Approved: March 19, 2010
Date

MINUTES OF THE HOUSE ENERGY AND UTILITIES COMMITTEE

The meeting was called to order by Chairman Carl Holmes at 9:15 a.m. on February 2, 2010, in Room 785 of the Docking State Office Building.

All members were present.

Committee staff present:
Matt Sterling, Office of the Revisor of Statutes
Cindy Lash, Kansas Legislative Research Department
Iraida Orr, Kansas Legislative Research Department

Conferees appearing before the Committee:
Laurie Flaherty, Office of EMS, US Department of Transportation
Patrick Halley, Government Affairs Director, National Emergency Number Association

Laurie Flaherty, Office of EMS,US Department of Transportation, (Attachment 1), spoke to the committee via telephone and gave a power point presentation on: Building and Funding Tomorrow's 9-1-1 System.

Patrick Halley, Government Affairs Director, National Emergency Number Association (Attachment 2), via telephone, spoke to the committee and gave a power point presentation on: Next Generation 9-1-1: Why do we need it? What is it? And how do we get there?

The next meeting is scheduled for February 3, 2010.

The meeting was adjourned at 10:39 a.m.

2/2

Building & Funding Tomorrow's 9-1-1 System

Laurie Flaherty
National 9-1-1 Office/ Office of EMS

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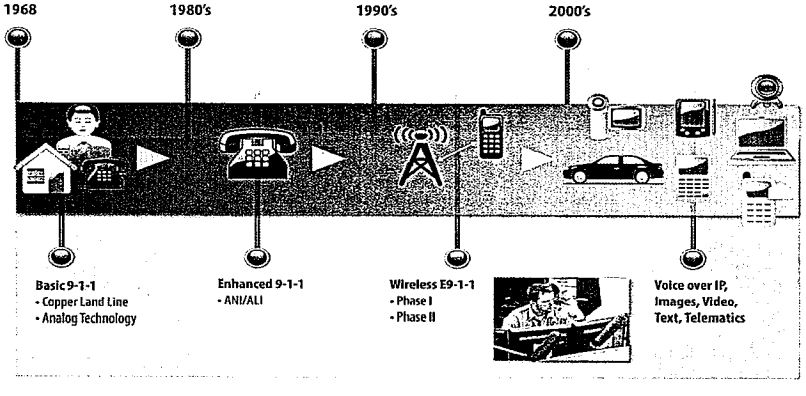
The Current 9-1-1 Network



HOUSE ENERGY AND UTILITIES
DATE: 2/2/2010
ATTACHMENT 1-1

Problem Statement

Consensus of 9-1-1 Community

Capitalize on advances in technologies that provide:

- ✓ Quicker and more accurate information
- ✓ Better and more useful forms of information (real-time text, images, video, and other data)
- ✓ More flexible, secure and robust Public Safety Answering Point (PSAP) operations
- ✓ Increased sharing of data, resources, procedures, and standards
- ✓ Promotion of increased coordination and partnerships

USDOT NG9-1-1 Project

Background:

Research and development project, funded by the USDOT's Intelligent Transportation Systems (ITS) Joint Program Office (JPO),

To define a NG9-1-1 system architecture and develop a transition plan for deploying digital, Internet Protocol (IP)-based 9-1-1 systems.

Long Term Goal:

To enable the general public to make a 9-1-1 "call" (any real-time communication – voice, text, or video) from any wired, wireless, or IP-based device, and

Allow first responders to take advantage of advanced real-time call delivery and data functions through new internetworking technologies based on open standards.

