



PSCR Update & Public Safety Innovation Accelerator Program Federal Funding Opportunity

Jeb Benson

PSCR Update – Topics



- Federal Funding Opportunity
 - Goals & General Info
 - Technology Areas
 - Teaming
 - Announcement
 - What SPOCs Can Do
- Prize Competitions
- Time permitting
 - NIST R&D Tech Areas



Public Safety Innovation Accelerator Program FFO - Goals



- Accelerate key technology areas
- Expand the R&D base
- Enhance the R&D toolsets
- Create sustainable research ecosystems
- Identify areas ripe for innovation funding
- Near-term and long-term positive impact for first responders (need SPOC help here...)

General



- Anticipate up to \$30M in FY2017-19 with awards in range of \$10k to \$1M per year
 - Two year period of performance
 - Exception: Three year POP for academic proposals led by PhD students
- Grants or cooperative agreements
- Open to all non-Federal entities



- Six technology areas:
 - Mission Critical Voice
 - Location Based Services
 - Public Safety Analytics
 - Communications Demand Modeling
 - Research and Prototyping Platforms
 - Resilient Systems
- Proposals can address specific technology areas and objectives, or be cross-cutting in nature



- MCV
 - Direct mode operations
 - MCPTT
- LBS
 - Positioning
 - Dissemination
 - Data integration and interoperation
 - Mapping and visualization
 - Affordable localization reference environments



- Public Safety Analytics
 - Data sets
 - Analytics tools and frameworks
 - Data analytics
- Public Safety Communication Demand Model
- Research and Prototyping Platforms
 - Tech areas: LTE, wireless backhaul, interworking, positioning and LBS
 - Platforms:
 - Link/Physical-level simulators
 - Packet-level network simulators
 - Software defined radio



- Resilient Systems
 - Decentralizing LTE/IMS control and data
 - Routing and mobility across heterogeneous networks
 - Data management, access, and consistency
 - Service replication and access
 - Future-proofing
 - Security, identity, and access control

Teaming



- Teaming with Public Safety
 - Required for Analytics (Letters of commitment)
 - Encouraged for other areas
 - Funding provided to organizations if needed
 - PSCR intends to maintain list of interested PSOs
 - For this FFO, public safety = Fire, EMS, and law enforcement
 - U.S. public safety partners only

Announcement



- FFO posted on <u>www.grants.gov</u> and <u>www.nist.gov/ctl/pscr</u>
- Webinars soon after geared for...
 - Potential applicants
 - Public safety
- Send questions to pscrffo@nist.gov
- Will post new information on the website

What SPOCs can do



- Outreach
 - We want highly competitive applications
- Engage your public safety network
 - Unique opportunity to participate in R&D
 - PS can drive the proposal, too
 - Contact PSCR if interested: <u>pscrffo@nist.gov</u>
- Evaluators
- UX interviews
 - Need 100-200 SMEs for 1 hr. interview



Prize Competitions



- Upcoming competitions/challenges
 - Video Challenge Competition launch Fall 2016
 - First UI/UX-related Prize/Challenge launch for VR Winter 2016
 - First LBS-related Prize/Challenge launch Summer 2017







FirstNet Guiding Principal

"FirstNet will provide technical support to these projects and will share any lessons learned with the broader public safety community to enable the successful implementation of FirstNet's nationwide network deployment. Designing and deploying a network that lives up to these principles will require an extraordinary level of coordination and collaboration among all stakeholders."

Project	Planned Sites	On-Air	Primary Focus Areas / Key Learning Conditions (KLCs)
1. LA-RICS	77	61	Secondary responders partnerships, Quality of Service, priority/pre-emption
2. NM	7	7	Hosted core, int'l border spectrum management, Federal partnerships
3. NJ*	32	31	Deployable assets, Disaster Recovery, training exercises, Network Operations Center notification
4. ADCOM	20	19	PSCR program/FirstNet test support, Band Class 14 device testing, demonstration access
5. TX	93	24	Core migration, data analytics, rural coverage, special events, LTE training

^{*:} New Jersey Totals Exclude Vehicle Network Systems and Staged Units



Highlights:

