FirstNet and Elected Officials

WHAT IS THE FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET)?

FirstNet is an independent authority within the U.S. Department of Commerce's National Telecommunications and Information Administration. FirstNet is governed by a 15-member Board consisting of the Attorney General of the United States, the Secretary of Homeland Security, the Director of the Office of Management and Budget, and 12 members appointed by the Secretary of Commerce. The FirstNet Board is composed of representatives from public safety; local, state and federal government; and the wireless industry.

Signed into law on February 22, 2012, the Middle Class Tax Relief and Job Creation Act created FirstNet. The law gives FirstNet the duty to build, operate and maintain the first high-speed, nationwide wireless broadband network dedicated to public safety entities. FirstNet will provide a single interoperable platform for public safety communications.

WHAT WILL THE FIRSTNET NETWORK DO FOR MY CITY OR COUNTY?

The FirstNet network will improve citizen and responder safety and increase the efficiency and effectiveness of emergency response through cutting edge broadband communications. Imagine a day when a single communications network can be used to dispatch EMS personnel, a medical helicopter, police officers, and fire personnel from different jurisdictions all at the same time, utilizing voice, video, and data at broadband speeds. Public safety personnel using the FirstNet network will be able to share applications, access databases, and provide better informed responses to incidents through integrated communications.

FirstNet's goal is to provide public safety-grade reliability and nationwide coverage so all public safety personnel can count on the network when they are on the job. FirstNet is also aiming to provide coverage solutions that let public safety "take the network along" to the destination in certain geographies. FirstNet will create a nationwide standard of service while affording localized customization and control.

WILL THE FIRSTNET NETWORK REPLACE THE LAND MOBILE RADIO (LMR) NETWORKS PUBLIC SAFETY USES TODAY?

When the FirstNet network launches, it will provide mission-critical, high-speed data services to supplement the voice capabilities of today's Land Mobile Radio (LMR) networks. Initially, the FirstNet network will be used for sending data, video, images and text. The FirstNet network will also carry location information and eventually support streaming video. FirstNet also plans to offer cellular voice communications such as Voice over Long Term Evolution (VoLTE) or other alternatives. The FirstNet network will not become a viable replacement for LMR until the availability of mission-critical voice functionality that meets or exceeds the needs of public safety agencies.

WHO IS RESPONSIBLE FOR BUILDING THE NETWORK COMPONENTS?

FirstNet will be responsible for building out the network core. If, after completing the collaborative state consultation process, a state decides to opt-in and accept FirstNet's state plan jointly developed by the state and FirstNet, FirstNet will pay to build out the state's radio access network (RAN) that will connect to the core. FirstNet will also be financially responsible for the network's operations and maintenance.

WILL ALL MY PUBLIC SAFETY EMPLOYEES HAVE TO SUBSCRIBE TO THE NETWORK?

Use of the FirstNet network is voluntary, and any public safety agency is not required to participate. However, a network built for and dedicated to public safety agencies should provide a dependable and affordable user experience making FirstNet network an attractive choice for first responders.

HOW MUCH IS THE SUBSCRIPTION COST AND WILL IT BE PER USER OR PER DEVICE?

FirstNet intends to offer services at a compelling and competitive cost to attract millions of public safety users and make the FirstNet network self-sustaining. The costs for FirstNet's services and devices have not yet been set.

WHO WILL BE RESPONSIBLE FOR OPERATING AND MANAGING THE NETWORK IN MY CITY OR COUNTY?

FirstNet will be responsible for managing core operations and RAN operations for opt-in states. FirstNet also will enable robust identity management and authentication practices at the local level.

WHEN WILL THE NETWORK BE AVAILABLE IN MY CITY OR COUNTY?

Each state/territory will participate in a series of meetings with FirstNet as part of the required consultation process. Once the consultation is completed, the state plan is finalized, and a governor opts into the network, the RAN will be built to the plan specifications. FirstNet cannot determine at this time when its services will be available to cities and counties.

HOW CAN MY CITY OR COUNTY PARTICIPATE IN THE DEVELOPMENT OF THE FIRSTNET NETWORK?

FirstNet is responsible for working through the designated state Single Points of Contact (SPOC) to consult with states, local communities, tribal governments, and first responders to gather requirements for developing its network deployment plans. Elected officials may provide input to FirstNet via the outreach efforts being coordinated by the SPOC in each state and through the notice of proposed rulemaking process that will take place in 2014.

Elected officials may also want to contact members of the FirstNet Public Safety Advisory Committee (PSAC). PSAC members represent associations whose memberships are comprised of local, state, and tribal entities. More information regarding the PSAC and its membership is available at http://firstnet.gov/about/public-safety-advisory-committee.

FirstNet often participates in professional association meetings and conferences. To request FirstNet's participation at a meeting or conference, please contact us at info@firstnet.gov.

To stay up-to-date on FirstNet activities, elected officials can track progress at www.firstnet.gov and @FirstNetGov on Twitter

WHAT AGENCIES BESIDES LAW ENFORCEMENT, FIRE, EMS, AND 911 CAN USE THE NETWORK? WHAT OTHER CITY/COUNTY OFFICIALS WILL BE ABLE TO USE THE NETWORK DURING AN EMERGENCY?

FirstNet will be issuing a public comment notice regarding eligible public safety entities under the law in 2014 to solicit input from stakeholders on this topic. State and territory specific discussions regarding eligible users will occur during the consultation process.

WHO IS MY STATE SINGLE POINT OF CONTACT FOR FURTHE

To identify the SPOC for a state, visit http://firstnet.gov/consultation.

FirstNet

Questions? Contact FirstNet at info@firstnet.gov or (703)

Questions in Massachusetts? Contact:

PSBO
Public Safety Broadband Office

PublicSafetyBroadband@state.ma.us
mass.gov/psbo

Curtis M. Wood
Undersecretary, Forensic Science and Technology

Steve Staffier
Commonwealth Statewide Interoperability Coordinator

Michael Saltzman
Project Director

FirstNet and Emergency Medical Services

WHAT IS THE FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET)?

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WHAT WILL BE POSSIBLE WITH THE FIRSTNET NETWORK?

The FirstNet network will save time during the golden hour. Imagine a day when one interoperable communications network can be used to dispatch EMS personnel, a medical helicopter, police officers, and fire personnel from different jurisdictions all at the same time. EMS professionals using the FirstNet network will be able to share applications, access to databases, and provide better patient care through improved communications.

FirstNet's goal is to provide public safety-grade reliability and extensive coverage so EMS personnel can count on the network when they are on the job. FirstNet is also aiming to provide coverage solutions that let EMS personnel "take the network along" to the destination in certain geographies. EMS chiefs and local officials will have local control over the network so, for example, they can assign users and talk groups and determine who can access applications.

When the FirstNet network launches, it will provide mission-critical, high-speed data services to supplement the voice capabilities of today's Land Mobile Radio (LMR) networks. Initially, the FirstNet network will be used for sending data, video, images and text. The FirstNet network will also carry location information and eventually support streaming video. FirstNet plans to offer cellular voice communications such as Voice over Long Term Evolution (VoLTE) or other alternatives.

WHY WAS FIRSTNET CREATED?

The public safety community fought hard to fulfill the 9/11 Commission's last standing recommendation and lobbied Congress to pass legislation establishing a dedicated, reliable network for advanced data communications nationwide. During emergencies, EMS personnel need priority access and preemption, which are not available on commercial networks.

HOW WILL THE FIRSTNET NETWORK BENEFIT EMS?

Using the FirstNet network will improve situational awareness and decision-making. The FirstNet network will make it possible to use new tools that support faster parallel processing. The FirstNet network will enable the exchange of real-time data and audio/video feeds between EMS personnel and hospital staff. This kind of connection, while units are on the scene and during transport, will improve all levels of pre-hospital care.

WHAT WILL USERS PAY FOR FIRSTNET'S SERVICES?

FirstNet intends to offer services at a compelling and competitive cost to attract millions of public safety users and make FirstNet self-sustaining. The use of FirstNet's services and applications will be voluntary. The costs for FirstNet's services and devices have not yet been set.

HOW CAN MY LOCAL AGENCY PARTICIPATE IN THE DEVELOPMENT OF THE FIRSTNET NETWORK?

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Questions in Massachusetts? Contact:

PSBO
Public Safety Broadband Office

psbo@state.ma.us
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FirstNet and the Fire Service

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WHAT WILL BE POSSIBLE WITH THE FIRSTNET NETWORK?

The FirstNet network will enable faster, better coordinated response to natural and manmade disasters. Just as smartphones have changed personal lives, FirstNet devices and applications will ultimately change the way career firefighters and volunteers operate. Imagine a day when one interoperable communications network can be used to dispatch an extrication team, a medical helicopter, police and EMS personnel from different jurisdictions all at the same time. Fire personnel using the FirstNet network will be able to share images and applications, and access databases to have a common operational picture as incidents unfold.

FirstNet's goal is to provide public safety-grade reliability and extensive coverage so fire personnel can count on the network when they are on the job. FirstNet is also aiming to provide coverage solutions that let fire personnel "take the network along" to their destination in certain geographies. Incident commanders and local officials will have local control over the network so, for example, they can assign users and talk groups and determine who can access applications.

When the FirstNet network launches, it will provide mission-critical, high-speed data services to supplement the voice capabilities of today's Land Mobile Radio (LMR) networks. Initially, the FirstNet network will be used for sending data, video, images and text. The FirstNet network will also carry location information and eventually support streaming video. FirstNet plans to offer cellular voice communications such as Voice over Long Term Evolution (VoLTE) or other alternatives.

WHY WAS FIRSTNET CREATED?

The public safety community fought hard to fulfill the 9/11 Commission's last standing recommendation and lobbied Congress to pass legislation establishing a dedicated, reliable network for advanced data communications nationwide. During emergencies, fire personnel need priority access and preemption, which are not available on commercial networks.

