competitive E9-1-1 environment should be fostered and should be done so with an eye towards a full NG9-1-1 system.

NG9-1-1 is not simply an extension of E9-1-1. While a full NG9-1-1 system must support all E9-1-1 functions and features, NG9-1-1 is Internet Protocol (IP) based, and software and database controlled in fundamentally new ways, enabling many new technical and operational capabilities to further enhance the coordination and delivery of emergency services nationwide. However, before and during the transition to a full NG9-1-1 system, it is expected that new E9-1-1 service offerings will be provided by competitive 9-1-1 SSPs in direct competition with incumbent SSPs.[8] Such offerings will likely replicate current E9-1-1 functions and advance beyond current E9-1-1 system capabilities, while initially not being a full NG9-1-1 system. In many cases, competitive SSPs will offer individual components of 9-1-1 solutions. As these competitive E9-1-1 service offerings and full NG9-1-1 capabilities are deployed, they will necessarily involve new complex technical and business arrangements that current regulations and laws did not fully contemplate.

DISCUSSION:

NG9-1-1 will not be deployed in a "flash cutover". There will be PSAPs and areas that remain tied to the legacy E9-1-1 system for quite some time that must be able to interoperate with PSAPs that have migrated to NG9-1-1. With that reality in mind, it is imperative that 9-1-1 authorities at every level – as well as industry – begin now to lay the foundation for NG9-1-1 by facilitating the deployment of "dual-mode" capabilities in networks and/or IP-enabled PSAPs that can translate between the legacy circuit switched environment and the next generation environment. This will be a significant issue as NG9-1-1 will not be deployed as a single nationwide project. It will take several years to complete the transition.

Much of the legislative and regulatory framework governing the provisioning, operation and maintenance of PSAPs, and the 9-1-1/emergency communications system that serves PSAPs, rests with state and local governments, and as such, varies greatly across the country. Additionally, the Federal Communications Commission plays a significant role in regulating communications providers and contains current rules that require the delivery of wireless and voice over IP (VoIP) 9-1-1 "calls" over the "wireline E9-1-1 network" which could be argued does not clearly include the routing of 9-1-1 calls via an IP-based NG9-1-1 system. These state and federal laws were written in an era where all the possibilities and

8 While typically a function of a private company, it is also possible for a government entity to play the role of a 9-1-1 service provider.

technological capabilities of NG9-1-1 simply did not exist. Many existing laws, regulations and tariffs make specific reference to older technologies or system capabilities which may inadvertently inhibit the migration to NG9-1-1. To foster the rapid migration of NG9-1-1, it is essential that state and federal legislatures and regulatory bodies review current laws and regulations to keep pace with the rapidly changing public safety marketplace. Efforts should be designed to create a framework which will optimize 9-1-1 governing authority choices and establish a competitively neutral marketplace that allows 9-1-1 authorities to replace legacy 9-1-1 functions component by component.

ACTION PROPOSED TO RESOLVE ISSUE:

To meet the objective of a fully functioning next generation 9-1-1 and emergency communications system, it is critical that state regulatory bodies and the FCC take timely and carefully scrutinized action to analyze and update existing 9-1-1, PSTN and IP rules and regulations to ensure they optimize 9-1-1 governing authority choices for E9-1-1 and NG9-1-1 and foster competition by establishing a competitively neutral marketplace.

- State legislatures and regulatory bodies, as well as the FCC, must initiate efforts to understand how current regulations and laws facilitate, or inhibit, the local, state, regional and national interoperable environment of NG9-1-1, and analyze how such rules and regulations may need to be modified to enable the IP-based, software and database controlled structure of NG9-1-1.
- State legislatures and regulatory bodies, as well as the FCC, are encouraged to actively consider appropriate steps to enable appropriate competition for the delivery of E9-1-1 service that will provide increased opportunities and choices for 9-1-1 governing authorities today. Simultaneously, as such rules are considered, states must ensure that any regulatory actions will effectively enable the transition to a full NG9-1-1 system.
- Some example regulatory/legislative issues that must be addressed include:
    - Laws/regulations concerning the eligible use of 9-1-1 funds.
    - Provisions that require specific technology components for "E9-1-1" service delivery that are not necessarily the same for NG9-1-1.
    - Laws which may inhibit appropriate and efficient information sharing of 9-1-1 data with appropriate safeguards for privacy protection. For example, regulations/ laws/tariffs may need to be modified to ensure that 9-1-1 authorities or new 9-1-1 SSPs should be entitled to receive relevant routing, location and other related 9-1-1 information in the possession of the incumbent SSPs at reasonable rates and terms. Such information is essential to ensure an efficient and error free transition of SSPs.
    - Existing 9-1-1 service arrangements and tariffs which may inhibit new entrants from making similar competitive services available on a component by component basis, where technically and operationally feasible. Unbundled tariff options should be made available in such away that prices of each unbundled component reflect reasonable rates and terms.
    - Uniform requirements for all 9-1-1 SSPs to meet accepted industry standards (reference to industry standards is necessary for service integrity).
- New competitive 9-1-1 SSPs should be afforded reasonable and nondiscriminatory treatment as incumbent 9-1-1 SSPs by requiring comparable agreements and terms between all 9-1-1 SSPs. Similarly, new types of originating service providers must be able to interface with the 9-1-1 system on reasonable and non-discriminatory terms regardless of who performs the 9-1-1 SSP function.
- Where regulatory requirements are in place, such requirements should be functional and performance based without reference to any specific proprietary technologies, manufacturers or service providers.