- 61 permanent LTE PSBN sites on-air; 13 COWS nearing completion, 2 spares
- 86 devices provisioned to date; approx. 450+ IVRs installed between LASD and LACF
- BTOP grant period can be extended to 2020; \$37M remaining.
- New procurement proposed to NTIA
 - 26 new LTE sites, NOC funding, network operations support, PSEN migration

Lessons Learned / Project Challenges:

- Device provisioning delayed by technical issues
- Remote NOC monitoring and lack of network operations tools
 and support systems impact local level network operations



Fig.1 – Existing Mobile Coverage



Fig.2 – Proposed Phase 2 Mobile Coverage

New Mexico



Highlights

- US/ Mexico Border operations and coverage are in place near
 Las Cruces
- Active with Special Events support for Law Enforcement and EMS including Balloon Fiesta, New Mexico State Fair
- Project successfully utilized remote core connectivity and operations

Lessons Learned / Project Operations

- Budget constraints forcing project to implement local core due to on-going maintenance and transport costs
- Project is struggling with user adoption due to lack of wide area coverage footprint
- The team is planning to move the Artesia/FLETC site to the Santa
 Fe area to expand coverage for the Santa Fe police department
- Loss of key engineering personnel present transition challenges for network operations

Transforming public safety's future – together

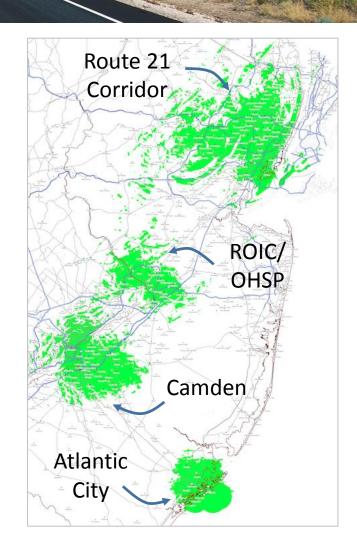


Highlights

- Project implementation substantially complete (now in BTOP closeout period)
- Project leadership transition in progress good progress
 made
 - Operational focus on user management and hosting agency satisfaction

Lessons Learned / Project Challenges

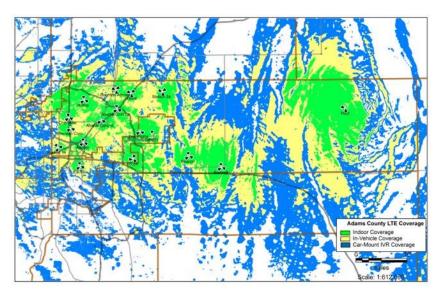
- Network monitoring far more complex than LMR strong management focus required to understand user experience
- 4.9 GHz microwave a good solution for temporary service –
 especially in urban areas
- Device installation (access to public safety vehicles) requires strong coordination
- Data analytics (key performance indicators) is essential to effective network management





Highlights

- Usage on the band 14 ADCOM network
 has increased slightly with download
 usage approaching 50M/day
- Northglenn PD is the most active agency on the ADCOM network
- Project distributed 24 SIMs to Adams
 County Sheriff. Agency goal to
 transition users to Band 14 by 1Q17



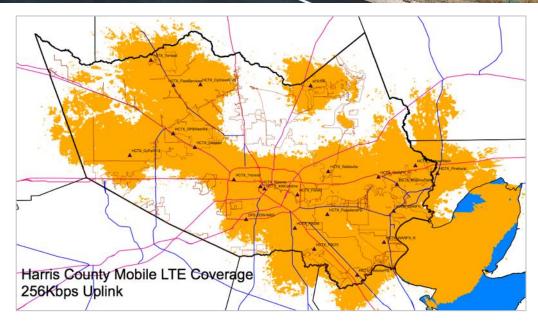
Lessons Learned/Project Challenges

- Project has been struggling operationally to maintain network due to cost and limited staffing. (9 sectors currently off-air with no remediation planned)
- Getting consistent access to system usage and Key Performance Indicators following core upgrade continues to be a challenge



Highlights:

- Vehicle modem installations with
 Brazos County Sheriffs Dept. and
 City of Webster PD
- Planning larger sales push after completion of network build in early 2017
- Project continues to lead Early
 Builders in network performance
 monitoring



23 sites of the full 38 site Phase 1 County-wide network complete

Lessons Learned / Project Challenges

- The project is taking a lead role with applications testing including ICAM proof of concept with PSAC, PSCR and Georgia Tech Research Institute.
- As seen at WSMR, training at the practitioner level can improve compromised operations.