HOW WILL THE FIRSTNET NETWORK BENEFIT THE FIRE SERVICE?

Using the FirstNet network will greatly improve situational awareness and keep fire personnel safer with an improved communications capability. The FirstNet network will make it possible to gain quick access to new tools and applications that provide location data and other vital information for firefighting. The FirstNet network will enable the exchange of real-time data and audio/video feeds on the fireground to assist incident commanders with operational decision-making and maximize search and rescue and suppression effectiveness.

WHAT WILL USERS PAY FOR FIRSTNET'S SERVICES?

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FirstNet and Law Enforcement

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WHAT WILL BE POSSIBLE WITH THE FIRSTNET NETWORK?

The FirstNet network will enable faster, more informed and better coordinated response to incidents. Just as smartphones have changed personal lives, FirstNet devices and applications will ultimately change the way law enforcement personnel and agencies operate. Imagine a day when one interoperable communications network can be used to dispatch police, fire, and EMS personnel from different jurisdictions all at the same time. Law enforcement personnel using the FirstNet network will be able to share images and applications, and access multiple databases to have a common operational picture as incidents unfold.

FirstNet's goal is to provide public safety-grade reliability and extensive coverage so law enforcement personnel can count on the network when they are on the job. FirstNet is also aiming to provide coverage solutions that let law enforcement personnel "take the network along" to the destination in certain geographies. Incident commanders and local officials will have local control over the network so, for example, they can assign users and talk groups and determine who can access applications.

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HOW WILL THE FIRSTNET NETWORK BENEFIT LAW ENFORCEMENT AGENCIES?

Using the FirstNet network will improve situational awareness and keep law enforcement personnel safer with an improved communications capability. The FirstNet network will make it possible to use new audio reporting tools in the field to gain efficiency. Real-time data and audio/video feeds sent before, during and after incident response will improve the overall effectiveness of law enforcement personnel.

WHAT WILL USERS PAY FOR FIRSTNET'S SERVICES?

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Steve Staffier
Commonwealth Statewide Interoperability Coordinator

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Project Director

FirstNet™

How will the FirstNet Network Work with Today's Land Mobile Radio Networks?

WILL THE FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET) NETWORK REPLACE THE LAND MOBILE RADIO (LMR) NETWORKS PUBLIC SAFETY USES TODAY?

When the FirstNet network launches, it will provide mission-critical, high-speed data services to supplement the voice capabilities of today's Land Mobile Radio (LMR) networks. Initially, the FirstNet network will be used for sending data, video, images and text. The FirstNet network will also carry location information and eventually support streaming video. FirstNet plans to offer cellular voice communications such as Voice over Long Term Evolution (VoLTE) or other alternatives.

WHEN WILL MISSION-CRITICAL VOICE BE AVAILABLE FOR FIRSTNET USERS?

FirstNet can't predict the arrival of mission-critical voice in part because the standards are still under development. The standards work will determine the functionality and performance requirements for mission-critical Voice over Long Term Evolution (VoLTE). FirstNet is actively involved in the standards-setting process and the industry at large is working to accelerate the development of this new worldwide standard.

WHAT MAKES MISSION-CRITICAL VOICE DIFFERENT FROM CELLULAR-QUALITY OR COMMERCIAL-GRADE VOICE?

Today's LMR networks support push-to-talk, direct mode, and emergency call functionality. Public safety users typically communicate one-to-many instead of one-to-one. If the network fails, they also must be able to communicate with other responders in close proximity, so direct mode is critical. There are also performance requirements for mission-critical voice that address call set-up speed, quality, and reliability. These attributes need to be defined through the standards-setting process.

WILL THE FIRSTNET NETWORK SHARE SITES WITH LMR NETWORKS?

The FirstNet network will leverage existing infrastructure where it makes engineering and economic sense. Our goal is to keep costs down and reduce the time it takes to build out the new Band Class 14 FirstNet network. Band Class 14 is the portion of spectrum allocated to public safety for operation of the FirstNet nationwide public safety wireless broadband network. Whether FirstNet shares sites with LMR networks will depend on the availability of space to house FirstNet equipment and whether the location proves to be the best option for meeting our network design, coverage, and cost requirements.

WILL THE FIRSTNET NETWORK CONNECT TO LMR NETWORKS?

In order to access one or more LMR networks, a dedicated handset must be within range of the specific towers within the frequency band on which it operates. Public safety personnel utilize a propriety subscriber unit and must sometimes carry multiple units to execute their daily mission. Headquarters personnel, ad hoc users or neighboring jurisdictions are routinely provided with units when needed for mutual aid. There are many solutions that will allow FirstNet users to improve efficiency by extending LMR access to smartphones, tablets and PCs. Through a simple Internet Protocol (IP) gateway, users will be able to transmit and receive voice traffic on any device that is authenticated to an LMR network via a Push to Talk (PTT) voice application.

Questions in Massachusetts? Contact:

psbo@state.ma.us
mass.gov/psbo

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Project Director

FirstNet™

FirstNet Update for Massachusetts Stakeholder Groups

Fall 2014

Curt Wood

Undersecretary of Forensic Science and Technology, Massachusetts Executive Office of Public Safety and Security

FirstNet Single Point of Contact, Commonwealth of Massachusetts

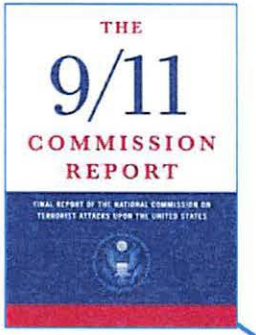
Michael Saltzman

Project Director, Commonwealth Public Safety Broadband Office

FirstNet Alternate Single Point of Contact, Commonwealth of Massachusetts

Origins of FirstNet and National Public Safety Broadband Network (NPSBN)

PSBO
Public Safety Broadband Office

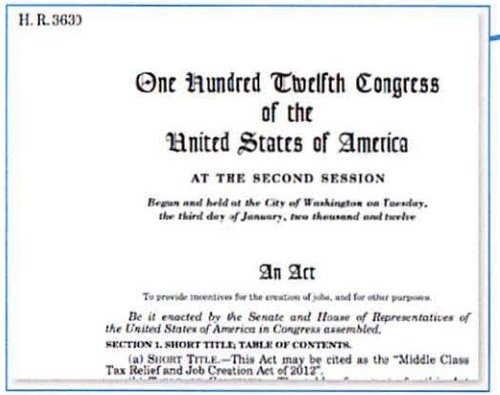


9/11 Commission **recommends improved communications** for public safety and first responders.

FirstNet™

Dept of Commerce establishes **FirstNet Board**

Sep 2001 — **Jan 2004** — **Feb 2012** — **Aug 2012**


H. R. 3630

One Hundred Twelfth Congress
of the
United States of America

AT THE SECOND SESSION

Begun and held at the City of Washington on Tuesday, the third day of January, two thousand and twelve

An Act

To provide incentives for the creation of jobs, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

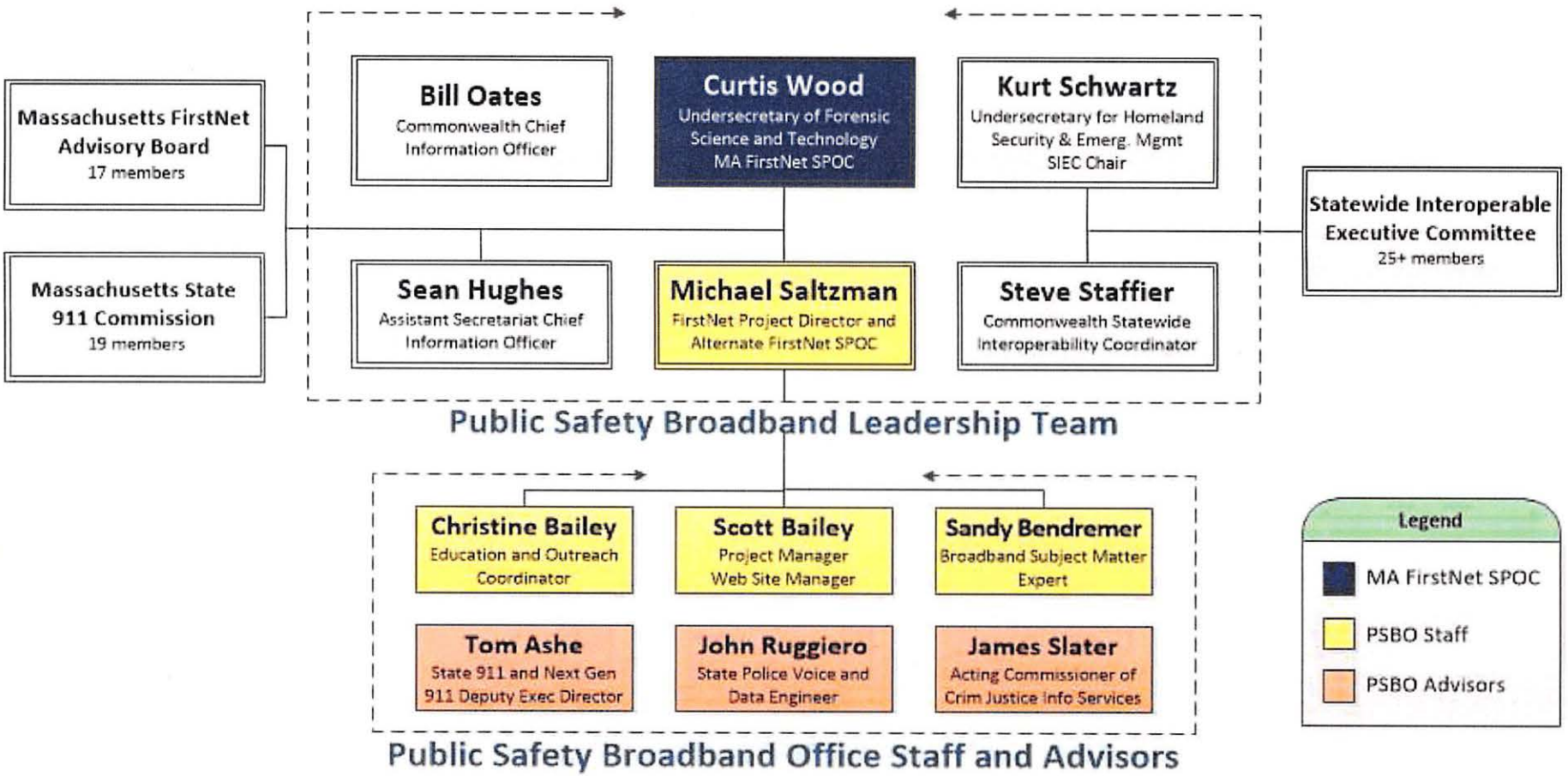
(a) SHORT TITLE.—This Act may be cited as the "Middle Class Tax Relief and Job Creation Act of 2012".

