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Public Safety Communications Research
(PSCR)

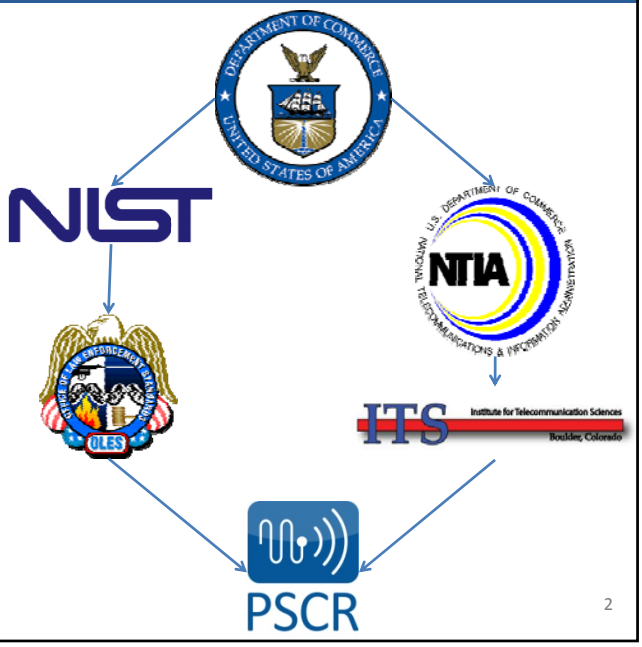
Department of Commerce – Boulder Labs

Public Safety Communications Research Program

Located at the Department of Commerce Boulder Labs in Colorado

The PSCR Program is a joint effort between:

NIST's Law Enforcement Standards Office (OLES)
and
NTIA's Institute for Telecommunication Sciences (ITS)



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PSCR Portfolio

LMR Standards and Technologies	Broadband Standards and Technologies	Interoperability Device Standards and Technologies	Emerging Standards and Technologies	Cross-cutting or Supporting Activities
P25 CAP	700 MHz Broadband	Multi-Band Radio	P25 Security	Program Management & Reporting
Project 25 (P25) Standards Development	Public Safety VoIP	Interim Interoperability Device Testing	Technical Services Projects	Statement of Requirements (SOR)
ISSI Test Tools	4.9 GHz Broadband Task Group		Video Quality	Public Safety Architecture Framework
Audio Quality	ROW-B			RF Propagation Studies
	Modeling and Simulation			

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FCC National Broadband Plan

- Released March 2010
- One of six major goals is the formation of a nationwide, wireless, interoperable broadband public safety network accessible to all first responders
  - Requests public funding of $6.5 billion over 10 years to support the construction of network
  - Calls for $6-10 billion in operating costs over 10 years
  - Creation of the FCC Emergency Response Interoperability Center (ERIC)
- Impacts a significant market
  - As many as 15 million public safety users in the country

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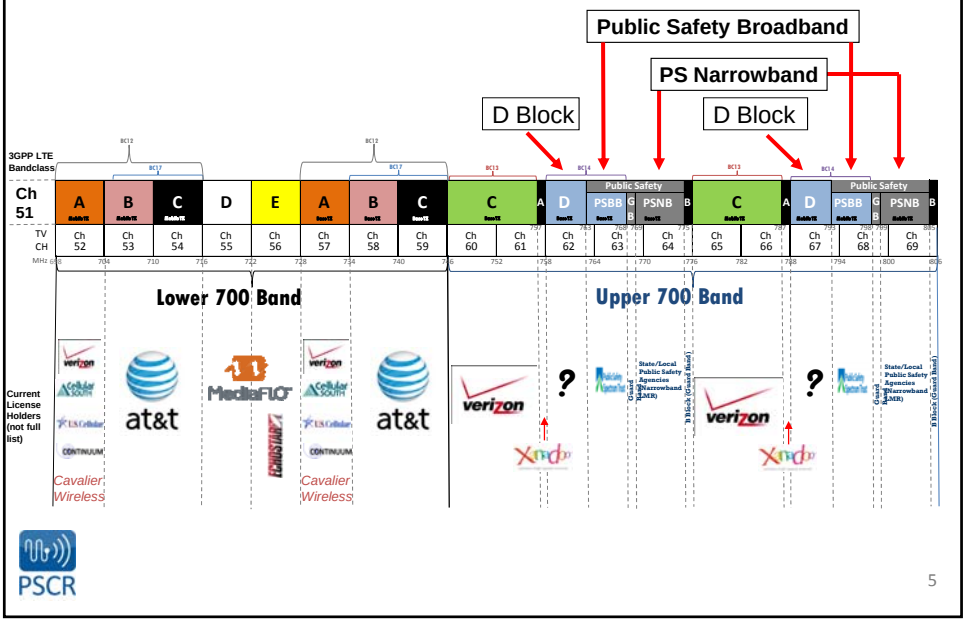
700 MHz Spectrum



