FirstNet Update for Massachusetts Stakeholder Groups

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

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

Dept of Commerce establishes FirstNet Board

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
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

**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

FirstNet by the Numbers

**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 10x faster than 3G wireless service.
FirstNet Coverage

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

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

- **Law Enforcement**
- **Fire Services**
- **Medical Services**
- **Federal Gov’t**
- **State Gov’t**
- **Utilities**

3,800,000 Square Miles

60,000 Public Safety Agencies

3,250 Counties

566 Tribes
Coverage Challenges

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

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<th>Phase</th>
<th>Funds</th>
<th>Purpose</th>
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<tr>
<td>Planning</td>
<td>$135 Million</td>
<td>Grants to assist States/Territories with planning &amp; implementation Requires 20% match</td>
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<tr>
<td>Implementation</td>
<td>$7 Billion</td>
<td>$2 billion provided up front to start planning, designing and early implementation</td>
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| 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 |
LMR T-Band Giveback

- **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

Initiation

- Initial Consultation \textit{(Aligned with SLIGP Phase 1)}

Design

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

Approval

- Final State Plan \textit{(Presented to Governor)}

PSAC, Tribal Working Group, NTIA SLIGP Monitoring/Support, ECPC Federal Agency Inputs
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

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

- **Consultation**
  - Regional Workshops
  - State Visits
  - Ongoing Dialogue

- **RFP Process**

  - **FirstNet Presents Plan to Governor**

  - **State Decision 2 Options**
    - 90 days to decide and notify FirstNet, NTIA and the FCC

  - **Accept FirstNet Plan**
    - FirstNet builds the RAN.

- **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

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

**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

**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

Follow updates at: mass.gov/psbo

Contact us at: psbo@state.ma.us