Middle Class Tax Relief and Job Creation Act of 2012

- Establishes **Technical Advisory Board** for First Responder Interoperability within the FCC
- Authorized the NTIA to establish **First Responder Network Authority (FirstNet)**
- Directed FirstNet to establish the NPSBN based on a **single, national network architecture**
- Reallocated **700 MHz D Block spectrum** to public safety (under license to FirstNet)
- **Authorized funding** through spectrum auctions

Introduction to the Public Safety Broadband Office (PSBO)

Governor Patrick designated **EOPSS Undersecretary Curtis Wood** as the Commonwealth's **Single Point of Contact (SPOC)** to FirstNet.



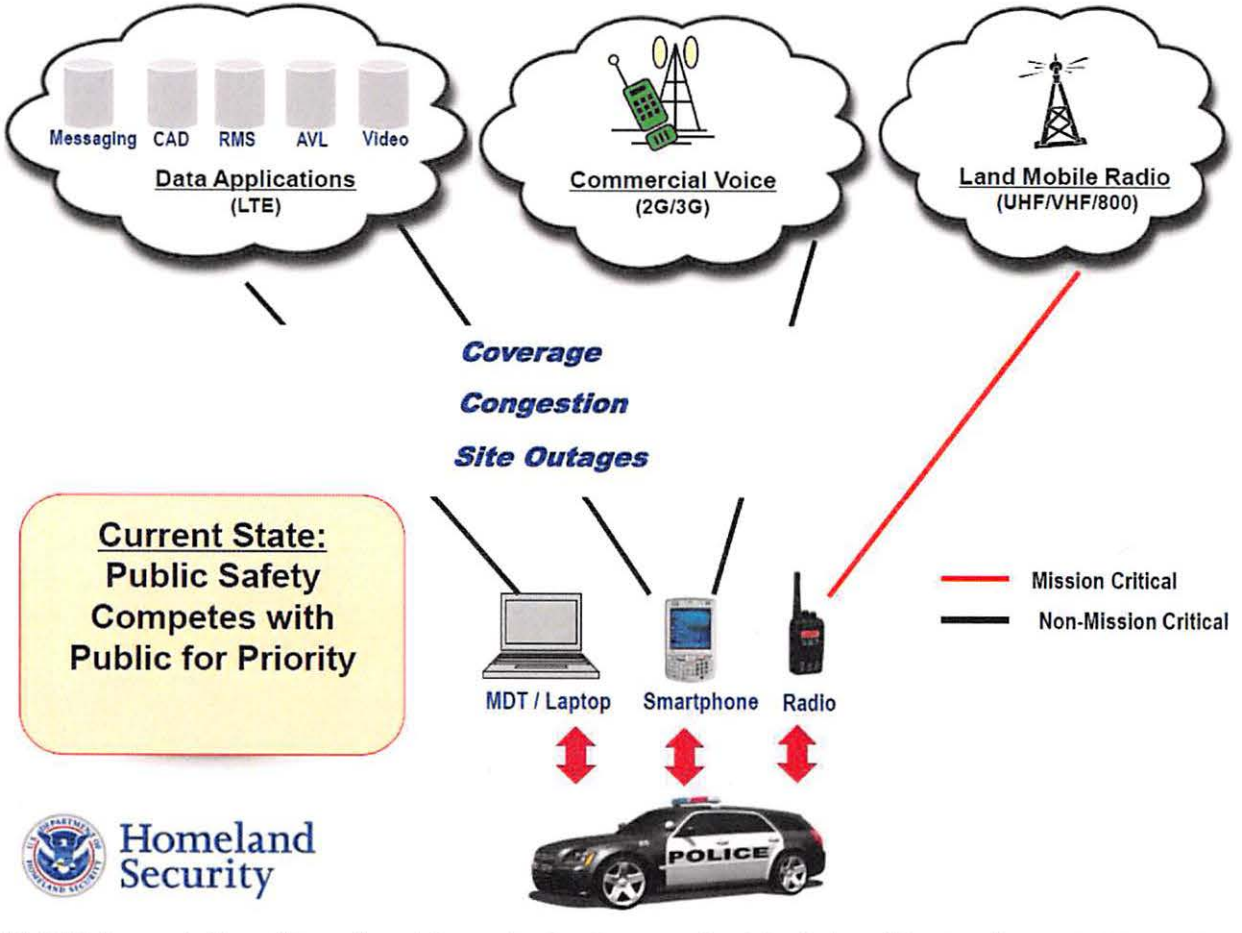
The Need for FirstNet and the NPSBN

PSBO
Public Safety Broadband Office

Current State: Public Safety competes with the public for priority.

Immediate Goal:
Make data mission critical for public safety

Long-Term Goal:
Develop mission critical voice over LTE



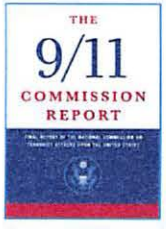
Reference: DHS OEC Presentation, "Broadband Consultation Preparation Workshop," September 4, 2014, p. 10

FirstNet by the Numbers

PSBO
Public Safety Broadband Office

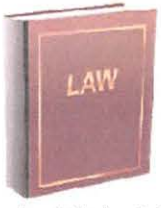
VISION *To provide emergency responders with the first nationwide, high-speed, wireless broadband network dedicated to public safety*

THE ORIGIN



9/11 Commission recommends improved communications for public safety and first responders.

THE LAW



2.22.12

FirstNet becomes Law in Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (PL 112-96).

FUNDING

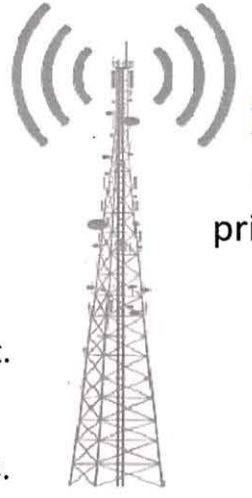
$7B authorized to build the FirstNet network. Funded by spectrum auctions through 2022. The first auction netted **$1.6B**

GOVERNANCE

FirstNet Board of Directors' 15 members have backgrounds in police, fire, sheriff, emergency medical, city government, and commercial telecommunications.

Governor appoints 1 Single Point of Contact (SPOC) and governing body to represent the state's interests to FirstNet.

40 member Public Safety Advisory Committee (PSAC) advises FirstNet on public safety intergovernmental matters.



SPECTRUM

20MHz of bandwidth has been dedicated to public safety in the prime **700MHz** frequency range.

TECHNOLOGY

4G LTE is ***10x*** faster than 3G wireless service.

FirstNet Coverage

PSBO
Public Safety Broadband Office

Over 5 Million potential public safety users nationwide over...

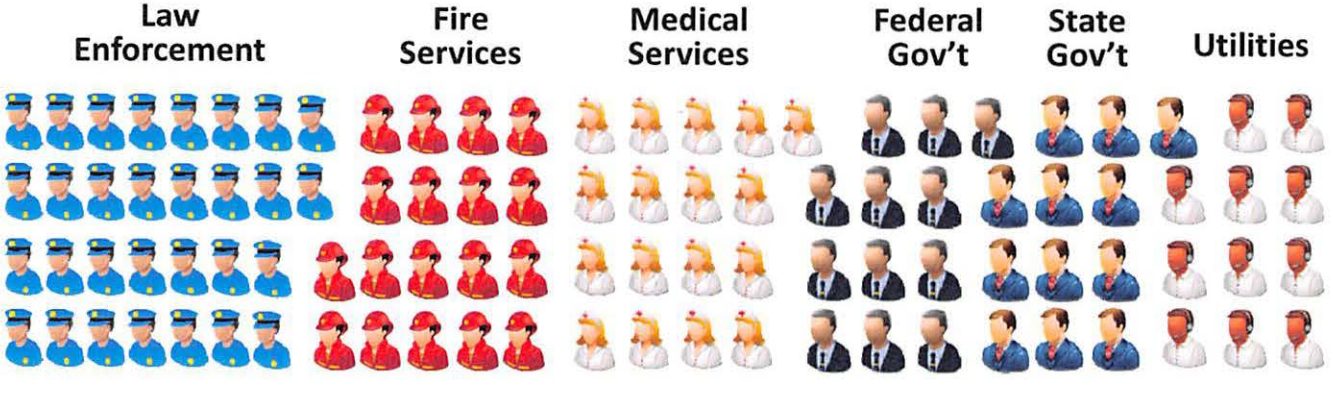
3,800,000
Square Miles

60,000
Public Safety Agencies

3,250
Counties

566
Tribes

...across the breadth of first response and public safety.