Next Generation 9-1-1

Today's 9-1-1	Next Generation 9-1-1
Primarily voice calls via telephones	Voice, text, or video information, from many types of communication devices
Minimal data available	Advanced data sharing is automatically performed
PSAP services – access, transfer, backup – are local only	Enhanced "long distance" capabilities; physical location of PSAP becomes immaterial
Limited capability for emergency notification	Location-specific emergency alerts possible for any networked device

US DOT NG9-1-1 Initiative

Transition Analysis

Preliminary Analysis of Cost, Value & Risk
Report on Critical Deployment Issues

Final Transition Plan
Final Cost, Value and Risk Analysis

Transition Plan

- Deployment Strategies
- Transition Issues
  - Funding
  - Operations
  - Standards and Technology
  - Governance & Policy

http://www.its.dot.gov/ng911/index.htm

Transition Plan

- Funding
  - 9-1-1 a fiscal priority
  - Change funding model
  - Preserve 9-1-1 funds
- Operations
  - Training for call takers
  - Preparing 9-1-1 authorities & PSAP managers
- Standards and Technology
  - Complete & open standards
  - Access & security controls
  - Location acquisition
  - Business rules and call priority
- Governance & Policy
  - Update legislation & regulations
  - Establish responsibilities @ every level of government

Analysis of Cost, Value & Risk

- Assumption: Hybrid Model
- Cost
  - Planning, Upgrading, Maintaining
  - Operating Costs comparable to maintaining present model
  - NG9-1-1 provides greater potential for cost savings
- Value [80% more value than present system]
  - Quicker transmission of useful, actionable information
  - Geographic-independent call access, transfer and backup
  - Increased interoperability and coordination
  - Increased access by public
- Risk
  - 17 Key Risks Identified
  - Risk adjusted lifecycle costs within range of current costs
  - Risks can be further mitigated by cost sharing

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A National Plan for Migrating to IP-enabled 9-1-1 Systems

- NET Improvement Act (2008)
- Benefits, Barriers, Strategies
- Access for Disabled (e.g., hearing impaired)
- Analysis of status of automatic location information (i.e., nomadic devices and high-rise buildings)
- Experiences of early adopters
- Issues for possible legislative or regulatory action

National Plan: Issues for possible legislative or regulatory action

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- Clear responsibility & authority for 9-1-1
- Sufficiently broad authority for 9-1-1 authorities
- Identify coordination required @ each level of government
- Consolidation/centralization of appropriate functions
- Model legislation
- Update laws & regs to be technologically neutral
- Consistent, long-term funding
- Establish responsibility for location information
- Consistent intergovernmental use of definitions

9-1-1 Grant Program

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- One-time appropriation: $43.5 million
- Eligible Applicants: States and Territories
- Non-competitive, Formula-based
- Match: 50/50 match, soft match
- 90% required "for direct benefit of" PSAPs
- Eligible use of funds:
  - Hardware
  - Software
  - Training
  - Consultant to manage deployment/training projects
- 30 Awards made September 25, 2009

Potential Role for NCSL:

NCSL
National Conference of State Legislatures

- NG Transition Plan: Appendix D: State Government
  - Funding, Operations, Standards & Technology, Governance & Policy
- National NG Migration Plan: Executive Summary
  - Changing relationship between PSAP and Networks (Service/Network Providers)
  - Clarifying jurisdictional relationships and responsibilities at each level of government
  - Ensure broad enough authority for 9-1-1 agencies
- Model legislation

- Direct Responsibility/Authority AND Indirect Influence, Support & Promotion


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Next Generation 9-1-1: Why do we need it? What is it? And how do we get there?

Patrick Halley
Government Affairs Director
National Emergency Number Association

February 2, 2010

Why Do We Need NG9-1-1?

- **The old E9-1-1 system design just can't cope**
  - 9-1-1 system not keeping up with technology used by consumers, individuals with disabilities; Growing data rich environment – E9-1-1 can't handle
  - Constant adaptation of E9-1-1 expensive and slow
  - New communications technologies need "plug and play" access and interfaces
  - Need data bandwidth, modernized networks -- broadband/IP
  - Need state-wide, nation-wide and beyond intercommunication, including other emergency services
  - Post transition, NG9-1-1 can be significantly more efficient (and potentially less expensive for similar features)

Core Purposes of NG9-1-1

The core purposes of NG9-1-1 can be briefly described in four segments:

- Fully replace Enhanced 9-1-1, with all capabilities and functions in place today
- Add capabilities to support changes for current and new types of Originating Service Providers
- Add flexibility for the PSAPs and 9-1-1 Authorities
- Add capabilities to integrate and interoperate with emergency entities beyond the PSAP

Core Purposes of NG9-1-1

Fully replace Enhanced 9-1-1, with all capabilities and functions in place today

- Need to replicate all features of E9-1-1 with IP-based, software and database versions
- All current calling types supported seamlessly
- No service disruption during transition

Core Purposes of NG9-1-1

Add capabilities to support changes for current and new types of Originating Service Providers

- New types of wireless services
- Non-voice messaging, such as text, photo and video, data-only (sensors), unknown future services
- Direct handling of telematics (*e.g.* OnStar) calls and data
- Language preference, including ASL, can direct the call to an appropriate calltaker, or cause auto addition of interpreter
- Common interface for developers to design to for quick connection to the system
- Access to information available in external databases

Core Purposes of NG9-1-1

Add flexibility for PSAPs and 9-1-1 Authorities

- Transfer calls and data between PSAPs and other entities anywhere an NG9-1-1 system exists
- Direct control of system functions (overflow and alternate routing), control data flow
  - Optional data access under calltaker control – no `pushing' of large added data quantities if undesired
- Share applications and costs (GIS, CAD, mobile data, etc)
- Disaster related call control
- Malicious call control
- In sum - direct programming of the NG9-1-1 system to operate the way 9-1-1 governing authorities desire, based on local conditions and needs

Core Purposes of NG9-1-1

Add capabilities to integrate and interoperate with emergency entities beyond the PSAP

- Connection to other emergency response entities for calls and data routing or transfer (EOCs, DHS, Trauma Centers, Public Health, etc)
- Interaction with 211, 311, N11s
- Sharing of infrastructure with non-PSAP entities

The Nature of NG9-1-1

- Designed to enable interoperability
- Designed with open standards
- Designed for and invites open competition, by major component, through interface standards
- Causes a transition to competitive service provider environment
- Causes a need for legislative and regulatory change

Current NENA NG9-1-1 Focus

- Concentrating on completing development and publication of NENA documents required to provide standardization and interoperability for `baseline' NG9-1-1 features and functions
- Much more work required after baseline development accomplished, which will include national testing of baseline NG9-1-1 and further development of the full version of NG9-1-1
- Significant focus on transition stage
- Significant focus on state/federal policy issues

Baseline NG91-1

- Comprised of all features and functions required to replicate current E9-1-1 service
- Plus those features and functions for management of the service and support for current or near future NG9-1-1 capabilities that E9-1-1 cannot handle
- Will support basic transport, routing, and control of voice and non-voice messaging and related data, but will not be able to fully support more advanced multi-media that depend on originating provider standards not yet defined by their SDOs

Baseline NG9-1-1

- Depends on originating provider network interfaces that are defined and in use for other purposes, but must be negotiated with carriers and/or their vendors for new types of NG9-1-1 applications
- But significant system capabilities are enabled by NG9-1-1 even before new types of originating services are able to connect to the system

Recent Activity

- Progress in NENA standards development
  - Several standards complete
  - Several major core NG9-1-1 standards slated for approval in early 2010 (IP functions and interfaces ("i3") stage 3 design, NG Security, IP-capable PSAP minimum operational requirements update, and several system operations/database standards)
- Some pre-NG9-1-1 early deployments and planning/implementation of IP-backbone networks; IP network and equipment development
- Successful NENA NG9-1-1 Industry Collaboration Event (ICE) -http://www.nena.org/ng9-1-1/ice
- Significant state regulatory activity regarding provisioning of "competitive E9-1-1 services"; some state legislative activity