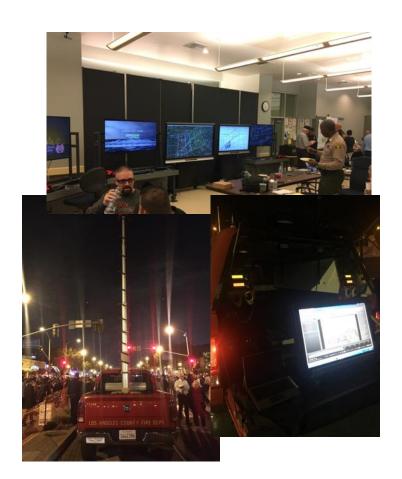


West Hollywood Halloween Carnival

- B14 connectivity provided to support law enforcement and fire services.
- 500,000+ event attendees spread over 2 miles of Santa
 Monica Blvd.
- 100 LTE devices (handheld and some IVR), 6 fixed cameras,
 and 3 Strongwatch mobile video unit deployed.
- Network performance impacted during the event, thought to be caused by network software upgrade implemented during event.
 - Waiting on full Vendor report on network KPI analysis

2017 Tournament of Roses Parade

- Event in planning stages; Lessons learned from Halloween to be implemented.
- More users on Network this year and additional responsibility for the Rose Bowl game inside the stadium.
- Investigating backhaul at Rose Bowl for COW deployment.





- Project has supported multiple events including:
 - Papal visit
 - Miss America
 - Atlantic City beach concerts
 - PGA championship
 - FEMA exercises
- Most recently, JerseyNet supported the annual steeplechase in Far Hills
 - Crowds in excess of 35k
 - Commercial congestion observed even with commercially deployed COWs
 - Demonstrated dedicated service to public safety
- Potential support of presidential inauguration under discussion





- Network supporting upcoming Super Bowl across the the city of Houston
 - Team focused on indoor location services and situational awareness applications
 - Validating service during regular season
 NFL games
- Houston Rodeo and Livestock Show 2016
 - 30 day event provided B14 connectivity and services to law enforcement and parking services
 - Demonstrated device, accessory, and application complexities
 - Service becomes "mission critical" once in the hands of first responders