Coverage Challenges

PSBO
Public Safety Broadband Office

5% **68%** **27%**

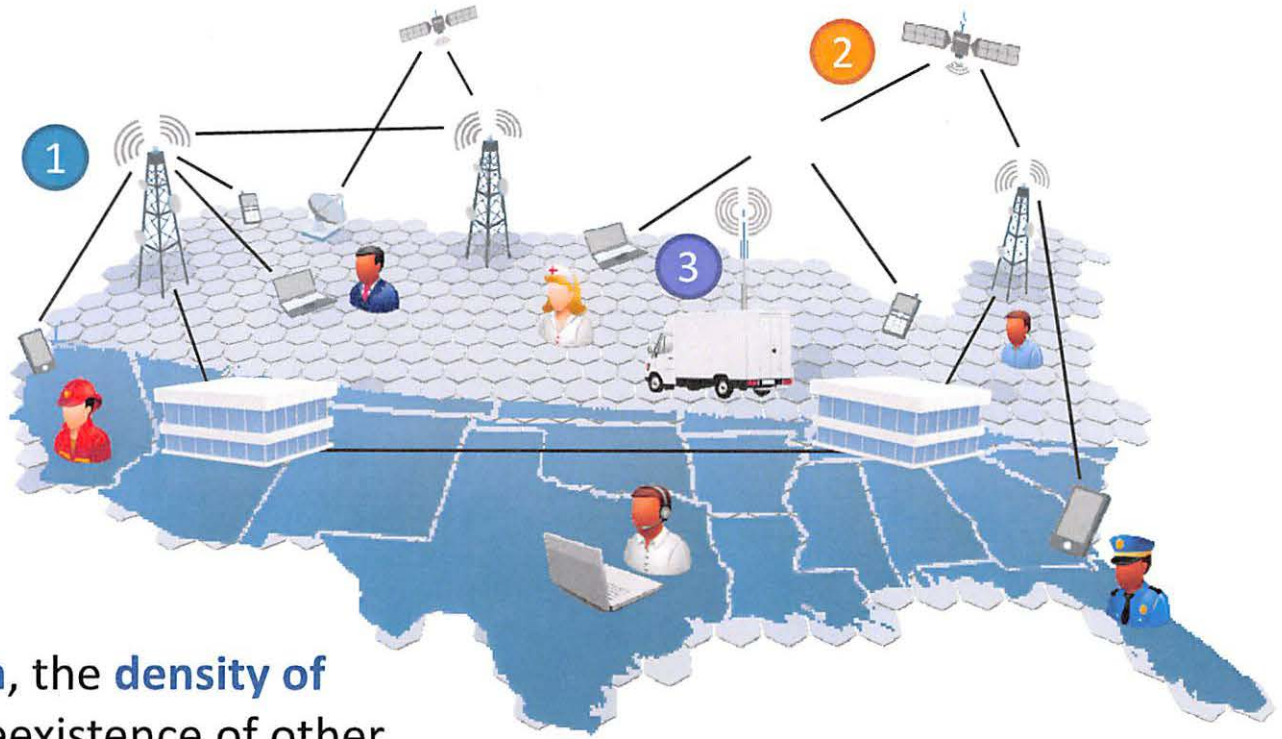
Dense Urban
Urban
Suburban

Rural

Wilderness

3 IN 1 COVERAGE APPROACH

1. Terrestrial towers and various small cells
2. Satellites
3. Deployables



The nature of the **terrain**, the **density of populations**, and the preexistence of other **infrastructure** are factors when determining coverage approaches.

Network Funding

- Planning and implementation funding is provided through **spectrum auctions**
- By law, the **network is to be self-sustaining** upon expending $7 billion

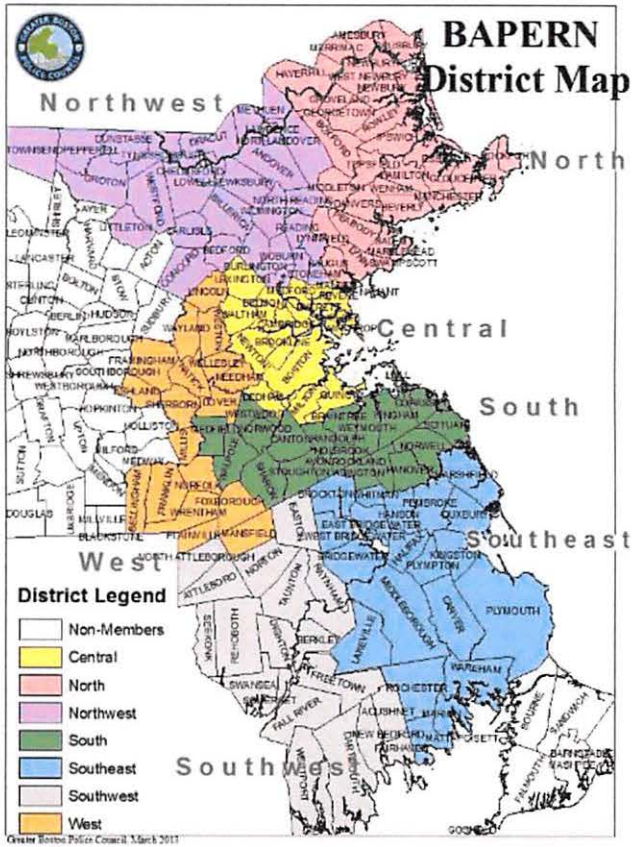
Phase	Funds	Purpose
Planning	$135 Million	Grants to assist States/Territories with planning & implementation Requires 20% match
	$7 Billion	$2 billion provided up front to start planning, designing and early implementation
Implementation		Remaining $5 billion to be provided from spectrum auctions; used to complete network build out
Sustainment	Ongoing	**Network User Fee:** Fee from each entity including public safety or secondary user that uses the Network **Lease Fee for Network Capacity:** Fee for agreement between the FirstNet and secondary user to permit secondary access **Lease Fee for Network Equipment/Infrastructure:** Fee for entity that seeks access or use of antennas, towers, etc. constructed or owned by FirstNet

Table Reference: DHS OEC Presentation, "Broadband Consultation Preparation Workshop," September 4, 2014, p. 22

LMR T-Band Giveback

PSBO
Public Safety Broadband Office

- Spectrum Act
  - **Requires the giveback of the T-Band spectrum** (470-512 MHz) that is used by public safety and business/industry users on a shared basis
  - T-Band licenses **have up to 9 years to plan the move** to other spectrum and then **2 more years to implement the plan**
  - **Proceeds** from the auction of the T-Band spectrum would be **used to pay for relocation costs**
- Impact on Public Safety
  - Many agencies, particularly in the **Boston metro area**, will be **significantly affected**
  - This will impact all current users of the **Boston Area Police Emergency Radio Network (BAPERN)**



Actions in this proceeding is not anticipated anytime soon as relocation need not occur until 2023

The FirstNet Consultation Process

PSBO
Public Safety Broadband Office

Initiation

- **Initial Consultation** *(Aligned with SLIGP Phase 1)*

Design

- **State RAN Design** *(Iterative design reviews)*
- **Asset Identification & Selection** *(Aligned with SLIGP Phase 2)*
- **State Operations** *(National template customized by each State)*

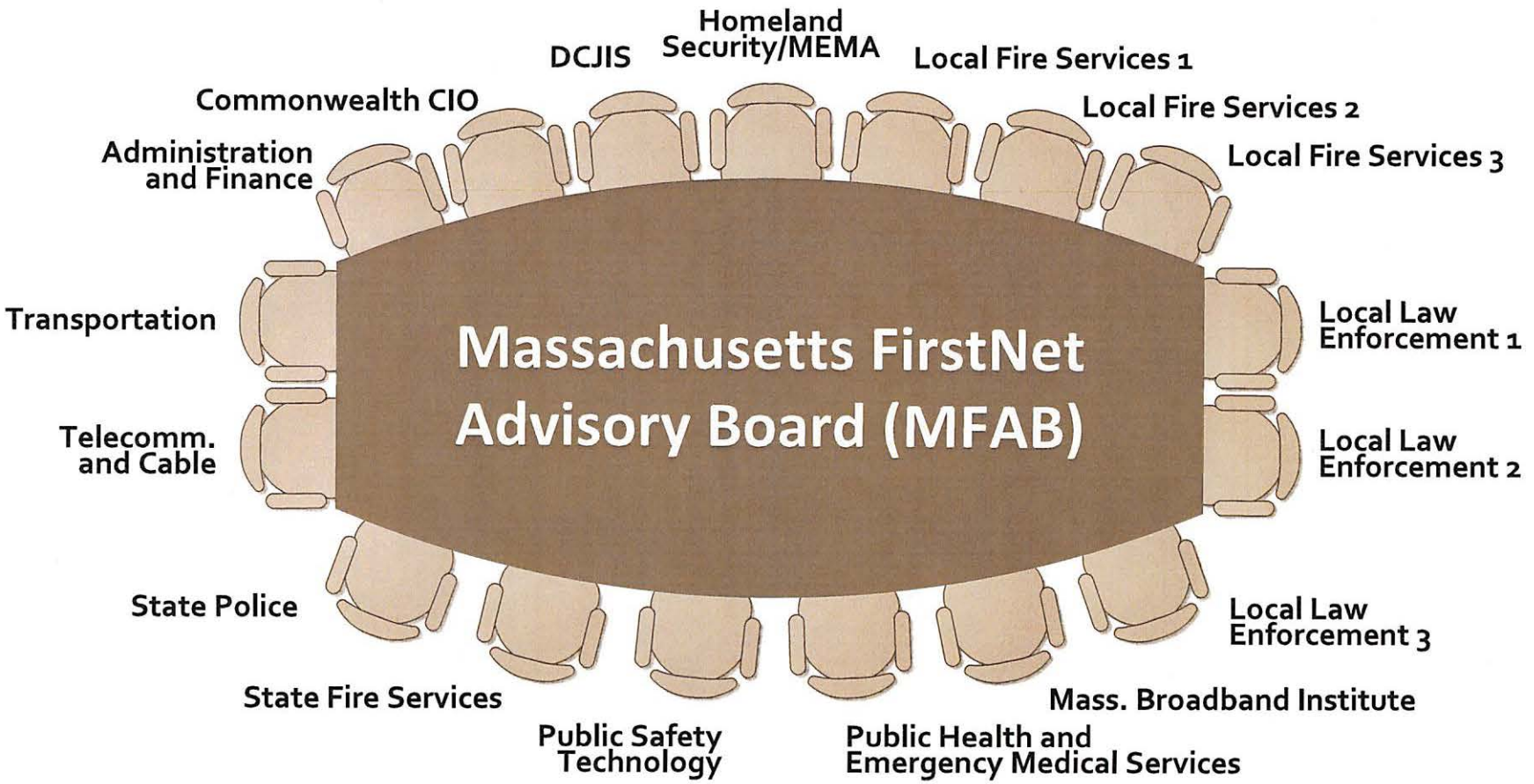
Approval

- **Final State Plan** *(Presented to Governor)*

Governance

PSBO
Public Safety Broadband Office

Chaired by US Wood, the Commonwealth SPOC, EOPSS has established a **multi-discipline advisory board** to help assist in planning the NPSBN implementation in Massachusetts. The Board has **17 members**.