IMPLEMENTATION CHECKLIST:

- ☐ Have you reviewed and analyzed existing rules and regulations to determine which ones affect 9-1-1?
- ☐ Have you solicited input from all interested stakeholders to determine which rules and regulations may inhibit the evolution of Next Generation technology? In doing so, have you ensured participation by existing 9-1-1 system service providers, as well as new competitive 9-1-1 SSPs?
- ☐ Based on the review of current rules and regulations with all affected stakeholders, have you made recommendations to revise all laws, rules, and regulations that may impede the evolution of Next Generation technology? Have you proposed enabling legislation or recommendations for specific regulatory/rule revisions to the appropriate authorities?

Specific Examples:

- ☐ **9-1-1 System Service Provider (SSP)** – In NG9-1-1 systems, entities who are not traditional telecommunications providers may be in a position to provide NG9-1-1 service. Therefore, any statutes/regulations that limit competition by indicating that the role of a 9-1-1 SSP can be performed only by a specific type of entity (*e.g.* a provider of local exchange service), should be amended. Are there provisions that require specific technology components for "E9-1-1" service delivery that are not necessarily the same for NG9-1-1 (e.g. ANI, CAMA trunks, etc)? Does the statute allow for competition for the provisioning of the 9-1-1 system, and individual components within that system?
- ☐ Are there statutes and regulations that do not afford new competitive SSPs reasonable and nondiscriminatory treatment equal to that of incumbent SSPs? Are there comparable requirements for quality of service and other requirements (e.g. provider of last resort, security) for all NG9-1-1 SSPs, regardless of their regulatory classification?
- ☐ Are all suggested revisions to existing regulatory requirements based upon functional and performance objectives without reference to any specific proprietary technologies, manufacturers or service providers?
- ☐ Do suggested modifications to existing regulations/laws/tariffs ensure that 9-1-1 authorities or new SSPs are entitled to receive relevant routing, location and other related 9-1-1 information in the possession of the incumbent SSP at reasonable rates and terms?
- ☐ Do suggested modifications to existing laws and regulations enable competitive 9-1-1 SSPs to connect to other competing 9-1-1 SSP networks in a non discriminatory, technically feasible, and economical manner to ensure interoperability among 9-1-1 SSPs?
- ☐ Do modifications to existing laws, regulations, and tariffs require the unbundling of 9-1-1 component services? Where tariffs are involved, do suggested modifications to existing tariff structures require that each component be tariffed at a reasonable, cost-based rate?
- ☐ Do modifications to existing laws, regulations, and tariffs require that all 9-1-1 SSPs meet the same standards of functionality and performance, while recognizing that many of the legacy technical standards (CAMA trunks, for example) may become obsolete?

- ☐ Do suggested modifications to existing laws, regulations, and tariffs facilitate the migration of individual 9-1-1 authorities to alternative Next Generation 9-1-1 SSPs without incurring continuing legacy costs for component services that are no longer needed?

- ☐ Where multiple competitive 9-1-1 SSPs are deployed in a region, or new competitive SSPs are seeking to deploy service in a region, do existing laws, regulations, and tarrifs, or suggested modifications to such laws, regulations and tariffs, effectively account for the responsibility of cost distribution for the decreasing use of shared legacy resources (*e.g.* legacy selective routers)?

- ☐ **Access to 9-1-1 systems** – One of the many benefits of implementing NG9-1-1 is to allow appropriate and authorized sharing of automated data sources (e.g., telematics data, bioterrorism or health sensors) with PSAPs and other emergency response agencies. Do suggested modifications to existing laws, regulations and tariffs allow for new types of services that are currently legally prevented from accessing the 9-1-1 system, such as sensors and alarms?

- ☐ **Definitions, Terminology and Lexicon** – Definitions contained in laws, regulations and tariffs should not limit the ability to implement NG9-1-1. Current rules using terms such as "calls," "telephone service," "emergency telephone system," "trunks," "dials/dialed," etc. will need to be examined and modified as appropriate to cover the calling and messaging capabilities enabled by NG9-1-1. For example, does a definition for "calls" include not just a voice call, but also messages or any other type of communication delivered over the NG9-1-1 system? Another example is the definition of a PSAP. Does a definition limit a PSAP to a physical facility or building, or can a PSAP be "virtual" whereby 9-1-1 calls may be answered from anywhere IP access to an ESInet is available once an authorized person logs in with the proper user ID and password? Do suggested modifications to definitions in existing rules in any way limit the ability to implement NG9-1-1?

- ☐ **9-1-1 Authority capabilities** – Do suggested modifications to existing laws and regulations enable a state, regional, or local 9-1-1 Authority to deploy, operate, or manage software and database controlled NG9-1-1 systems that replace traditional wireline E9-1-1 systems?

- ☐ Do suggested modifications to existing laws and regulations provide 9-1-1 and public safety authorities with sufficient authority to implement emergency service IP networks to replace dedicated 9-1-1 telephony systems which are shared among multiple emergency response entities (not stand-alone 9-1-1 networks)?