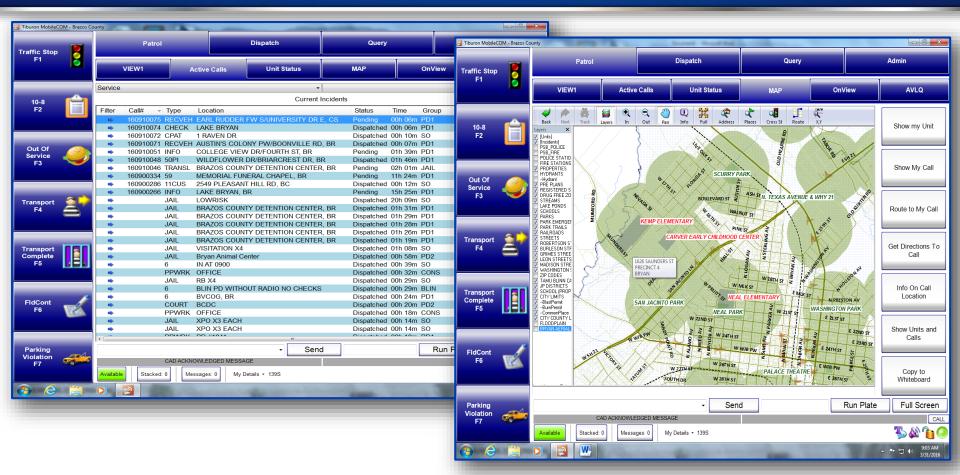
Brazos County Sheriff's Office





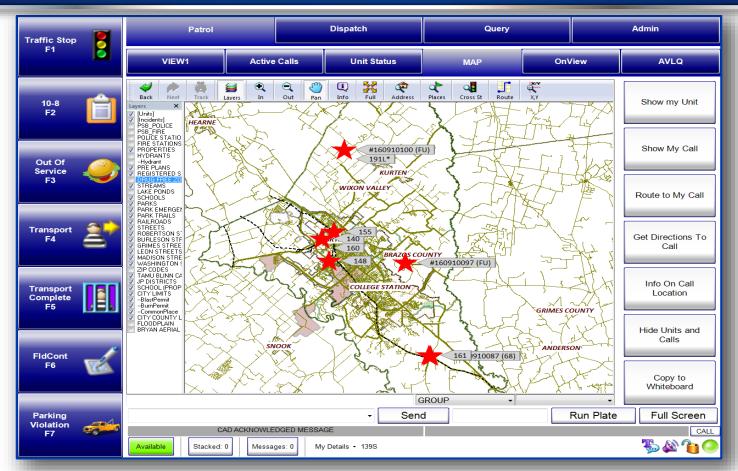
Brazos County: CAD Data





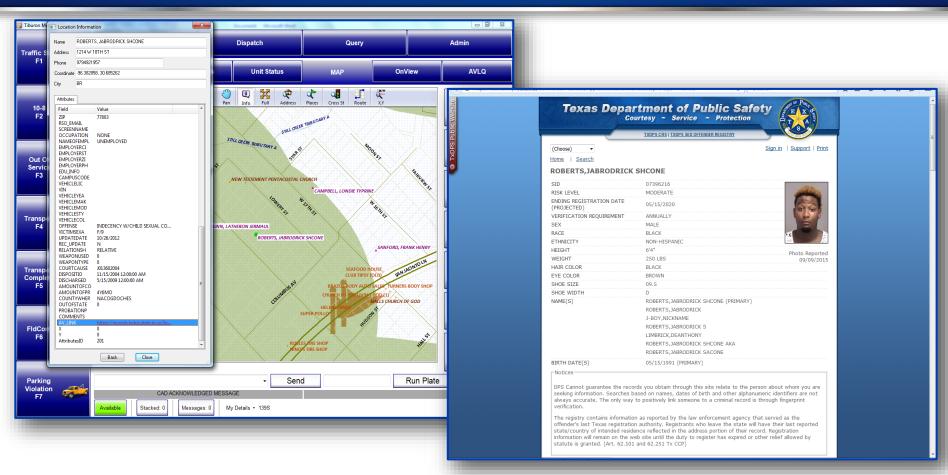
Brazos County: Mapping Data





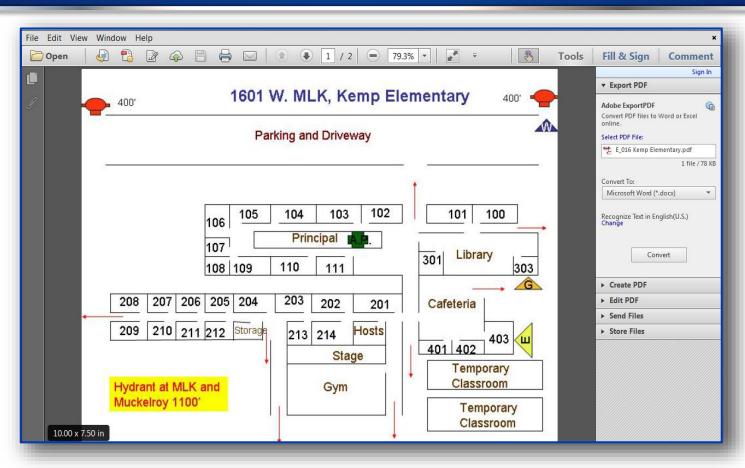
Brazos County: CAD Integration





Brazos County: Building Pre-Plan





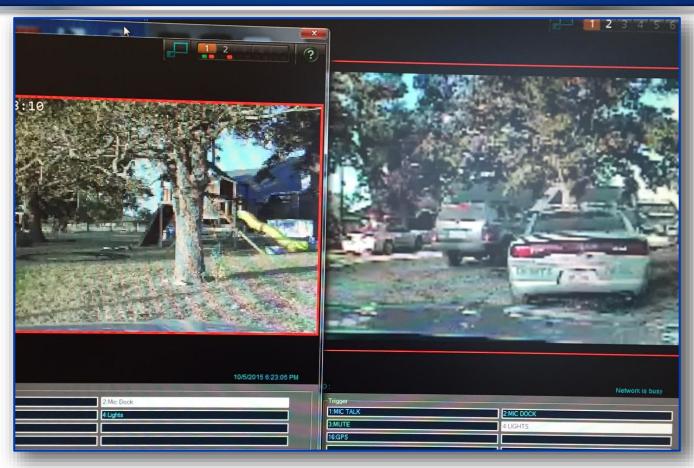
Brazos County: Mobile Video





Brazos County: Armed Stand-off





Brazos County: Tornado & Flooding





Brazos County: Security Cameras







State and Local Implementation Grant Program (SLIGP) Update

FirstNet Single Point of Contact (SPOC) Meeting
November 16-17, 2016

NTIA

Mike Dame SLIGP Director Office of Public Safety Communications (OPSC) NTIA Yuki Miyamoto SLIGP Federal Program Officer (FPO) OPSC Natalie Romanoff SLIGP FPO OPSC NTIA

Overview

CURRENT STATE

40%
of the total awarded amount could remain unspent.

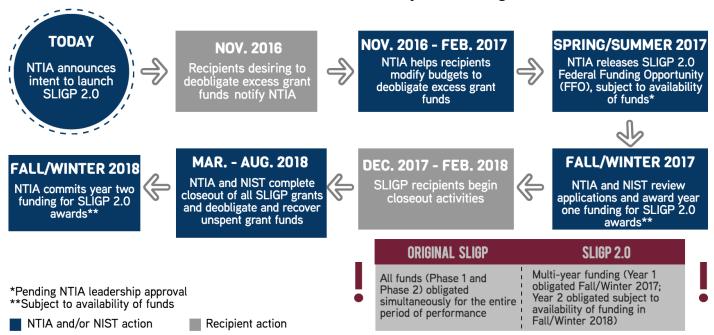
State and Local Implementation Grant Program (SLIGP) recipients have not expended funds as quickly as expected. NTIA expects that approximately \$45-47 million will remain unspent at the end of the period of performance in February 2018.