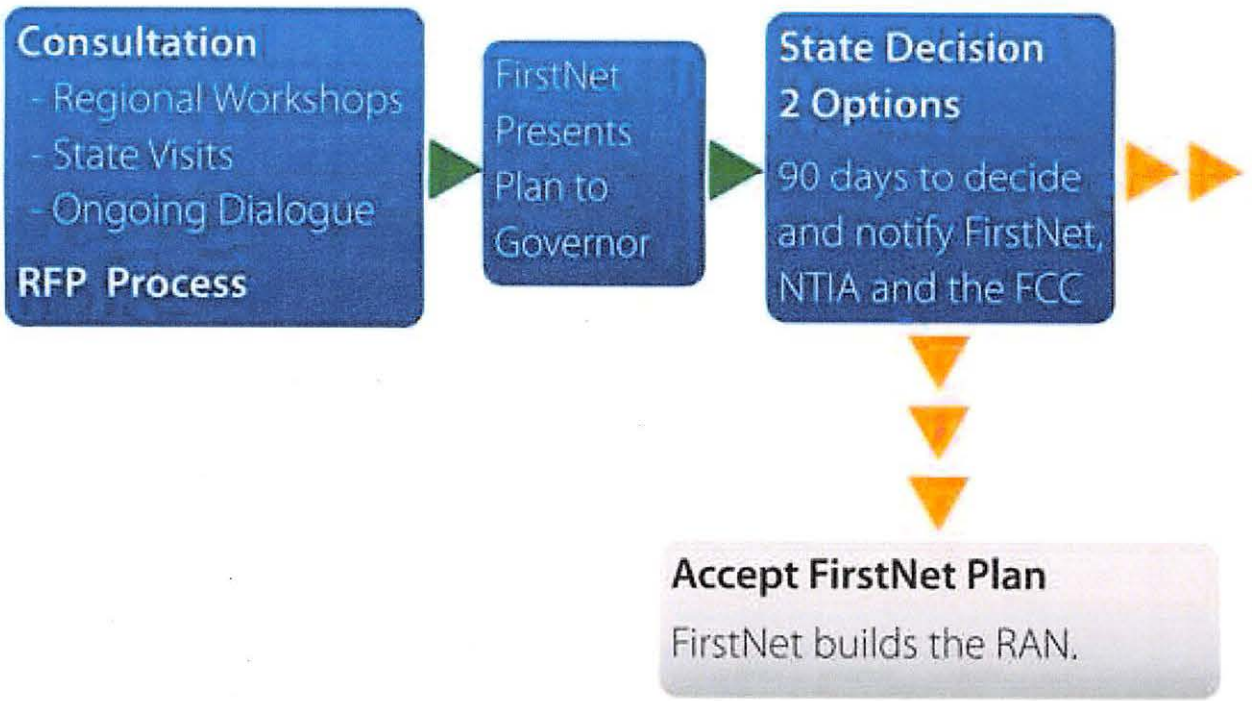


Opt In or Opt Out Decision

PSBO
Public Safety Broadband Office

State Decision Process

FirstNet will collaborate with states to develop and deliver a RAN plan that meets their needs.



Opt Out

State seeks approval to construct its own RAN

State Requirements:

- Submit alternate plan to FCC and gain FCC approval
- Complete an RFP
- May apply for grant funding from NTIA
- Must apply to NTIA to lease FirstNet spectrum
- State RAN must connect to the FirstNet Core
- State must pay user fees to FirstNet

Reference: FirstNet web site, "Consultation," http://firstnet.gov/consultation

Upcoming Activities

Massachusetts PSBO

- Conduct **FirstNet updates** with public safety stakeholder groups (Sept to Dec)
- Convene first **MFAB meeting** (October)
- Participate in **FirstNet Initial Consultation Meeting** (likely Jan-Feb 2015)
- **Collect data** to support FirstNet
- Identify Massachusetts specific **network requirements**
- Identify likely **users and coverage needs**

FirstNet

- Continue to **staff key positions** (including Region 1 liaison)
- Conduct **56 Initial Consultation Meetings**
- Continue development of **FirstNet core**
- Coordinate with PSCR on **testing Band 14 devices** and technologies
- Coordinate with NIST in advocating for inclusion of **Public Safety requirements in upcoming releases of LTE**
- Draft and **issue RFP(s)** for:
  - Comprehensive network
  - Network equipment and services

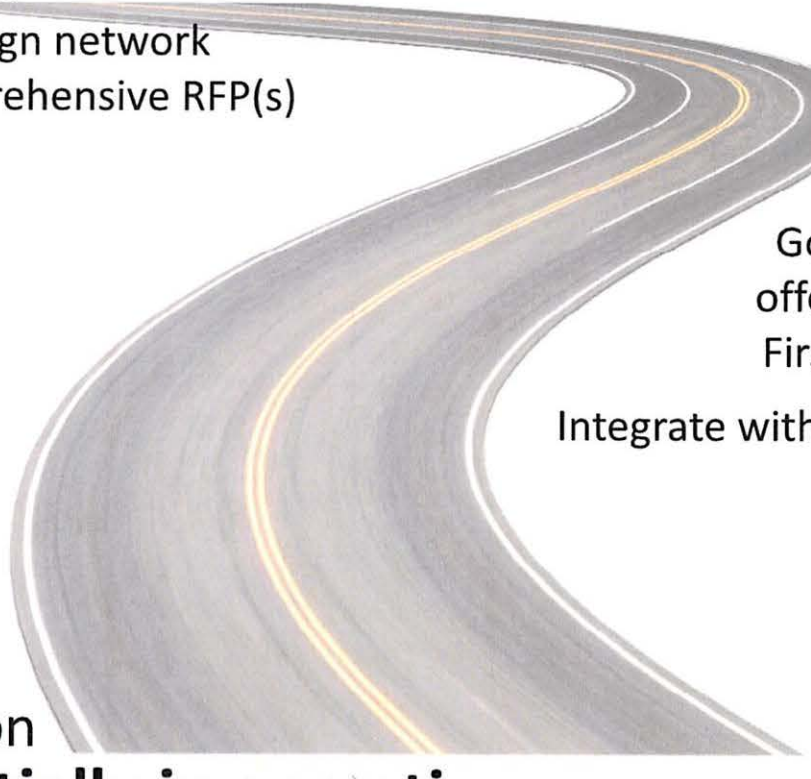
The Road to FirstNet

PSBO
Public Safety Broadband Office

2014-2016

Develop FirstNet Roadmap
Conduct outreach and awareness
Consult State consultations
Collect local data and design network
Develop and award comprehensive RFP(s)
Establish network core