- ☐ **Call Routing** – With NG9-1-1 call routing may be affected by business rules/policies, which may indicate that calls should be routed based on caller characteristics, not just the location of the call. For example, a Spanish-speaking person could dial 9-1-1, the caller's device could indicate a Spanish-speaking caller, a business rule built into a policy-based routing function could indicate all Spanish callers for this location route to a pre-determined PSAP and call taker position number OR if no call taker available, add Language Line to the call and route to appropriate PSAP based only on the location of the call. Another example would be a video call from a deaf caller that could automatically be routed to a certain PSAP or call taker that would enable a real-time video call to a 9-1-1 calltaker certified in American Sign Language (ASL) interpretation. Do modifications to existing statutes and regulations enable non-location-based call routing and the sharing of IP networks to route calls for multiple national N-1-1/800 numbers (e.g., 2-1-1, 3-1-1, 8-1-1, 9-1-1, suicide hotline, poison control)?

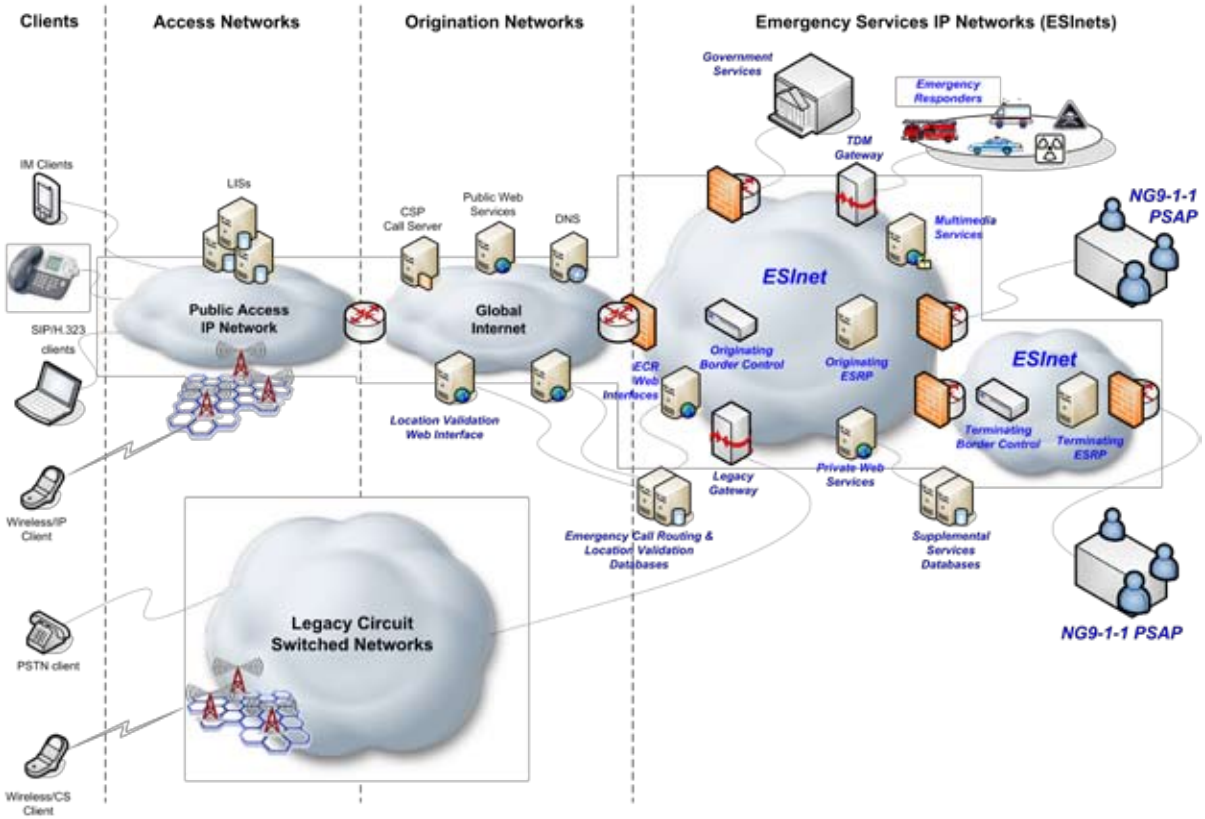
NG9-1-1 TRANSITION POLICY
ISSUE NUMBER: FOUR

SUBJECT: Establishing State-Wide Emergency Services IP Networks (ESInets)

OBJECTIVE: Ensuring that State/Regional/Local authorities recognize the need and initiate state-wide ESInets needed for NG9-1-1

BACKGROUND: Most current 9-1-1 and emergency communications systems are local or regional in nature, both operationally and technically. However, the proposed technical architecture of the NG9-1-1 system indicates the need for state-level management and coordination of Emergency Services IP networks. In addition to technical specifications, the NENA *Functional and Interface Standards for Next Generation 9-1-1 (i3)* provides some guidance on "Roles and Responsibilities" for ESInets. There are two key aspects to the deployment of ESInets: (1) the physical buildout and coverage of the ESInets and (2) the management and coordination of ESInets.

