

HJ 7. Next Generation 911 Stakeholder Working Group Update

HJ 7 Directives

- Assess federal and state regulatory and statutory environment
- Make recommendations for the implementation, management and operation and ongoing development of NG911 emergency communications services

Stakeholder Working Group

- Members
 - Legislature and staff; State of Montana; Counties; 911 jurisdictions/PSAPs; Public Safety; Industry
- Meetings
 - First meeting in October, including Reps. Steenberg, Regier and Zolnikov
 - Meetings in November (technology and network infrastructure) and December (“follow the money”)
 - Future meetings: on-going operation, sustainability, interoperability (FirstNet, public safety communications), legal issues (privacy), GIS

Definitions: What is “Next Generation 911?”

- The capability to send and receive data in real time, share data between agencies and centers, receive calls from traditional and non-traditional sources, to route calls, and resources based on real time GIS data. (APCO)
- A NG911 system enables the public to make voice, text/data or video calls/communications from any communications device via Internet Protocol (IP) based networks. The NG911 center of the future will be able to receive data from sources such as Advanced Automatic Collision Notification systems, medical alert systems, and other “sensors.”
- An IP-based system comprised of managed IP-based networks (ESInets), functional elements (applications) and databases...designed to provide access to emergency services from all connected communications sources... (USDOT/NHSTA)

Where are we now; where do we need/want to go; and how do we get there?

- Today’s landscape (Where we are today)
 - IP network backbone for 80% of PSAPs (calls) for more than 10 years.
 - One of first in the nation, putting MT ahead of most states
 - TDM system for 20%
 - 53 PSAPs
 - 15 “legacy” PSAPs on CenturyLink network; 60% of population
 - 41 on Vision Net, IP capable (80% of PSAPs can receive IP)
 - 4 Selective Routers, none of which is IP ready
- NG911 Network (Where we want to go?)
 - Infrastructure
 - ESInet (statewide IP network backbone)
 - IP selective routers

ENERGY &
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INTERIM COMMITTEE 2015-2016

January 15, 2016

Exhibit 8

- IP-capable PSAPs
- Applications and Databases
- Operations and Governance
- How do we get there?
 - Implementation Plan
 - Technology/Network/System (CAPEX)
 - ESInet
 - IP-capable PSAPs
 - GIS, Applications
 - Database
 - Migration plan. (pilot projects?)
 - Human factors: education, training, operating protocols
 - Operations, maintenance, upgrade
 - Modernizing statute (10-4-101, *et seq.*, MCA) (see USDOT/NHSTA guidelines, November 2012)
 - Current statute
 - Statutory allocation formula is inefficient, arbitrary
 - Public-private partnership model works
 - Statewide coordination/administration/planning
 - Local jurisdictional operation/implementation
 - Governance.
 - Statewide NG 911 plan, objective
 - Statewide coordinating council/governing board/advisory cte.
 - Rulemaking authority
 - Local jurisdictions; nothing discourages multijurisdictional or regional systems
 - Funding
 - 911 Fee, Fund
 - \$1.00 911 fee raises ~\$13M/yr
 - “contributions” mechanism in an IP (non-voice) world
 - ~\$5M to upgrade PSAPs and selective routers
 - \$ to integrate applications, update databases, etc.?

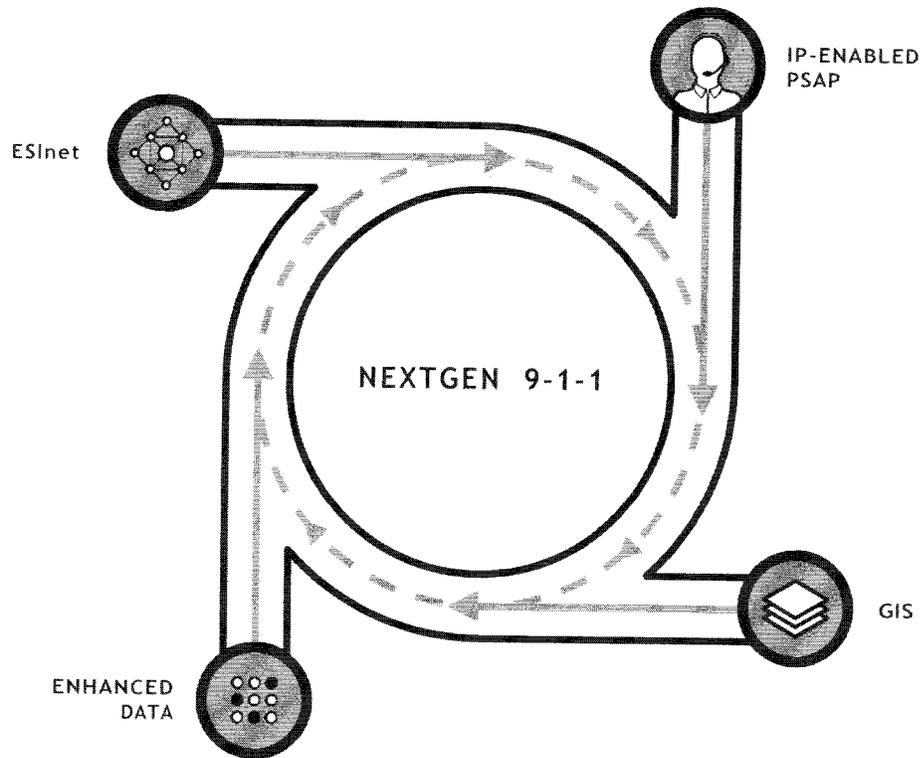
Slides:

- Getting Started: Next Gen entry points (Intrado)
- GIS call routing and validation (Intrado)

Glossary (See NENA Master Glossary. 7/29/14)

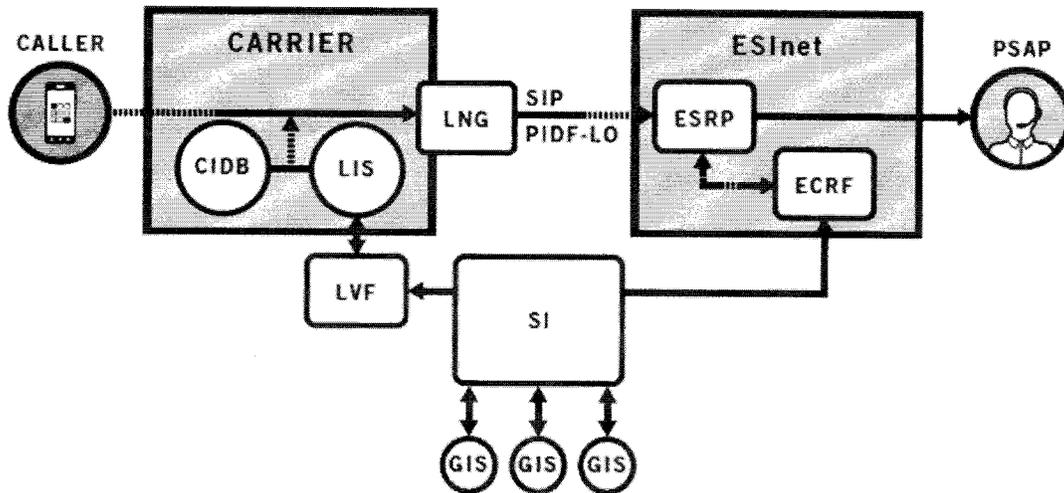
- ESInet. Emergency Services IP Network. IP transport infrastructure upon which independent application platforms and core functional processes can be deployed.
- IP. Internet Protocol. The method by which data are sent on the Internet.
- PSAP. Public Service Answering Point (911 call center)
- TDM. Time Division Multiplexing. A digital transmission methodology.
- GIS. Geographic Information System. Allows for special reference.

4.1 NEXT-GENERATION 9-1-1 STARTING POINTS



Source: Intrado. NG 911. The Essential Guide to Getting Started. 2013.

3.1 GIS LOCATION VALIDATION AND CALL ROUTING



Source: Intrado. Next Generation 9-1-1: The Essential Guide to Getting Started. Vol 4. The Role of Geographic Information Systems in Next Generation 9-1-1. 2015.

CIDB	Caller Information Database
LIS	Location Information Server
LVF	Location Verification Function. GIS function that matches location with geo-coordinates.
LNG	Legacy Network Gateway
SI (or SIF)	Spatial Interface, or Spatial Information Function. GIS data and workflows/processes that get the GIS data from a local government that is creating and maintaining the data, up to the NG9-1-1 system where it can be used for call routing.
GIS	Geographic Information System
SIP	Session Initiation Protocol. Call signaling protocol for IP traffic
PIDF-LO	Presence Information Data Format-Location Object (location information in a SIP header)
ESRP	Emergency Services Routing Proxy. Selects the next hop routing within the ESInet based on location and policy
ECRF	Emergency Call Routing Function. Used to route an emergency call toward the appropriate PSAP
ESInet	Emergency Services IP Network.
PSAP	Public Safety Answering Point (911 call center).