SLIGP 2.0 grants that will leverage SLIGP unspent balances to support activities in states where FirstNet is deploying the Radio Access Network (RAN), subject to the availability of funding.



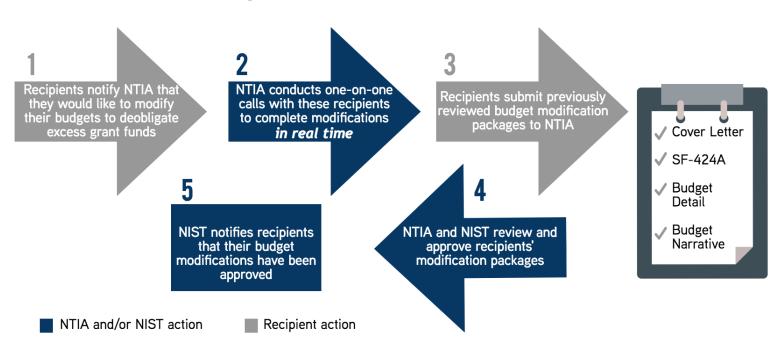
Approach: Leveraging Unspent Balances

Timeline is notional and subject to change





Budget Modification Process





Questions

NTIA will have a table in the "Conversation Room" and will be available to answer questions in-person at that time.



Frequently Asked Questions (FAQs)

- Who will be eligible for a SLIGP 2.0 award?
- If I deobligate projected excess funds, will I get those funds back in a SLIGP 2.0 award?
- If I deobligate funds and apply, will I be guaranteed a SLIGP 2.0 award?
- What happens if NTIA does not recover enough money to make SLIGP 2.0 awards?
- How will the presidential election affect SLIGP 2.0 awards?
- Why isn't NTIA just extending current SLIGP grants?
- What will the allowable costs be for SLIGP 2.0 grants?