ESInets may be deployed at a state level and there may be increased efficiencies and economies of scale in doing so. However, ESInets will very likely be deployed at a sub-state level (regional/county) in many areas which must then be interconnected with other sub-state ESInets to establish a standardized, interconnected and interoperable state-wide ESInet. In practice there will be a number of different ways to achieve statewide ESInet coverage. Regardless of the path to such state-wide coverage, a state level entity or organization is recommended to implement and manage the interconnected state-wide ESInet (comprised of the interconnected regional/local IP networks and/or a single state network). A state-level entity or organization can play a significant role by providing and managing an IP backbone network to make interconnection of regional/local ESInets more efficient.



Regardless of who manages the ESInet(s) in a state, it is desirable to have one entity or organization coordinate development and management of the network in order to ensure adherence to appropriate standards and achieve the economies of scale and efficiencies that NG9-1-1 promises. That entity should have appropriate mechanisms in place to ensure substantive involvement and input from local and regional 9-1-1 stakeholders. However, to further improve efficiency, one entity per state should be responsible for arranging connections between their network and adjacent state networks. This includes both redundant physical connections and router configuration to allow seamless interagency communications.

Local and regional 9-1-1 operations will continue to be handled at the current entity level.

DISCUSSION: ESInets are critical to the NG9-1-1 and next generation emergency communications architecture. They will provide or support call routing, transport, interoperability, security, and related services that can most effectively and efficiently be coordinated at the state level and facilitate required intra and interstate connectivity that will be very difficult, if not impossible, to achieve at the regional or local level.
State-wide ESInets are more than just physical pathways. They host (or provide access to) numerous application layer services that support interoperability among the highly diverse regional/local networks and agency applications. These include appropriate standardized core services such as GIS-based directories of authorized organizations and resources, and access control/identity management for implementation of information sharing policies. These directories will enable interstate and intrastate dissemination and queries for emergency incident information and messages, including references to locations, agencies and data sources. All authorized organizations (local, state, national, public, private) need to be able to implement their data policies through these core services. The ESInets may also offer optional managed services (or access to them) for use by individual agencies.

While there are numerous state-level programs in place for the funding and administration of 9-1-1 service and other emergency services, as of the beginning of 2010 no state today is implementing and operating a comprehensive ESInet shared by 9-1-1 and other emergency services and government functions. Some have state networks for specific emergency functions (*e.g.* Indiana's statewide wireless 9-1-1 network; numerous state Health Alert Networks; state law enforcement networks including NCIC and NLETS). Some states do not have the ability or authority to establish a statewide ESInet. Some states do not have a state-level 9-1-1 authority. Most states do not have a comprehensive state emergency communications agency, or if they do have one, the agency does not have the authority or funding to implement an ESInet and carry out these comprehensive new responsibilities involving all emergency response agencies, including coordination with state and local agencies or organizations responsible for 9-1-1.

ACTION PROPOSED TO RESOLVE ISSUE:

- Policymakers at all levels should commit to the development and deployment of interoperable state-wide ESInets as a fundamental 9-1-1 and emergency communications policy objective.
- 9-1-1 and emergency services authorities need to review existing legislation and regulations to ensure there are no barriers to, and sufficient authority for, the establishment of state-wide ESInets.
- Where existing state statutes and regulations permit, state, regional, and local 9-1-1 and emergency services authorities should work cooperatively toward establishing state-wide ESInets.
- Where not currently authorized, states should affirmatively legislate, authorize, organize and fund state-wide ESInets and key interoperability services hosted on, or accessed by them. It is in the operational and financial interests of emergency agencies to share and contribute to an

ESInet. Planning and funding should involve and come from all emergency services, including but not limited to 9-1-1. The federal government should support efforts to establish state-wide ESInets.

- Emergency services agencies need to consider the sharing of infrastructure with other governmental entities as a matter of affordability. This calls for the development of new cooperative working agreements between federal, state and local agencies to participate in shared state backbone networks that include priority access for emergency services, particularly during periods of disaster.

IMPLEMENTATION CHECKLIST:

- ☐ Policy makers should be aware of NG9-1-1 benefits and encouraged to support establishment of state-wide ESInets. Are policymakers at all levels committed to the development and deployment of interoperable state-wide ESInets as a fundamental 9-1-1 and emergency communications policy objective?

- ☐ Statutes and regulations should be reviewed to determine where changes will be required to facilitate establishment of state-wide ESInets. Where necessary, changes must be initiated well in advance of planned implementation dates. Do existing state statutes and regulations support cooperative working relationships between state, regional, and local 9-1-1 and emergency services authorities to facilitate the establishment of state-wide ESInets?

- ☐ Policies, statutes and regulations that will enable ESInets should be actively pursued. Any current rules that would prohibit the establishment of ESInets must be modified. Transition Policy Brief #3, *Addressing Transitional Regulation/Legislation/Tariff Modifications to Enable Next Generation 9-1-1 Deployment*, provides additional background and examples on this subject. Do existing legislation and regulations present barriers to the establishment of state-wide ESInets (through a single state-level ESInet or multiple interconnected regional ESInets)?

- ☐ It is in the operational and financial interests of emergency agencies to share and contribute to an ESInet. Planning and funding should involve and come from all emergency services, including but not limited to 9-1-1. Has the state affirmatively legislated, authorized, organized and funded state-wide ESInets and key interoperability services hosted on, or accessed by them?