FirstNet™



2016+

Governor reviews design offer and opts in or out of FirstNet RAN deployment

Integrate with Next Generation 9-1-1

2022

Last spectrum auction

Network substantially in operation

Information on the Web

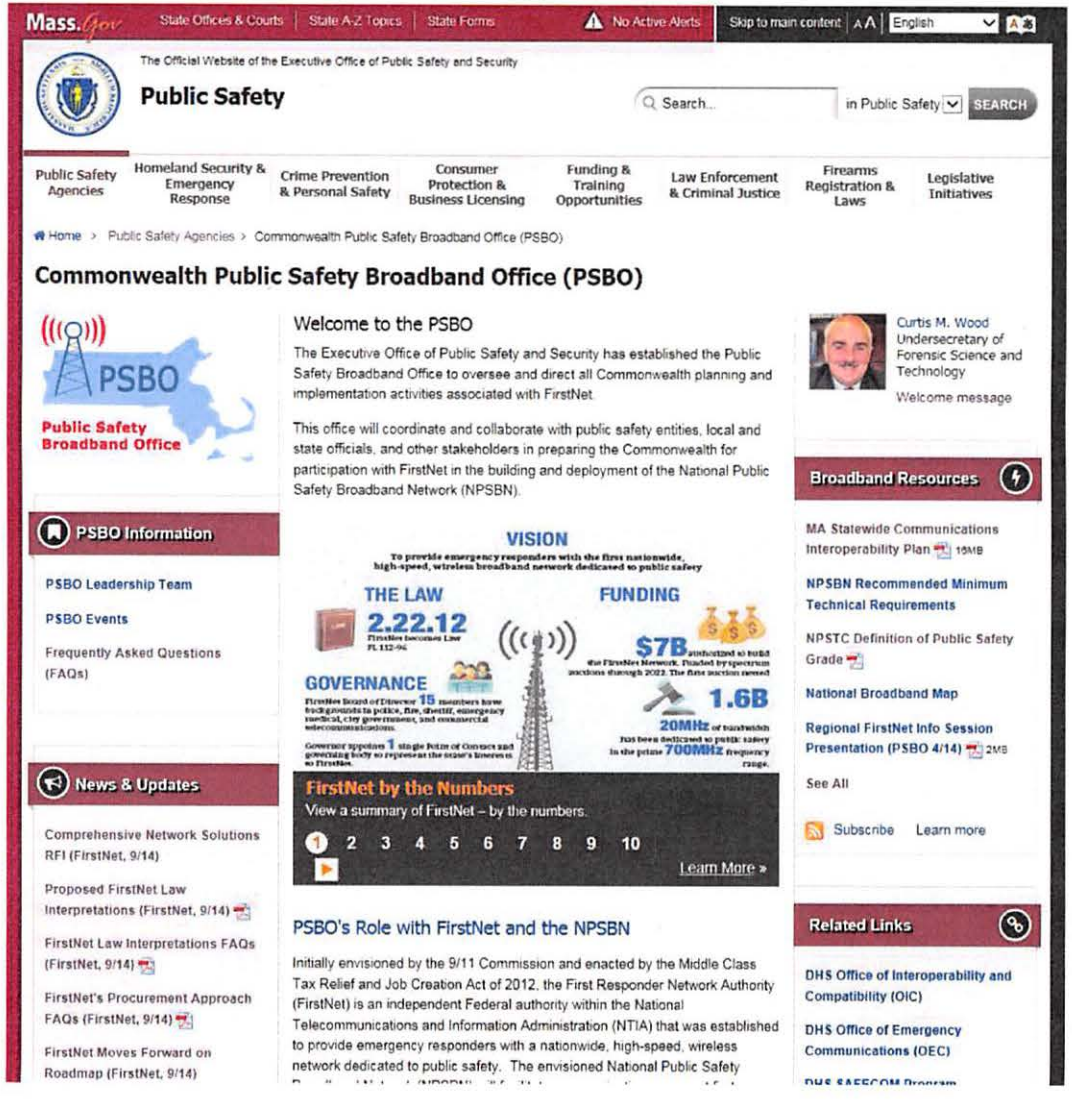
Public Safety Broadband Office

Follow updates at:

mass.gov/psbo

Contact us at:

psbo@state.ma.us



QUESTIONS?

Homeland Security
Office of Emergency Communications

October 2012

The Nationwide Public Safety Broadband Network
FAQs for Technical Personnel

The *Middle Class Tax Relief and Job Creation Act of 2012* (the Act), specifically Title VI entitled *Public Safety Communications and Electromagnetic Spectrum Auctions*, authorizes the deployment of the Nationwide Public Safety Broadband Network (NPSBN). The NPSBN will be a wireless, interoperable nationwide communications network that will allow the public safety community to securely and reliably gain and share information with their counterparts in other locations and agencies. The law also establishes the First Responder Network Authority (FirstNet) as an independent body that will govern the NPSBN; sets aside $7 billion for network development, deployment, and operation; and assigns the use of the 700 MHz D Block to FirstNet for the public safety community. As envisioned, the network will incorporate open, commercial wireless technology standards.

NATIONWIDE NETWORK OVERVIEW

What is FirstNet and what will it do? FirstNet is an independent authority within the Department of Commerce's National Telecommunications and Information Administration (NTIA) that will develop and design the network architecture and gather network requirements. FirstNet will also develop a plan for network deployment for each State; and work with State, local, and tribal governments to create an interoperable, nationwide network; and hold the spectrum license for the NPSBN. FirstNet is led by a Board composed of 15 members to include the Secretary of Homeland Security, the Attorney General, the Director of the Office of Management and Budget, and 12 experts—named by the Secretary of Commerce on August 20, 2012—each with experience in the public safety, technical, network, or financial fields. Per the Act, at least three Board members must represent the collective interests of States, local, tribes and territories. At least three Board members must have served as public safety professionals.

When will the NPSBN be deployed? Will deployments vary across the country? There is no defined timeline for the deployment of and transition to the NPSBN. FirstNet must first engage in a consultation process before crafting its nationwide network architecture, which will serve as the basis for requests for proposal (RFPs). FirstNet will provide each State with a proposed network build-out plan and State-specific funding allocation, as determined by NTIA. It is projected that deployments will vary by State based on existing infrastructure and geography; however, the way in which deployments will vary will not be known until FirstNet develops the plan for each State.

What entities are included in the term "public safety"? The Act defines a public safety entity as a provider of public safety services and defines public safety services and emergency response providers by the definitions included in the Communications Act of 1934 and the Homeland Security Act of 2002, respectively. Section 337(f) of the Communications Act defines public safety services as the sole or principal purpose of which is to "protect the safety of life, health, or property; that are provided by State or local government entities; or by nongovernmental organizations that are authorized by a governmental entity whose primary mission is the provision of such services; and that are not made commercially available to the public by the provider." Section

2 of the Homeland Security Act of 2002 defines emergency response providers as including "Federal, State, and local governmental and nongovernmental emergency public safety, fire, law enforcement, emergency response, emergency medical (including hospital emergency facilities), and related personnel, agencies, and authorities."

What is the timeline for my State to opt-out of the NPSBN? Within 90 days of a State receiving the FirstNet plan for the NPSBN, the governor of each State must decide whether to participate in the FirstNet recommended nationwide network build-out or opt-out and deploy a State-specific Radio Access Network (RAN) that connects to the nationwide network. If the governor elects to opt-out, the governor must develop and complete requests for proposals for the construction, maintenance, and operation of the RAN within 180 days of notifying FirstNet, NTIA, and the Federal Communications Commission (FCC) of its decision. The State must submit to the FCC an alternative plan for RAN construction and operation that meets the minimum technical interoperability requirements developed by the Technical Advisory Board for First Responder Interoperability and interoperates with the NPSBN. The State must also apply for spectrum through the NTIA and pay user fees for the shared elements of the network core. The State may also apply to NTIA for a grant to build its portion of the RAN. If the FCC disapproves the State's plan, network build-out within the State will proceed under the FirstNet plan.

COMMUNICATIONS TECHNOLOGY

What is the difference between Land Mobile Radio (LMR) and broadband networks, in particular Long Term Evolution (LTE) networks? LMR is a terrestrially-based wireless narrowband communications system commonly used by Federal, State, and local emergency responders, public works companies, and even the military to support voice and low-speed data communications. LTE is the next evolution of commercial broadband wireless communications technology, which was developed to address the demand for high-speed, data intensive communications, such as situational awareness, advanced analytics, database queries, photographs, and video applications. LTE promises higher data transmission rates and capacity than the current 3rd generation (3G) commercial service offerings. Unlike LMR, LTE does not currently support mission critical public safety grade voice communications; priority access for public safety users; or have the push-to-talk, multi-broadcast, or "talk around" capabilities required by the public safety community.

FirstNet has yet to determine the nationwide network architecture and technical requirements; therefore, many questions are yet to be defined:

- How will the NPSBN intersect/interact with the Commercial Mobile Alert System (CMAS)?
- What is the ratio of sites needed to provide data coverage (in comparison to the tower sites needed for voice coverage)?
- How will the NPSBN be secured? Will the same level of security standards be required nationwide?
- What is the current stage of development for broadband devices? When will the devices be available for public safety use?
- Who will provide and maintain devices for the network? How and where will user agencies acquire these devices? What options will we have? Will there be cooperative purchasing opportunities? How do we participate?
- How will individual jurisdictions maintain and provide access to their applications and data, while restricting access to outside users?
- What capabilities can we expect if we indeed roam to a commercial network?

Will broadband replace LMR? For the foreseeable future, broadband will supplement, but not replace LMR. At this time, the available broadband technologies do not adequately support voice communications capabilities as required by public safety personnel; therefore, it will be necessary to continue to invest in LMR networks as an integral part of first responder communications. Voice over LTE (VoLTE) standards are under development and emerging, and in time will provide standardized voice capabilities as an adjunct to public safety LMR services. These VoLTE services may be similar to telephony services and capabilities now offered on commercial 3G systems. While VoLTE is expected to support standardized voice traffic over LTE, the way in which critical LMR voice capabilities can be delivered in the NPSBN in the future will only be determined once the architecture is defined; technical standards are drafted and accepted; devices are built, tested, and certified; and the public safety community begins the migration to these new services and capabilities.

Will broadband data access be ubiquitous across the country? Depending on many technical factors and the deployment methodology selected, the final architecture of the NPSBN should provide coverage for public safety operations in most areas. However, achieving universal coverage immediately may not be technically or financially possible. The Act includes direction to leverage existing assets and capabilities of government and commercial entities, which may provide and enhance robust network coverage.

How will the NPSBN be different than Project 25 (P25)? The envisioned NPSBN will embrace commercial LTE technology, which is the next evolutionary step in the Third Generation Partnership Program (3GPP) technical standard for Global System for Mobile Communications. LTE builds upon the previous generations of cellular communications technology and is being implemented worldwide by many commercial wireless carriers. Project 25 is a public safety communications standard dedicated to ensuring voice interoperability for public safety LMR communications. It is designed to provide a common operating platform for public safety LMR communications. The envisioned NPSBN will have a single, nationwide network architecture, in contrast to the multiple P25 and non-P25 public safety LMR systems that are deployed consistent with local, county, State, and Federal jurisdictions.

Will the NPSBN make all public safety agencies interoperable? On their own, the standardized technological attributes of the NPSBN will not make an agency interoperable. SAFECOM developed an Interoperability Continuum, which is a guiding framework for interoperability planning. The Continuum identifies governance, standard operating procedures, technology, training and exercise, and usage as critical elements of interoperable solutions for both LMR and broadband communications. The creation of standard operating procedures that dictate the use and capabilities of the network will be of significant importance to ensure both operability and interoperability of the NPSBN.

Who has priority on my State's system when outside users come into our State? Is there a standard priority system? The nationwide network architecture and technical requirements have not yet been established. FirstNet, in consultation with the States, localities, tribes, and territories will determine how user priorities will be established throughout the network.

