



PSCR

Public Safety Communications Research Program

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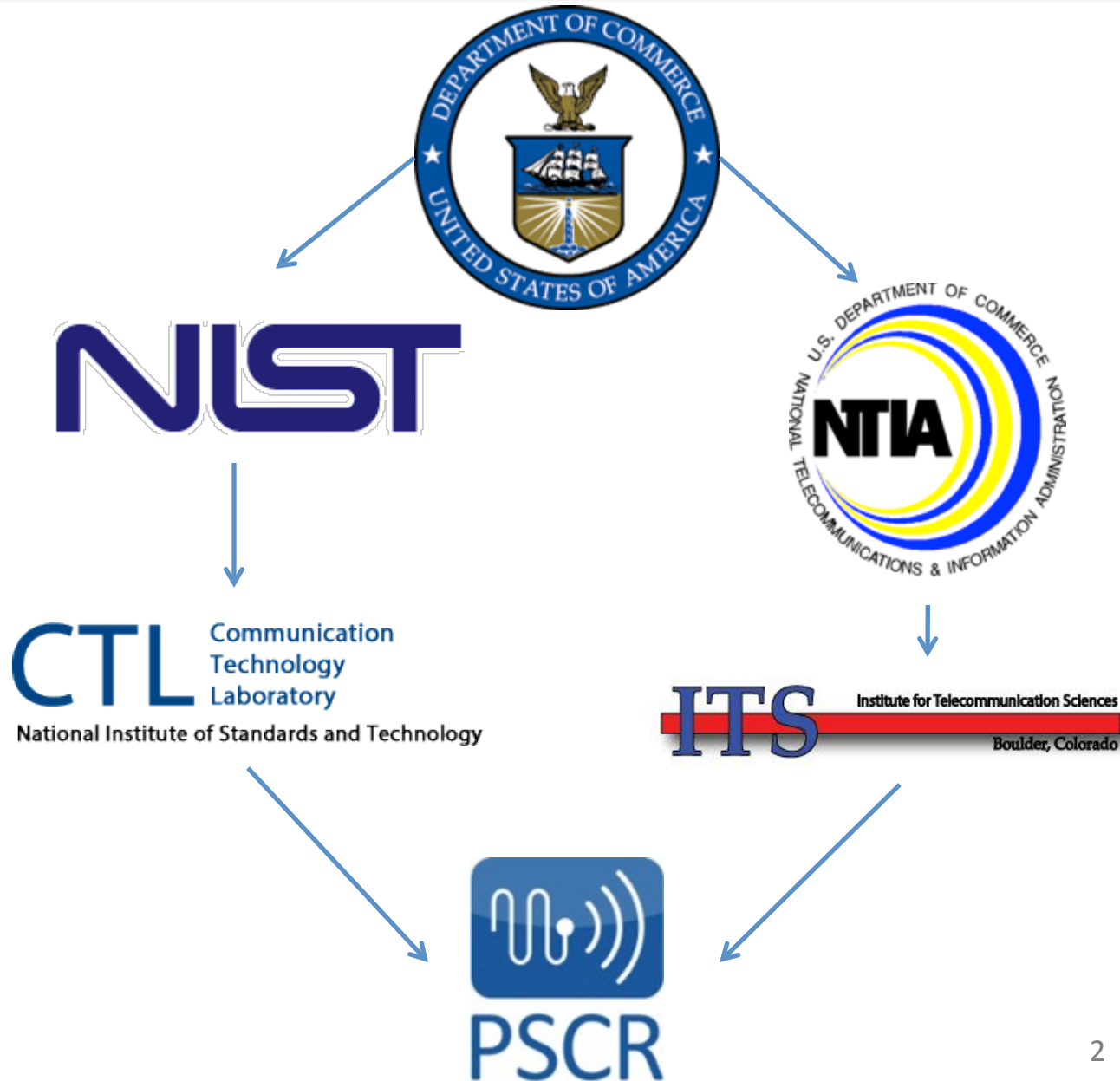
www.pscr.gov

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
Communications
Technology Laboratory
(CTL)
and
NTIA's
Institute for
Telecommunication
Sciences
(ITS)



PSCR Sponsors

- Department of Homeland Security's Office for Interoperability and Compatibility (DHS S&T OIC)
- Department of Homeland Security's Office of Emergency Communications (DHS NPPD OEC)
- First Responder Network Authority (FirstNet)
- National Institute of Standards and Technology (NIST)
- National Telecommunications and Information Administration (NTIA)



PSCR Portfolio

Broadband Standards and Technologies	Emerging Standards and Technologies
700 MHz Demonstration Network	Bridging LMR & LTE
Requirements and Standards	Video Quality
Mission Critical Voice	Security Research
Modeling and Simulation	R&D Technology Roadmapping
RF Propagation Studies	
Audio Quality	