- ☐ The development of shared ESInets calls for the development of new cooperative working agreements between federal, state and local agencies to participate in underlying shared state-level backbone networks that include priority access for emergency services, particularly during periods of disaster. This new high-capacity, multiple application environment could, in addition to public safety services, include; health, transportation, education, libraries, and myriad community services components. Have policies, statutes or regulations been modified to encourage emergency services agencies to plan for the sharing of infrastructure with other governmental entities as a matter of efficiency and affordability?

NG9-1-1 TRANSITION POLICY
ISSUE NUMBER: Five

SUBJECT: Confidentiality, Disclosure and Retention of 9-1-1 Call[9] and Other Emergency Information

OBJECTIVE: Ensuring that information delivered over Next Generation 9-1-1 systems can be appropriately delivered to Public Safety Answering Points (PSAPs) and shared with emergency response organizations while conforming to applicable confidentiality, disclosure and information retention statutes and rules

BACKGROUND AND DISCUSSION: Today's E9-1-1 systems are dedicated, closed, single purpose systems. The amount of information currently delivered with a landline, voice-over IP (VoIP) or wireless 9-1-1 call is limited compared with the information that will be available through NG9-1-1 systems. Since information associated with a 9-1-1 call in today's E9-1-1 system is generally stored in a single restricted location, preserving the confidentiality of the information and retaining appropriate records as required by local or state law is a relatively straightforward process.

NG9-1-1 systems will not be dedicated, closed, single purpose systems. They will be shared systems comprised of multiple entities. 9-1-1 will be only one part of a much larger system shared with general government, private sector entities and other public safety services/agencies. The amount and types of information (voice, text or video) that may be received by PSAPs and shared with emergency response agencies will greatly surpass current E9-1-1 systems. In addition to the increased amount of data, the nature of the content of data will be dramatically different in some instances. For example, NG9-1-1 will make it possible to transmit video, still images, medical[10] information and a host of other data for a 9-1-1 call. Additionally, the architecture of NG9-1-1 systems will significantly increase the amount of data that is contained in shared databases with data residing in the network rather than in single-purpose databases housed locally. Finally, next generation systems can allow increased security of information through role-based access control and data rights management that limits access to information only to authorized entities. Existing local, state, and federal confidentiality, retention and disclosure laws were not designed to address these types of information and systems.

NG9-1-1 will make it possible to transfer the voice and data records associated with a 9-1-1 call, and ensuing actions in response, from the PSAP to other agencies, in real-time during an emergency, and to archive them (or portions of them) in a decentralized location (or locations) off site.

NG9-1-1 will make it possible for aggregate or anonymized information to be shared outside the bounds of the parties involved in the local response to a specific emergency. Governmental agencies such as

9 In this Transition Policy Brief, the term 9-1-1 "call" refers to any real-time communication – voice, text or video and related data. The term also includes non-human-initiated automatic event alerts, such as alarms, telematics, or sensor data, which may also include real-time voice, text or video communications to a PSAP or other emergency response agency.

10 Medical information may involve special federal and state laws designed to protect patient confidentiality.

the Centers for Disease Control (CDC), state/local health departments, state or federal departments of homeland security, emergency management agencies may have a legitimate need to be aware of a situation, and to have adequate information to assess the situation, anticipate what is likely to happen next, and decide what action(s) to take.

In this environment, states and the federal government need to be careful not to unnecessarily restrict access to critical emergency information, while maintaining the confidentiality of specific data. Privacy advocates and emergency responders can almost always agree on exceptions for life-saving situations, as they have done in the federal health records law, the Health Insurance Portability and Accountability Act (HIPAA), and with E9-1-1 location information in Section 222 of the Communications Act and comparable state laws. Similar exceptions to privacy laws for emergency purposes should be extended to all types of data. The last thing we want to do is limit the availability of information for which the NG9-1-1 system is specifically being designed to receive and share among authorized entities. Real time crash data from telematics/event data recorder systems in cars sent to 9-1-1 centers and emergency medical entities is a growing example.

Similarly, there need to be exceptions for legitimate research regarding improving end-to-end emergency response, assuming appropriate protections ensuring anonymous and aggregate use of data. For example, NG9-1-1 will make possible the collection and analysis of data from the beginning of an incident to the discharge of a patient from the hospital. Such data will enable research that will be invaluable in improving emergency response. Properly anonymized, it needs to be encouraged. In short, as NG9-1-1 systems are implemented that enable a much more data rich 9-1-1 and emergency response environment, laws should be crafted in a manner that enable the most effective real-time emergency response, as well as providing for appropriate anonymous data sharing, data mining and research.

