National 700 MHz Public Safety Wireless Broadband Network Requirements

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NPSTC is a federation of organizations whose mission is to improve public safety communications and interoperability through collaborative leadership.
Representative Uses

• It’s all about moving data
  – Medical/EMS: disease database, emergency treatment
  – Fire fighting: blueprints, hazardous material database, etc.
  – Robotics: automated inspection, intelligence gathering
  – Environmental monitoring
  – Collaboration of resources
  – Surveillance
  – Traffic management
  – Law enforcement database access
Operational Requirements

1. Internet access – wired to wireless to wired
2. Connectivity between networks – broadband/private land mobile radio/satellite
3. VPN access to home or other specialized data servers
4. SMS/MMS messaging
5. Location information (mobile)
6. LMR gateway(s)
Operational Requirements, cont.

7. Multiple modes – voice, data, video
8. Broadband dynamic backbone for connectivity
9. Access to Public Switched Telephone Network (PSTN)
10. Dynamic virtual network creation
11. Security/Authentication/Encryption
12. Survivability and Reliability of Network
13. Service in remote areas

Note: Broadband is not a replacement for traditional Private Land Mobile Radio (PLMR) systems
Technical Requirements

1. Wireless devices meet LTE standards
2. Network-wide IP assignments
3. Dynamic bandwidth assignments
4. Equipment authentication across networks
5. Survivability of Network(s)
6. User authentication
7. Handoff between networks
8. Access to applications
   a. Mapping
   b. Documents
   c. Information
Governance Issues

1. Network standards are national
2. Public/Private partnerships permitted
3. Public safety priority access on shared spectrum networks
4. Bandwidth management based on priority of communications
FCC/Congressional Actions – Wireless

- FCC issues rules for national/local/ build-out and issues waivers in the interim
- FCC allows PSBL to sublicense local/regional entities
- Congress/FCC makes D-Block available to public safety
- Congress/FCC allows national and local public/private partnerships
- Congress/FCC allows network access to all responders including critical infrastructure, federal, and others as defined by regional network administrators
FCC/Congressional Actions – General

• Funding
  – Access to Universal Service Fund
  – Grants for broadband development
  – Spectrum auction proceeds
  – Tax benefits for carriers who support public safety

• Resource sharing
  – Access to federal resources
    • Networks
    • Satellites
    • Mobile assets
    • Spectrum