How will the commercial wireless companies interact with States? Will we have public safety priority? Under the law, FirstNet is to enter into agreements, as appropriate, with commercial network providers for public safety communications roaming and prioritization on commercial networks during emergencies. The FCC may adopt rules to improve the ability of public safety network users to roam onto commercial networks and gain priority access to commercial networks in an emergency.

Will there be a standard for hardening the system to public safety standards? Who will approve and pay for that? The nationwide network architecture and technical requirements, specific to robustness and resiliency of systems, have not yet been defined. FirstNet, in consultation with the States, localities, tribes, and territories will determine the appropriate hardening and resiliency needs of the network.

How will other States' networks identify and allow access for my State's equipment? The public safety broadband network will be based on a single, nationwide network architecture and will utilize a shared core, which will include authentication of end user devices.

A commercial vendor approached me to sell LTE infrastructure, do I need to purchase this equipment now? No, you do not need to purchase, and in some cases should not purchase, LTE infrastructure and devices from commercial vendors at this time. Because the network architecture has not been designed or deployed, it is impossible to know what infrastructure and devices each State, region, or jurisdiction may need. Any entity making such purchases now risks buying infrastructure and equipment that may not be interoperable with the future NPSBN.

GOVERNANCE

Who is responsible for coordinating all the State and local assets and working with the FirstNet Board? The Act requires each State to designate a single State officer or governmental body that will be the point of contact for consultations with FirstNet. States must also designate a single officer or governmental body to coordinate the implementation of any grant funding the State receives under the State and Local

Implementation Grant Program. These decisions will be made by each State's governor.

FirstNet has yet to determine the nationwide network architecture and technical requirements; therefore, many questions are yet to be defined:

- If the entire State is not covered by the NPSBN, how will coverage gaps be addressed?
- How will the NPSBN standard operating procedures be developed?
- What basic applications/access will the network and operators/providers give or be required to provide to visiting authorized users entering their jurisdictions?
- Who will be responsible for user equipment applications development allowing access to the various information sources?

Many States have a Statewide Interoperability Coordinator and a Statewide Interoperability Governing Body to implement the statewide plans for enhancing interoperable communications. These individuals and structures should be leveraged to support NPSBN implementation.

How does a State that chooses to opt-out of the FirstNet deployment obtain spectrum? The Act allocates 20 MHz of public safety broadband spectrum to FirstNet and FirstNet will hold the spectrum license for the NPSBN. If a State has received approval for its alternate plan from the FCC as outlined above, it may seek authority to lease the public safety broadband spectrum from NTIA. To receive approval, the State must demonstrate that it has the technical capabilities to operate and the funding to support the State RAN, the ability to maintain ongoing interoperability with the NPSBN, and the ability to complete the project within its specified timelines.

FUNDING

How will the network be funded? The Act authorizes the creation of the Public Safety Trust Fund (PSTF), in which revenue collected from the spectrum auctions will be deposited, to fund FirstNet's activities as it designs, deploys, operates, and maintains the network. FirstNet also will collect user fees and fees from leasing its spectrum, and is also authorized to accept other financing, such as through grants and gifts.

Is grant funding available to develop a network in my State? Will this funding pay for planning only, or also for equipment or services? While grant programs and funding have been identified, currently there is no structure to apply for and receive funding. In the future, NTIA will provide guidance regarding how to apply for funds from the State and Local Implementation Grant Program, define the scope of eligible grant activities, and prioritize grants for activities that ensure both rural and urban coverage.

Should I continue to spend money on public safety communications systems? Public safety's use of LMR systems will continue for the foreseeable future as there is no defined timeframe when LTE broadband technology may provide the same level of mission-critical voice services that are available today. Therefore, it will be necessary to continue investments for existing and new LMR voice systems, while allocating new funding to the development and deployment of the NPSBN.

How will costs associated with roaming to commercial networks be dealt with? Under the law, FirstNet is to enter into agreements, as appropriate, with commercial network providers for public safety roaming and prioritization on commercial networks during emergencies. The FCC may adopt rules to improve the ability of public safety networks to roam onto commercial networks and gain priority access to commercial networks in an emergency if:

- Public safety entity equipment is technically compatible with the commercial network;
- The commercial network is reasonably compensated for use; and
- Such access does not preempt or otherwise terminate or degrade all existing voice conversations or data sessions.

FOR ADDITIONAL INFORMATION

Please contact OEC@dhs.gov or visit www.dhs.gov (keyword OEC).

Homeland Security
Office of Emergency Communications

October 2012

The Nationwide Public Safety Broadband Network
FAQs for Policymakers

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NATIONWIDE NETWORK OVERVIEW

What is the purpose of the NPSBN? As envisioned, the network will allow first responders to send and receive voice, video, and other information in real time; enable communications across agencies and jurisdictions; and improve the safety and effectiveness of operations by enhancing the way public safety personnel are notified about, gain information on, and respond to emergencies and natural disasters.

What is the history of the NPSBN? Following the terrorist attacks on September 11, 2001, the 9/11 Commission was established to review the incident and make recommendations to the President that would mitigate the possibility of such attacks occurring again. One of the 9/11 Commission's recommendations was the establishment of a nationwide, interoperable public safety communications network envisioned to resolve communications challenges faced by emergency responders. For the past decade, public safety worked with State and local government officials, the Federal government, and Members of Congress to amass support for the creation of the nationwide network. On February 22, 2012, President Obama signed the Act into law, of which Title VI includes provisions to fund and govern the NPSBN.

What is FirstNet and what will it do? FirstNet is an independent authority within the Department of Commerce's National Telecommunications and Information Administration (NTIA) that will develop and design the network architecture and gather network requirements. FirstNet will also develop a plan for network deployment for each State; and work with State, local, and tribal governments to create an interoperable, nationwide network; and hold the spectrum license for the NPSBN. FirstNet is led by a Board composed of 15 members including the Secretary of Homeland Security, the Attorney General, the Director of the Office of Management and Budget, and 12 experts—named by the Secretary of Commerce on August 20, 2012—each with experience in the public safety, technical, network, or financial fields. Per the Act, at least three Board members must represent the collective interests of States, local, tribes and territories. Additionally, at least three Board members must have served as public safety professionals.

When will the NPSBN be deployed? There is no defined timeline for the deployment of and transition to the NPSBN. FirstNet must first engage in a consultation process before crafting its nationwide network architecture, which will serve as the basis for

requests for proposal (RFPs). FirstNet will provide each State with a proposed network build-out plan and State-specific funding allocation, as determined by NTIA.

Will deployments vary across the country? It is projected that deployments will vary by State based on existing infrastructure and geography; however, the way in which deployments will vary will not be known until FirstNet develops the plan for each State.

What entities are included in the term "public safety"? The Act defines a public safety entity as a provider of public safety services and defines public safety services and emergency response providers by the definitions included in the Communications Act of 1934 and the Homeland Security Act of 2002, respectively. Section 337(f) of the Communications Act defines public safety services as the sole or principal purpose of which is to "protect the safety of life, health, or property; that are provided by State or local government entities; or by nongovernmental organizations that are authorized by a governmental entity whose primary mission is the provision of such services; and that are not made commercially available to the public by the provider." Section 2 of the Homeland Security Act of 2002 defines emergency response providers as including "Federal, State, and local governmental and nongovernmental emergency public safety, fire, law enforcement, emergency response, emergency medical (including hospital emergency facilities), and related personnel, agencies, and authorities."

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A commercial vendor has offered to sell Long Term Evolution (LTE) infrastructure to my agency. Do I need to purchase this equipment now? No, you do not need to purchase, and in some cases should not purchase, LTE infrastructure and devices from commercial vendors at this time. Because the network architecture has not been designed or deployed, it is impossible to know what infrastructure and devices each State, region, or jurisdiction may need. Any entity making such purchases now risks buying infrastructure and equipment that may not be interoperable with the future NPSBN.

COMMUNICATIONS TECHNOLOGY

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What is the difference between public safety and commercial networks? Public safety voice and data networks are designed to provide emergency responders with dedicated communications networks. Public safety

networks require higher degrees of robustness, resiliency, redundancy, and security than commonly found in commercial networks. Public safety networks are built to provide equal coverage across broad areas, handle one-to-many communications, and data distribution wherever the incident or event occurs. Commercial communications networks provide primarily one-to-one communications services to private consumers and are designed to generate the largest possible economic return for the commercial provider.

While current commercial solutions are used to augment public safety networks by providing non-mission critical services, many commercial mobile data solutions are not interoperable with public safety data systems. In addition, commercial mobile data have limited bandwidth and capacity, are not built to public safety standards, do not provide priority for first responders in the event of an emergency, and may become inaccessible during a significant emergency event.

Will broadband replace LMR? For the foreseeable future, broadband will supplement, but not replace LMR. At this time, the available broadband technologies do not adequately support voice communications capabilities as required by public safety personnel; therefore, it will be necessary to continue to invest in LMR networks as an integral part of first responder communications. Voice over LTE (VoLTE) standards are under development and emerging, and in time may provide standardized voice capabilities as an adjunct to public safety LMR services. These VoLTE services will be similar to telephony services and capabilities now offered on commercial 3G systems. While VoLTE is expected to support standardized voice traffic over LTE, the way in which critical LMR voice capabilities can be delivered in the NPSBN in the future will only be determined once the architecture is defined; technical standards are drafted and accepted; devices are built, tested, and certified; and the public safety community begins the migration to these new services and capabilities.

GOVERNANCE

Who is responsible for coordinating all the State and local assets and working with the FirstNet Board? The Act requires each State to designate a single State officer or governmental body that will be the point of contact for consultations with FirstNet. States must also designate a single officer or governmental body to coordinate the implementation of any grant funding the State receives under the State and Local Implementation Grant Program. These decisions will be made by each State's governor. Many States have a Statewide Interoperability Coordinator and a Statewide Interoperability Governing Body to implement the statewide plans for enhancing interoperable communications. These individuals and structures should be leveraged to support NPSBN implementation.