More information available at http://www.nena.org/ng911-project

NG9-1-1 Transition Issues

NG9-1-1: From Paper to Reality

- Significant technical and operational standards development (NENA and other SDOs)
- Proof of concept trial demonstrations
- Architectural framework development
- Concept of operations development
- But...Without policies that promote NG9-1-1 and statutes & regulations that allow it, standards and architecture development is irrelevant
- What is possible must also be a policy goal, a legal activity, and well coordinated within and among the states

NG9-1-1: Overall Policy Needs

- Overall policy promotion to enable NG9-1-1 needed at all levels of government
- Current federal and state statutes and regulations must be analyzed to ensure laws do not prohibit NG9-1-1
  - -Likely need for combination of new statutes/regulations and revision or repeal of outdated laws
- Issues requiring analysis include (but are not limited to):
  - -Collection and eligible use of 9-1-1 funds
  - -State 9-1-1 program authority and responsibility
  - -System definition and technology requirements/limitations
  - -Rules concerning which devices/services may connect to 9-1-1
  - -Liability and privacy protection laws

Some Policy Issues Identified

- Funding models must be reexamined to account for emerging technologies and to enable the sharing of infrastructure and costs
- State and federal policies are needed to enable the establishment of State Emergency Service IP Networks (ESInets)
- Jurisdictional frameworks for NG9-1-1 at federal, state and local levels must be clarified (Need for appropriate statewide coordination/management)
- Out of date state and federal laws/regulations that do not reflect modern communications capabilities in an NG9-1-1 system must be addressed
  - e.g. outdated state statutes and PUC regulations based on traditional telephone system;
  - e.g. rules prohibiting the direct transfer of verified emergency data to PSAPs (such as telematics automatic crash notification data, sensors)
- Need for review of liability and confidentiality statutes

State 9-1-1 Program Authority Considerations

- NG9-1-1 architecture, implementation coordination and funding requires a state-level mechanism
- Some states have no state-level 9-1-1 program (or programs are limited to a specific technology – e.g. Wireless 9-1-1 Board); Others may have a program, but lack adequate authority and resources to be truly effective
- Federal homeland security and 9-1-1 policy increasingly recognizes the need for state coordination
- Responsible for managing statewide IP network(s) and/or interconnecting regional/local intra and interstate networks
- Minimize need for PSAPs to understand all technology advancements and individual service provider capabilities

Local Responsibility Considerations

- Primary responsibility should be to receive calls/information and provide emergency response (assurance of service delivery)
- 9-1-1 service remains locally managed and controlled
- Potentially responsible for much less technology and vendor relationship management
- Develop and Maintain Local Data
  - Local PSAP authorities have best knowledge of local Information and Infrastructure

Funding

- Essential to address (1) collection of funds to pay for the system and (2) the eligible use of funds – for NG9-1-1
- Need to ensure sufficient funds for 9-1-1 are raised and that eligible use of 9-1-1 funds match NG9-1-1 needs
- Current state 9-1-1 funding legislation functionally tied to current 9-1-1 system architecture, not NG9-1-1
- State and federal legislation and grant programs need to consider the growing convergence and integration of public safety technology and agency interaction

NG9-1-1 Funding

- We should no longer pay for a stand-alone 9-1-1 system
  - Shared system, shared costs
  - Paying for 9-1-1's portion of the overall emergency service internetwork
- Deployment approach significantly affects cost
  - Coordinated, intergovernmental implementation
  - Independent, unilateral implementation
- Some Funding Model Options Outlined in NENA Next Generation Partner Program Funding Model Report
  - Available at http://www.nena.org/media/File/NGFundingReport.pdf
- Eligible use of funds? Only for E9-1-1? NG9-1-1?