ACTION PROPOSED TO RESOLVE ISSUE: 9-1-1 and emergency response authorities are encouraged to work with State Attorneys General, elected leaders and other stakeholders to:

- Ensure that a uniform and suitably broad definition of "9-1-1 call" is established in statutes and rules taking into account all types of information that may make up a 9-1-1 request for assistance.
- Analyze the applicability of current state confidentiality, disclosure and retention laws/rules to all types of 9-1-1 calls and call content and, as necessary, modify such laws/rules to treat all types of 9-1-1 calls and call content in a consistent manner.
- Ensure statutes and rules make clear the responsibility of all parties in situations in which 9-1-1 call information will be stored in non-local shared databases and networks.
- Ensure rules enable the simultaneous receipt of 9-1-1 call information from originators of such data by multiple emergency response agencies, as well as access to relevant information about individuals involved in emergency incidents, and the simultaneous sharing of such information among multiple authorized emergency response entities at all levels of government during and after incidents as appropriate. Sharing information with some parties in the chain of response, such as emergency operations centers (EOCs) or the CDC may require anonymization of specific information in certain cases.

- Ensure that non-local agencies or local PSAP telecommunicators answering 9-1-1 calls outside of a physical PSAP (e.g. a virtual PSAP) may legally access 9-1-1 call data when necessary, while requiring adherence to appropriate confidentiality, disclosure and retention statutes and rules. This may require anonymization in certain cases.
- Require state and local 9-1-1 governing authorities to develop standard operating procedures (SOP's) establishing rules governing who has access to 9-1-1 call information, under what circumstances, and how they may be incorporated in data rights management, identity management and access control applications.
- Provide education and awareness of confidentiality issues in an NG9-1-1 environment for users of the system. The US Department of Commerce's National Institute of Standards and Technology (NIST) Special Publication 800-122 provides additional information that may be beneficial.

IMPLEMENTATION CHECKLIST:

- ☐ Do existing privacy, confidentiality, disclosure and retention statutes or regulations apply to all types of 9-1-1 calls and call content that are possible with an NG9-1-1 system (e.g., voice, data, images, video, information from third party databases added to a 9-1-1 call record)?
- ☐ Does the 9-1-1 statute or regulations provide a uniform and suitably broad definition of "9-1-1 call" that takes into account all types of information that may make up a 9-1-1 request for assistance? (see footnote 9 for example)
- ☐ Does the existing 9-1-1 statute and rules allow for the storage and retrieval of 9-1-1 call information in non-local shared and/or distributed databases? Note: In NG9-1-1, 9-1-1 call information may be available in multiple, distributed databases. The entire record of a call may not be available in a single location.
- ☐ Do existing 9-1-1 statutes, rules and/or policies provide clear direction to all parties with regard to their relative responsibilities in situations in which 9-1-1 call information will be stored in non-local shared and/or distributed databases?
- ☐ Are state and local 9-1-1 governing authorities required to develop standard operating procedures (SOP's) establishing rules governing who has access to 9-1-1 call information, under what circumstances, and are these access rights incorporated in data rights management, identity management and access control applications?
- ☐ Do existing rules provide appropriate protection of personally identifiable information, while enabling the sharing of this data with other authorized parties?
- ☐ In NG9-1-1, non-local agencies or local PSAP telecommunicators answering 9-1-1 calls outside of a physical PSAP (e.g. a virtual PSAP) will need to have access to 9-1-1 call information. Do laws provide for appropriate access to 9-1-1 call information, regardless of where the call is answered?
- ☐ Is there a formal education and awareness program for users of the system regarding confidentiality issues in an NG9-1-1 environment?

NG9-1-1 TRANSITION POLICY
ISSUE NUMBER: SIX

SUBJECT: Next Generation 9-1-1 Liability Issues

OBJECTIVE: Ensuring that state/federal liability statutes cover all public and private entities involved in the end-to-end provision of NG9-1-1 and emergency communications systems and services.

BACKGROUND AND DISCUSSION:
Experience in the deployment of E9-1-1 has shown that a lack of legal clarity on the issue of liability can lead to delays in the provisioning of E9-1-1 service. NG9-1-1 will promote a more complex service delivery environment, with more types of services able to connect to NG9-1-1 systems, more external data sources available to PSAPs, and increased information sharing options among emergency response agencies. These technological possibilities will potentially complicate how liability protection is appropriately provided for new and future services. 9-1-1 SSPs, emergency response agencies and originating service providers that are prepared to transition to NG9-1-1 systems will likely more rapidly do so with the legal certainty that their good faith efforts to improve 9-1-1 and emergency communications services will not expose them to further liability.

Recently passed federal legislation (the New and Emerging Technologies 911 Improvement Act of 2008)[11] provides liability protection for PSAPs, service providers, and their vendors consistent with existing state liability protection provided through statute, tariff or judicial decision.[12] This protection applies to all communications services that are required by the FCC to provide 9-1-1/E9-1-1 (today and in the future), as well as for services that voluntarily provide information to PSAPs, in the absence of an FCC requirement, with approval from the appropriate state or local 9-1-1 governing authority. Thus, where there is existing state 9-1-1 liability protection, federal law now covers communications to PSAPs from new types of services enabled by NG9-1-1. This should encourage the entry of new services and provision of innovative data solutions that could result in more effective emergency response.

It is important to note that in some states liability protection may not be provided through a statute, but rather through the tariff of a Local Exchange Carrier (LEC). In such states, if the LEC is permitted to withdraw its tariff (which includes liability protection), and that is the only source of liability protection in the state, then no liability protection will be in place for any providers or PSAPs. Therefore, it is increasingly important for states to ensure liability protection is provided through a statutory mechanism, particularly since NG9-1-1 will potentially be provisioned without the use of tariffs.