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PSCR's 700MHz Public Safety Broadband Demonstration Network

The only government or independent lab facility located in the United States to test and demonstrate public safety 700 MHz broadband networks and applications, the Demonstration Network provides:

- A place for manufacturers and carriers to deploy their systems to test them in a multi-vendor environment. This provides integration opportunities.
- A place for public safety to see how these systems will function, specific to their unique needs. Interested agencies can visit the network and get hands-on experience with these systems, as well as run public safety specific test cases that relate directly to their operational environments.
- A place where early builders can ensure that the systems they might procure will in fact work in the eventual nationwide network, assisting agencies in their procurement process.

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PSCR Demo Network Project Plan

- 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 the commercial standards and testing process with public safety requirements e.g.

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Demonstration Network Outcomes

- Stakeholders will be able to deploy their equipment in a neutral host network.
- Inform public safety on how this new technology can meet their requirements.
  - Allow public safety to access the cost savings and innovation of the larger commercial market
  - They do not have to potentially waste capital expenditures for evaluating a network technology.
- Information & test results gleaned can inform all stakeholders

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Demonstration Network Outcomes (cont)

- Help create nationwide interoperability through a unified approach to network design and implementation
  - Requirements definition & standards development
    - Testing (conformance, performance and evaluation)
    - Planning – Network architecture, RF, IP, PLMN, IMSI, eNUM, Security, Application… etc
- NOTE: Information published will be non-attributable

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Backup

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To Date

- In 1997, Congress directs FCC to allocate 700MHz band spectrum to public safety
- In 2007 the 2nd Report and Order created by the FCC to "to promote the creation of a nationwide interoperable broadband network for public safety and to facilitate the availability of new and innovative wireless broadband services for consumers"
  - March 2008 – FCC Auction 73 fails to attract D-Block bidder
- Public safety agencies, through the Public Safety Spectrum Trust (PSST), are allocated spectrum at 763-768MHz and 793-798MHz
- 20 cities, counties, and stats have received a waiver from the FCC to build out individual broadband networks prior to nationwide build out
  - 30 more jurisdictions have applied for waivers
- Public safety has chosen LTE (Long Term Evolution) as the technology for this build out

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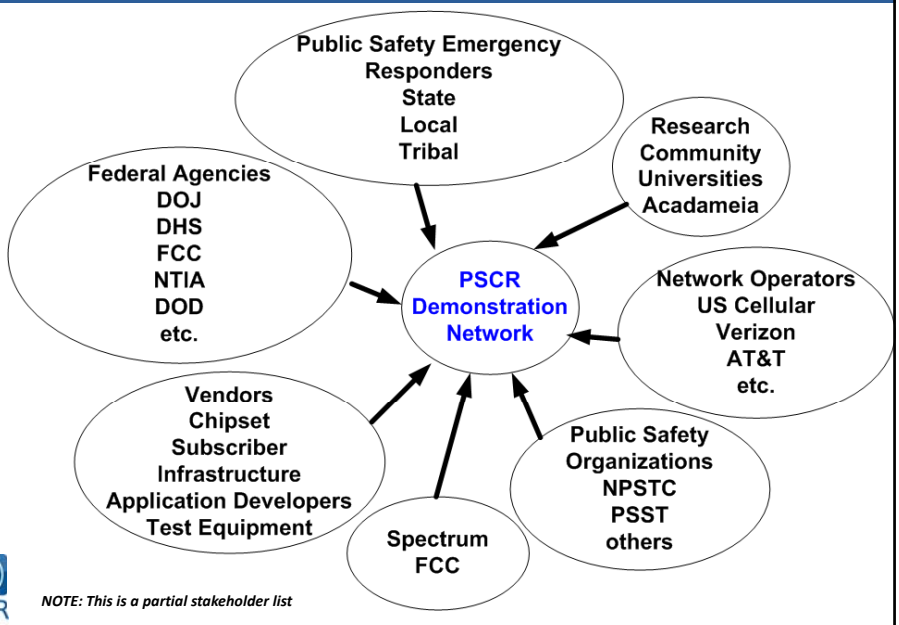
Demo Project Stakeholders



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NOTE: This is a partial stakeholder list