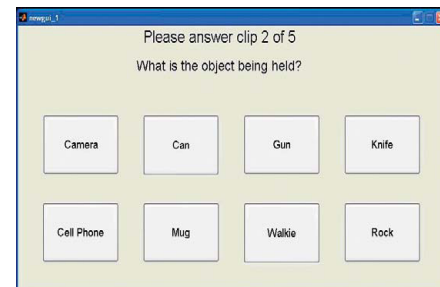
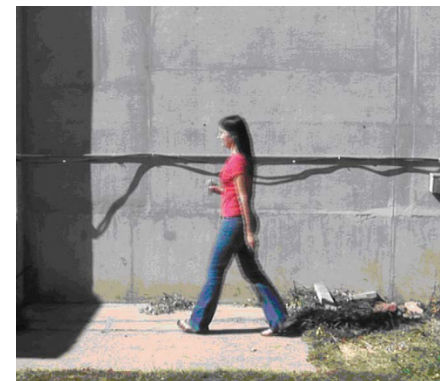
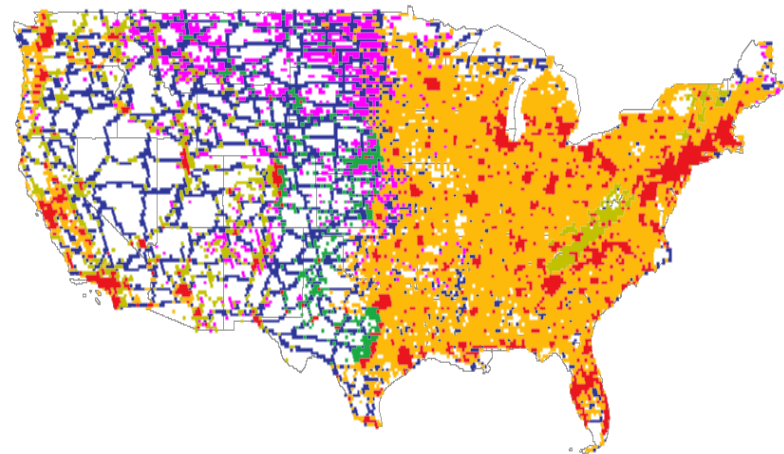
Current Efforts—DHS OIC

- Testing & Evaluation
 - 700MHz Public Safety Broadband Demonstration Network
 - Vendor-neutral test bed to understand how LTE technologies can meet public safety's expectations
 - Extremely vendor-diverse
 - Built in partnership with industry, through Cooperative Research and Development Agreements (CRADAs)
 - Indoor/In-building Coverage
 - Extended Range Cell Testing
 - Local Control
 - Deployables for Public Safety
 - LMR to LTE Integration



Current Efforts—DHS OIC (continued)

- Network Modeling & Simulation
- Video Quality for Public Safety
- Audio Quality for Public Safety
- Requirements Gathering
- Security Research
 - Mobile Application Security
 - Identity Management



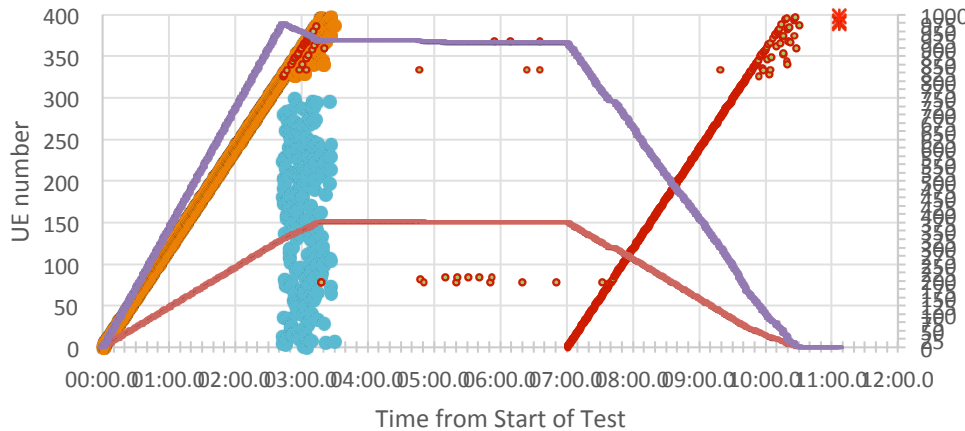
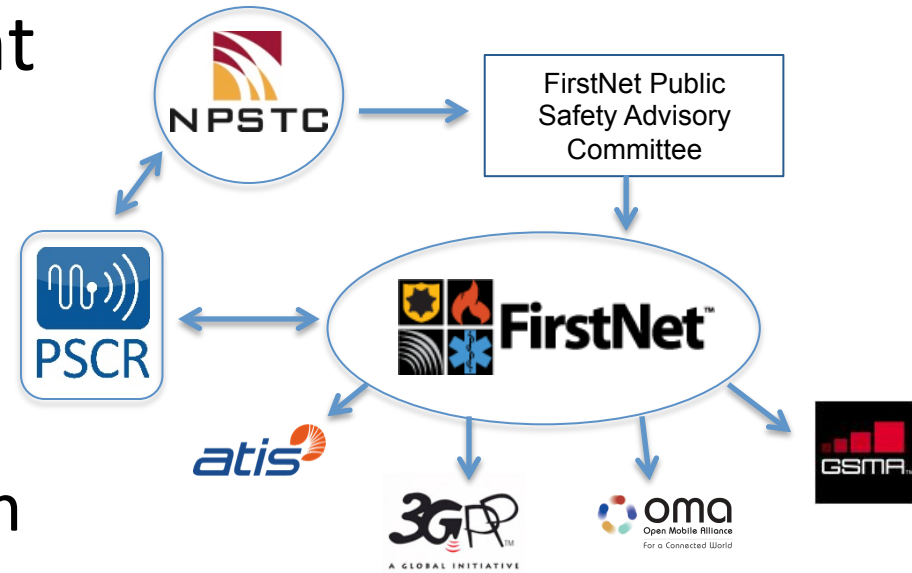
Current Efforts—DHS OEC