Even where current liability statutes are in place, other liability issues may still need to be addressed through state or federal statutes. For example, NG9-1-1 is designed to increase choices and opportunities to empower 9-1-1 governing authorities and PSAP Administrators to design 9-1-1 systems that enable the sharing and receipt of information consistent

11 Pub. L. No. 110-283, July 23, 2008.
12 47 U.S.C. § 615a.

with local needs. One region may choose to receive all possible information (voice, text, images, and video) from all devices. Another area may choose to filter and limit receipt of certain information and to route calls differently based on unique local capabilities and needs. Differing 9-1-1 system policies and structures, enabled by standards-based NG9-1-1, is an advantage of NG9-1-1. However, it could also raise possible liability concerns if individual PSAPs choose not to receive all information (e.g., direct video communications) despite the technical availability of such information.

NG9-1-1 will also enable, as desired and appropriate, 9-1-1 call routing based on caller characteristics, not just the location of the call. For example, a 9-1-1 call might be made via a video-enabled device by a deaf caller whose native language is American Sign Language (ASL). Rather than route to the closest "geographically appropriate" PSAP that is not video enabled, it may be preferable to enable an intelligent 9-1-1 system to route the video 9-1-1 call to a PSAP that is video-enabled with a 9-1-1 telecommunicator prepared to respond to the caller using the caller's native sign language.

NG9-1-1 will also enable informed dispatch decisions to be made based on information about the incident and caller available from external sources, a capability that is not possible with today's E9-1-1 system. An example is a 9-1-1 call that arrives at a PSAP from a telematics equipped vehicle with information on the severity of a crash along with information from the vehicle occupant's electronic health record. Based on that information, algorithms may be able to predict the probability of severe injury and suggest a certain type of response[13]. These capabilities are intended to result in the appropriate level of care quickly being sent to victims in need of assistance. This should lead to lives saved. However, it may also result in unintentional errors despite the best efforts of all parties involved in the response. Liability protection statutes should extend to intentional non-location-based routing capabilities and the use of incident and personal data for emergency dispatch.

Another example of a possibility created by NG9-1-1, with liability implications, is the ability to utilize a "virtual PSAP." Today's 9-1-1 system generally requires 9-1-1 telecommunicators to answer calls from within the walls of a physical PSAP. With a connection to a high-speed broadband network and access to the necessary software needed to connect to the NG9-1-1 system, a 9-1-1 telecommunicator can answer local 9-1-1 calls from virtually any location. This capability is particularly advantageous during disasters and high call volume situations. However, liability laws were not written with this capability in mind and may need to be updated to ensure that 9-1-1 calls being answered "virtually" in potentially non-local locations separate from the physical PSAP do not create liability exposure.

A final example of a potential liability issue is the ability to transfer calls and data among multiple national N-1-1/800 numbers (e.g. 2-1-1, 3-1-1, 8-1-1, 9-1-1, suicide hotline, poison control centers). The current ability to transfer calls/data among the multiple N-1-1 entities is limited, but should not be as

13 See http://www.comcare.org/urgency.html..

NG9-1-1 systems are deployed and N-1-1 calls are able to be routed over shared networks. This ability should not open these entities up to liability exposure when they are making good faith efforts to get information to the right people to enable an effective emergency response.

ACTIONS PROPOSED TO RESOLVE ISSUE:

- Congress and State legislatures should review liability protection statutes to ensure that existing liability protection for PSAPs, users of technology, communications service providers and third party vendors will continue to effectively apply as new services and technologies are enabled by NG9-1-1.
- Modify current liability statutes, as necessary, to be technology neutral, rather than applying to any particular technology (e.g. CMRS wireless, VoIP, traditional landline), and ensure the liability protection extends to all forms of information pushed to a PSAP or pulled from external sources by a PSAP, regardless of the platform over which information travels.
- Ensure that such liability protection extends beyond the PSAP to all entities appropriately involved in the emergency response.
- Modify current liability statutes, as necessary, so that the protections apply to any entity playing the role of the 9-1-1 System Service Provider (SSP), and their third party vendors, regardless of whether that SSP is a traditional regulated local exchange carrier (LEC) or an unregulated IP-based SSP.
- Ensure that liability protections apply to the acquisition and use of data from external sources that do not come with the call, but that are added to the 9-1-1 call record.
- Review FCC requirements that 9-1-1 calls be routed to the "geographically appropriate" PSAP to assure they do not prevent 9-1-1 calls from being intelligently routed to the "situationally appropriate" PSAP, even if it is not the geographically closest PSAP.
- As desired and appropriate, ensure that "functional equivalency" requirements of the Americans with Disabilities Act, in its current forms or as modifications to the statute are made, do not have the unintended consequences of requiring all 9-1-1 calls to be treated the same, when an NG9-1-1 system can uniquely route calls from identified individuals with disabilities in a potentially more effective manner than a typical 9-1-1 call (e.g. call routing based on caller characteristics and needs, rather than location-based routing).

IMPLEMENTATION CHECKLIST:

- ☐ Does your state currently ensure liability protection for 9-1-1 calls? Does it effectively cover PSAPs, originating service providers, 9-1-1 SSPs and their vendors, as well as 9-1-1 callers? Have you located the 9-1-1 liability provision in your state, either through statute, tariff, or judicial decision?