FUNDING

How will the network be funded? The Act authorizes the creation of the Public Safety Trust Fund (PSTF), in which revenue collected from the spectrum auctions will be deposited, to fund FirstNet's activities as it designs, deploys, operates, and maintains the network. FirstNet also will collect user fees and fees from leasing its spectrum, and is also authorized to accept other financing, such as through grants and gifts.

Will funding of the network raise taxes in my State? Per the legislation, funding for the network will be generated by spectrum auctions through Fiscal Year 2022, not through tax revenue. Sustainment of the network is envisioned to come from user fees and potential leases of network assets to private sector providers for secondary use.

Is grant funding available to develop a network in my State? Will this funding pay for planning only, or also for equipment or services? While grant programs and funding have been identified, currently there is no structure to apply for and receive funding. In the future, NTIA will provide guidance regarding how to apply for funds from the State and Local Implementation Grant Program, define the scope of eligible grant activities, and prioritize grants for activities that ensure both rural and urban network coverage.

Does the size of my State matter or will most of the funding go to States with larger populations? If the State has many tribal entities, does that impact how much money a State may get? Distribution of grant funding for State and local planning for broadband has not yet been determined. The Act contains no provisions that indicate certain areas will receive more funding than other regions of the country. At this time it is also undetermined how the prevalence of tribal entities in a State will impact funding.

How much will the network cost to develop, deploy, and maintain? For what percentage of this cost will States and local areas be responsible? At this time, it is unknown how much it will cost to develop, deploy, and maintain the NPSBN; thus, there is no specific information available to indicate what percentages may be attributable to State or local entities. Any qualified entity receiving support through the State and Local Implementation Grant Program and State construction grant funding will be required to provide a minimum of a 20 percent match, unless a waiver is obtained.

Should I continue to spend money on public safety communications systems? Public safety's use of LMR systems will continue for the foreseeable future as there is no defined timeframe when LTE broadband technology may provide the same level of mission-critical voice services that are available today. Therefore, it will be necessary to continue investments for existing and new LMR voice systems, while allocating new funding to the development and deployment of the NPSBN.

Can my State generate revenue from the NPSBN if we opt-out? No. If a State chooses to opt-out it is only opting-out of the provision and construction of the RAN portion of the envisioned network. The Act specifies that if a State chooses to opt-out and then satisfies all of the conditions to construct a State-provided RAN using grant funding from FirstNet, any money or fees collected must be used to support the constructed network.

IMPACT AND THE FUTURE OF THE NETWORK

What do I need to do to promote the development and deployment of the NPSBN? The network build-out will require continuing education and a high level of commitment at all levels of government and across public safety disciplines to understand network requirements and identify existing resources and assets. It will also be necessary to develop and maintain strategic partnerships with a variety of stakeholder agencies and organizations, and design effective policy and governance structures. Stakeholders must engage in planning and coordination at the nationwide, statewide, regional, and tactical levels; foster partnerships between disciplines and jurisdictions; and develop policies and plans for new and emerging emergency communications technologies.

Has such a deployment been done successfully elsewhere? While there are regions that have received grant funding and invested their own resources to develop a network using broadband technology, no such nationwide public safety network exists in the US today. Further, while no other nation has developed a broadband network for public safety, nation states throughout the world, primarily in Europe and Asia, have built TETRA and TETRAPOL voice and data systems for emergency responders. In North America, the National Law Enforcement Telecommunications System (NLETS) network provides law enforcement and public safety personnel in the US and Canada with the ability to exchange information and other data. Other Federal networks, such as the Federal Bureau of Investigation's National Crime Information Center, Automated Fingerprint Identification System, and State Criminal Justice Information Systems, are accessible by authorized law enforcement entities at all levels of government.

FOR ADDITIONAL INFORMATION

Please contact OEC@dhs.gov or visit www.dhs.gov (keyword OEC).

Homeland Security
Office of Emergency Communications

October 2012

The Impact of the Nationwide Public Safety Broadband Network for Operational Personnel

The continued evolution of commercial wireless data services **and rapid development of new technologies and applications has led to on-demand access to information, with increased speeds, and with greater accessibility throughout the country**. However, these advances **have largely bypassed emergency responders**. More than 55,000 public safety agencies across the United States rely on individual Land Mobile Radio (LMR) networks, which support mission critical voice communications.

Currently, first responders largely augment LMR capabilities with commercial cellular service and/or agency-owned legacy data systems that provide relatively slow speed mobile data capabilities. Some agencies have also created mobile data systems using a variety of technologies to supplement legacy, agency-owned systems with newer offerings such as WiFi, WIMAX, and 4.9GHz broadband systems. These systems provide public safety personnel with capabilities to perform functions such as dispatch and Computer Aided Dispatch (CAD) system inquiries, various National Crime Information Center (NCIC) and National and State Criminal Justice Information System (CJIS) queries, dispatcher-to-unit and unit-to-unit messaging, and the transmission of low resolution images. Some networks also support records management systems (RMS) inquiries and in-field reporting capabilities for law enforcement, fire, and EMS personnel. Mobile data systems also provide an alternative communications capability and, in many cases, interoperability pathways for agencies sharing larger systems or using commercial offerings.

The February 2012 passage of the Middle Class Tax Relief and Job Creation Act of 2012 enables the public safety community to fully leverage advancements in broadband technology, specifically Long Term Evolution (LTE), to develop and deploy an interoperable Nationwide Public Safety Broadband Network (NPSBN). LTE is the next evolution of commercial wireless communications technology developed to address the increasing demand for data communications. As of mid-August 2012, a total of 98 LTE networks were deployed in 49 countries with an additional 342 networks planned or under development. LTE promises higher data transmission rates and capacity than other current commercial service offerings, allowing for high-speed access to information. Commercial LTE does not currently support public safety grade mission critical voice communications; priority access for public safety users; or push-to-talk, multi-broadcast, or "talk around" capabilities required by the public safety community. In addition, commercial LTE may not have the capacity to be accessible during an event or emergency.

THE NPSBN

The NPSBN will be a dedicated, wireless, interoperable, communications network that allows public safety to receive and share critical information with their counterparts across the Nation. The First Responder Network Authority (FirstNet) is an independent authority within the Department of Commerce's National Telecommunications and Information Administration that will hold the spectrum license for the NPSBN; specify the network requirements; develop a plan for network deployment for each State; and work with State, local, and tribal governments to create an interoperable, nationwide network. The FirstNet Board is composed of 15 members to include the Secretary of Homeland Security, the Attorney General of the United States, the Director of the Office of Management and Budget, and 12 experts with experience in the public safety, technical, network, or financial fields.

The NPSBN will embrace open commercial technology standards, possess built-in backup capabilities, and provide highly-available public safety-grade access to emergency response personnel. The network will provide emergency responders with the ability to have high speed access and exchange information in various forms, including pictures, graphics, video, and non-mission critical voice applications. Public safety will operate on a single network with a single Public Land Mobile Network ID, include nationally consistent technology and standards, and leverage uniform agreements with national commercial carriers. It is expected that First responders will not encounter roaming issues when traveling outside of one's home jurisdiction, as they will still be operating on the dedicated public safety network. First responders will only roam on commercial networks when outside of the NPSBN coverage area or if required due to network congestion and lack of capacity on the NPSBN.

Public safety will continue to rely on LMR and legacy communications systems for mission critical voice communications as the NPSBN evolves; therefore, LMR voice capabilities will be used by first responders for the foreseeable future. Investments in LMR infrastructure, subscriber devices, and overall system maintenance will continue for the foreseeable future, and agencies must begin, or continue, to implement emerging wireless broadband services and applications. Once the network is deployed public safety organizations may begin transitioning from using commercial broadband services to the dedicated NPSBN.

THE NPSBN AND THE FUTURE OF PUBLIC SAFETY OPERATIONS

The NPSBN will provide the emergency response community with mission critical voice, data, and video capabilities and access to real-time information. As a result, first responders will be able to communicate across agency and jurisdictional boundaries, have access to more effective emergency communications on a nationwide scale. LTE will provide the public safety community with reliable, redundant, and resilient technology and provide the potential benefit of purchasing lower cost equipment manufactured on a global scale. LTE systems are scalable, allowing system operators to tailor their network deployment strategies and add spectrum to meet the needs of available resources and/or a particular technology.

As the Nation's public safety entities increasingly employ broadband technologies, it is important to consider how emergency responders will use the nationwide network. While there currently is no timeframe for when the NPSBN will be fully operational, telephony voice and adjunct voice services will be deployed and available for first responder use prior to mission critical voice services. The future network will also provide services such as:

- Remote CAD access
- Geo-spatial applications
- Telemedicine for EMS
- Next generation 9-1-1 (NG9-1-1)
- Real-time resources tracking
- Enhanced field reporting.

The network will allow first responders to securely and reliably gain situational awareness, share information with their counterparts in other locations and agencies, conduct safer and more effective operations by enhancing the effectiveness of emergency communications throughout the Nation, and engage in response operations on a nationwide scale, all while operating on a single network.

The Benefits of Using LTE for Public Safety Communications:

√ Access to technological advances to include mobile data and video capabilities
√ Leverage potential cost savings by providing access to an increasing number of providers, manufacturers, and devices (handsets, mobile terminals and connective devices)
√ Network scalability will allow operators to tailor network deployment strategies and spectrum needs.
√ Use new and enhanced information sources, applications, and capabilities to conduct operations faster, more efficiently, and in greater detail. Applications include: remote CAD access, geo-spatial applications for personnel tracking, telemedicine, and NG9-1-1
√ Leverage experience of worldwide LTE deployments

FOR ADDITIONAL INFORMATION

Please contact OEC@dhs.gov or visit www.dhs.gov (keyword OEC).