Located at the Department of Commerce Boulder Labs in Colorado

The PSCR Program is a joint effort between

NIST’s Office of Law Enforcement Standards (OLES)

and

NTIA’s Institute for Telecommunication Sciences (ITS)
Public Safety Interoperability
• 700 MHz D Block spectrum will be reallocated to public safety
• The First Responder Network Authority (FirstNet) will be established by National Telecommunications Information Administration (NTIA)
• FirstNet is required to establish a nationwide public safety broadband network to be based on a single, national network architecture
• The Federal Communications Commission (FCC) will reallocate and grant a license for the use of the 700 MHz D block spectrum and existing public safety broadband spectrum to FirstNet
FirstNet Charter

• FirstNet is congressionally mandated to establish a nationwide wireless broadband network that enables police, firefighters, emergency medical technicians, and other first responders to effectively communicate with one another during emergencies and to use new technology to improve response time, keep communities safe, and save lives.

• Established as an independent authority within NTIA
• Headed by a Board
• Holds the single public safety 700 MHz wireless broadband license
• Takes all actions necessary to ensure the building, deployment, and operations of the nationwide public safety broadband network, in consultation with Federal, State, tribal, and local public safety entities, Director of NIST, the Commission, and public safety advisory committee
• Ensures deployment phases with substantial rural coverage milestones
Sec. 6413 of the statute lays out the funding for FirstNet and other agencies which is primarily based on funds generated from incentive auctions of spectrum (see Sec 6401)

- $7,000,000,000 – total amount that will eventually be allocated to FirstNet
- $2,000,000,000 will be available to the NTIA - borrowed from the US Treasury before incentive auction
  - $5,000,000,000 (difference from total and advanced funding) will come from incentive auctions

$135,000,000 Available for state planning grants
• SEC. 6303. NIST DIRECTED RESEARCH AND DEVELOPMENT PROGRAM REQUIRED ACTIVITIES.

• Director of NIST, in consultation with the First Responder Network Authority and the public safety advisory committee established under section 6205(a), shall….

  – …accelerate the development of mission critical voice, including device-to-device “talkaround” capability over broadband networks, public safety prioritization, authentication capabilities, and standard application programing interfaces for the nationwide public safety broadband network, if necessary and practical;
What is “Mission Critical Voice”

• 2011 Mission Critical Voice Requirements established by the National Public Safety Telecommunications Council (NPSTC www.npstc.org)
  – Direct or Talk Around
  – Push-to-Talk (PTT)
  – Full Duplex Voice Systems:
    – Group Call
    – Talker Identification
    – Emergency Alerting
    – Audio Quality
What’s the Problem?

• Commercial carriers
  – Good interoperability for voice, SMS & MMS (although this took a lot of time and work)
  – Poor interoperability of PTT
    • IDEN, Winforia, Qchat, Kodiak… all non-interoperable with each other

• Public Safety Land Mobile Radio
  – Nearly 60,000 agencies in the USA
  – Most utilize proprietary networks
  – Interoperability thorough
    • Limited P25 interface
    • Audio bridge
    • Same vendor

Public Safety Needs a next generation solution for voice, video, messaging and presence
Executed CRADAs

COMMSCOPE
ascom
Alcatel-Lucent
Anritsu
U.S. Cellular
Powerwave Technologies
Wavesat
CAVIUM NETWORKS
Nokia Siemens Networks
EDX Wireless
CETECOM
AT4 Wireless
Raytheon
JPS Communications
PSCR
T-Mobile
NORTHROP GRUMMAN
ROHDE & SCHWARZ
IXIA
VERIZON WIRELESS
TATT Radio Communications
TRAFFIX Systems
Sprint
AIRCOM INTERNATIONAL
JDSU
7 Layers
CASSIDIAN
CISCO
LG
LG
ERICKSON
AEROFLEX
ISCO International
Twisted Pair
Rethink Critical Communications
Agilent Technologies
Syniverse
PSCR Standards & Testing

• Lead and participate in public safety requirements development
• Generate interest from broadband vendors to develop a 700 MHz broadband equipment ecosystem
  – Band Class 14 (D Block & Public Safety Block), Long Term Evolution (LTE)
  – Stimulate early development for public safety systems (e.g. Waiver Orders)
  – Support & participate in the commercial standards and testing process with public safety requirements e.g.
  – Publish test results (non-attributable) to inform stakeholders
Global Market

- US is leading the way globally for public safety LTE but we are working to build global public safety requirements
  - European TETRA association
  - Sao Paulo Military Police Force and Brazilian Army preparing for World Cup.
  - Hong Kong Police
  - New Zealand/Australian protection forces
  - Abu Dhabi Police
  - Qatar Armed Forces
  - Canada CITIG
  - Dutch Police
For Additional Information:

http://www.pscr.gov

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