- Testing & Evaluation
 - Next Generation Networks (NGN) Priority Services
 - Test and evaluate how LTE technologies can meet the needs of Wireless Priority Service users
 - These services are used during emergencies when commercial networks are congested

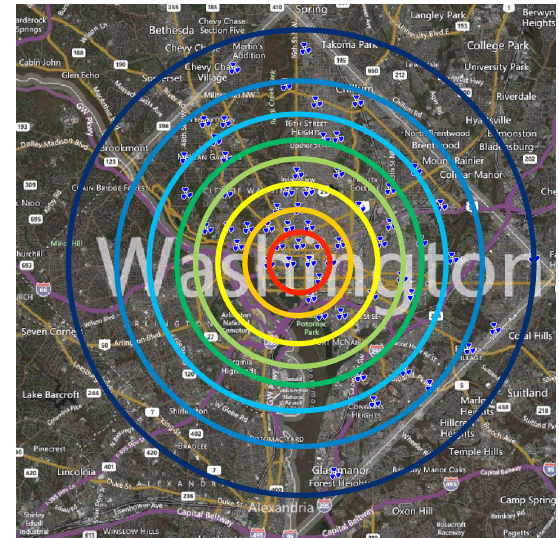


Current Efforts—FirstNet

- Standards Development
- Modeling & Simulation
- Testing & Evaluation
 - Quality of Service, Priority, and Preemption



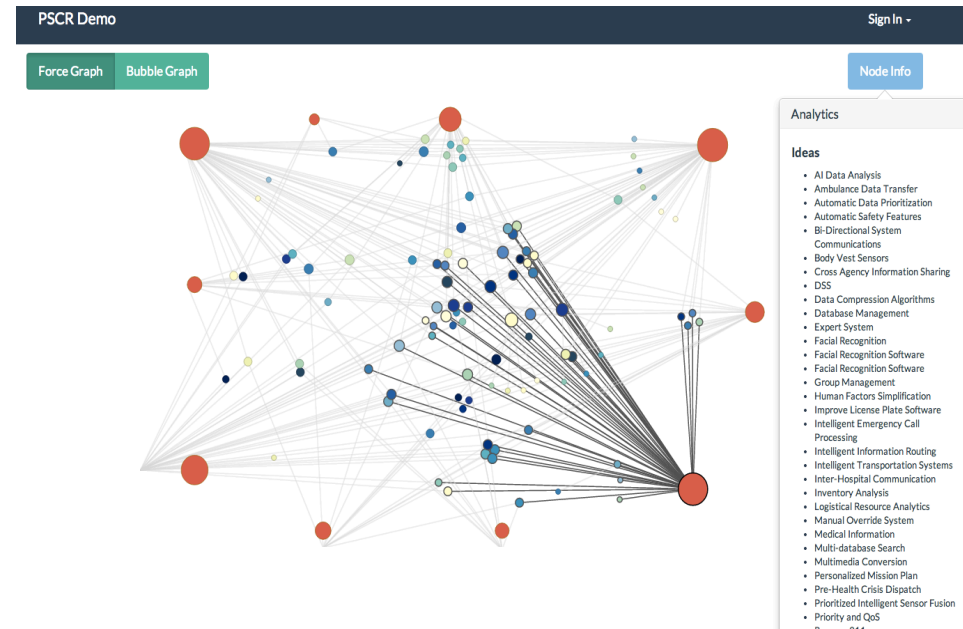
allocated bearers



- Bearer Add
- Bearer Preempted
- RRC release
- ✱ No Response from eNodeB
- #default bearers
- #dedicated bearers

Current Efforts—R&D Roadmapping

- November 2013 Public Safety Broadband R&D Roadmap Workshop
 - Highlight needs for public safety broadband research and development (R&D) beyond the short term horizon (18-24 months) and begin to identify research areas that need to be developed over the long term (5-10+ years) in order for a public safety broadband network to fulfill its ultimate goals.
- Current Efforts
 - Data Analysis and Organization
 - Roadmap Framework
 - Updated Public Safety Scenarios
 - Location Services R&D Roadmap



Thank you!

Questions?