- ☐ If the liability protection is provided through a non-statutory mechanism (tariff or judicial decision), have you considered the need for a codification of 9-1-1 liability protection?

- ☐ Is your 9-1-1 liability provision technology neutral, rather than applying to any particular technology (e.g. CMRS wireless, VoIP, traditional landline)?

- ☐ Have you reviewed federal legislation that addresses liability protection, contained in the Wireless Communications and Public Safety Act of 1999 (PL 108-61) and the New and Emerging Technologies 911 Improvement Act of 2008 (PL 110-283), codified at 47 U.S.C. § 615a.)?

- ☐ Do you believe your existing state liability protection provision, coupled with the federal statutes, is sufficient to cover ALL services and information that may be delivered over NG9-1-1 systems and shared among emergency response entities (e.g., voice, sensors, images and other data, video, medical records and any new, not yet developed, product or service)? Do current laws cover all potential 9-1-1 System Service Providers (SSPs), regardless of whether that SSP is a traditional regulated local exchange carrier (LEC) or an unregulated IP-based SSP?

- ☐ Even with the current federal liability protection statute, have you considered drafting a state-specific 9-1-1 liability statute that directly addresses all forms of communication that can be sent and received via the NG9-1-1 system? For example, such a state statute could explicitly cover:
    - Non-voice video and data communications;
    - Entities beyond the PSAP involved in the emergency response using information shared within the NG9-1-1 system, including the sharing of information with other N-1-1/800 numbers (e.g. 2-1-1, 3-1-1, 8-1-1, 9-1-1, suicide hotline, poison control centers);
    - Acquisition and use of data from external sources that do not come with the call, but that are added to the 9-1-1 call record;
    - The ability to do non-location based routing (e.g. routing based on call type or language of the caller; and
    - The ability to establish virtual PSAPs.

IV. Develop a Strategy and Implement Recommendations

Once existing policies and governance structures have been reviewed and needed changes to the current structure have been identified, the next step is to develop a strategy and plan to implement the changes.

Description

After completing a review of all existing 9-1-1 statutes and regulations, significant changes may need to be made to existing policies. Some revisions may need to be made to statutes, while other modifications or additions to agency rules and regulations or tariffs may be necessary. It will be important to determine which issues require statutory treatment and which issues can more effectively be addressed through changes in rules or regulations. When considering ideal governance structures for the NG9-1-1 system, stakeholders need to assess whether any statutory or rule changes are necessary or whether existing governance structures are sufficient to implement and operate NG9-1-1 systems.

Recommendations

The first and most important step in developing a strategy and plan to implement policy and governance changes is to identify all stakeholders that will be affected by the proposed changes and make sure everyone is involved in the planning process. Stakeholders should include representatives from 9-1-1 and public safety authorities and other emergency response entities, as well as state and local government organizations. All affected industry stakeholders should also be involved, including legacy E9-1-1 system service providers and originating service providers (wireline, wireless, VoIP, etc.), as well as new technology providers. Finally, ensuring the involvement of key consumer groups, including organizations representing individuals with disabilities, is also important. Ideally, all of the affected stakeholders will have been involved in the previous steps. If that is the case, developing a strategy and policy implementation plan will be a much simpler task.

Some specific topics that should be considered when developing a strategy and plan to implement policy and governance changes include, but are not limited to, the following:

- Consider whether desired changes can be made through the leadership and efforts of volunteer 9-1-1 and public safety leaders or if it is possible and desirable to hire private consultants. Implementing statutory and regulatory change is not an easy task and sometimes a call to the experts can be a worthwhile investment.
- Develop materials to educate relevant State legislatures, agencies and regulatory bodies, as well as municipal government bodies, to ensure that they understand how current regulations and laws facilitate or inhibit NG9-1-1.
- Determine whether individual policy modifications are best made through statutory revision or through a rule change at an implementing agency (e.g. State PUC or State 9-1-1 Agency). Decisions need to be made in terms of the level of detail desired in statutes versus the amount of flexibility given to independent regulatory agencies tasked with implementing general statutory commands.
- Consideration should be given to the approach taken to implement policy changes, whether in the form of a single, omnibus bill that addresses all issues in a single piece of legislation or addressing issues in a piecemeal manner.
- If necessary, consideration should be given to seeking waivers of some current rules and regulations in the short term during the initial transition to NG9-1-1 before final policy changes can be made.
- Consider an appropriate media strategy to support the overall transition to NG9-1-1 and specific legislative and policy efforts, where appropriate.
- Consider the statutory or regulatory changes that are needed to address the ideal governance structure for NG9-1-1 (including the establishment of a single agency responsible for managing the state-wide NG9-1-1 system and clear policies on the relationship of the many state agencies impacted by NG9-1-1).

V. Selected References

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- National Emergency Number Association (NENA) - *Next Generation 9-1-1 Project*: Detailed information on all aspects of NG9-1-1 can be found at http://www.nena.org/ng911-project.

- National Emergency Number Association (NENA) - *Next Generation Partner Program (NGPP)*. All products of the NENA NGPP can be found at http://www.nena.org/ng-partner-program.

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