State Emergency Services IP Networks (ESInets)

- State ESInets are critical to the NG9-1-1 and next generation emergency communications architecture
- No state today is implementing and operating a comprehensive ESInet that supports 9-1-1 as well as other next generation oriented emergency communications functions beyond 9-1-1
  - Significant planning underway in several states
- Legislative or regulatory barriers may exist

NG9-1-1 Regulation/Statute/Tariff Considerations

- Next Generation implementation will not be a statewide "flash cut" in many cases
- Legislation/Regulation, state policies and funding considerations must anticipate and support multiple deployment scenarios
- Many elements of Next Generation technology already exist
- Local 9-1-1 authorities need the ability to implement Next Generation technology (in all or part) as they see fit (ideally in coordination with a state authority)
- Need for statutes/regulations/tariffs to enable a competitive E9-1-1 environment that facilitates transition to full NG9-1-1

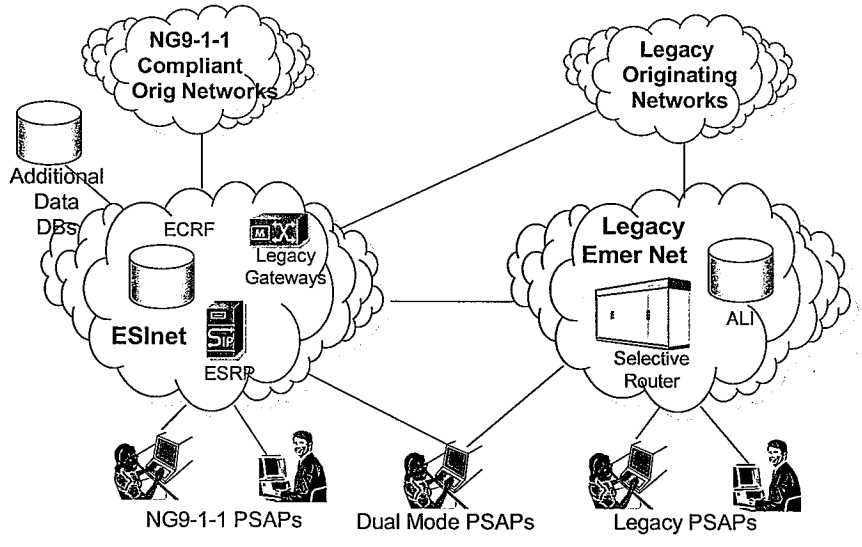
Confidentiality of 9-1-1 Call Information

- PSAPs currently receive only ANI and ALI (includes street address or lat/long location information)
- NG9-1-1 architecture enables a level of access and sharing not currently possible (more data, images, live video, personal medical data, etc.)
- Current statutory confidentiality provisions may not adequately protect the public, and may hinder access and sharing for legitimate purposes

Evolution Approaches

- NG9-1-1 Evolution Approaches
  - **Coordinated, Intergovernmental Approach:**
    - Top Down approach
    - Statewide or regional coordination
  - **Independent, Unilateral Approach:**
    - Independent initiatives by PSAP Jurisdictions or 9-1-1 Authorities
  - In either case Legacy Emergency Networks and NG9-1-1 Networks will coexist

Coexistence of Legacy and NG9-1-1 Networks



Some Kansas 9-1-1 Statute Observations

- Some definitions outdated – e.g. references to the "emergency telephone service"
- Rules/grants are (1) technology specific (e.g. focused on wireless or VoIP) and (2) have a very local focus on PSAPs (for grants and funding distribution primarily) rather than focused on an overall system
- Very limited state authority and system management responsibility

Next Steps

- Start getting ready now
- Review national materials to fully understand architecture and system capabilities and policy recommendations
- Monitor and participate in demos and trials
- Form NG9-1-1 policy working group to review current 9-1-1 laws, regulations and tariffs and analyze impact on NG9-1-1 and need for revisions
- Ensure broad stakeholder involvement

Transition Recommendations

- Make use of guidelines, other's experiences
  - NENA NG9-1-1 Policy Implementation Handbook under internal review and expected to be published this month
- Address near and long term funding
- Maximize cost sharing
- Consolidate system management functions; ensure sufficient state coordination, management and oversight (with significant local involvement)
- Plan transition process to minimize time operating under both E9-1-1 and NG9-1-1 like environment – operational and cost savings

Questions?

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