

State of 911

Webinar Series

NATIONAL 911 PROGRAM

June 21, 2016

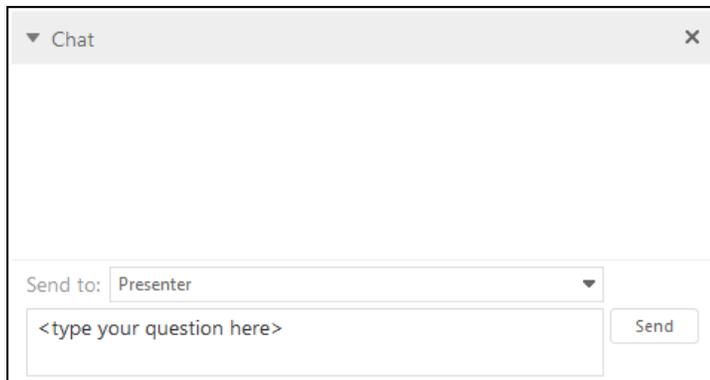
State of 911 Webinar Series

- Designed to provide useful information about Federal and State participation in the planning, design, and implementation of Next Generation 911 (NG911) coupled with real experiences from leaders overseeing these transitions throughout the country
- Webinars are held every other month and typically include presentations from a Federal-level 911 stakeholder and State-level 911 stakeholder, each followed by a 10-minute Q&A period
- For more information on future webinars, access to archived recordings and to learn more about the National 911 Program, please visit 911.gov
- Feedback or questions can be sent to: National911Team@mcp911.com

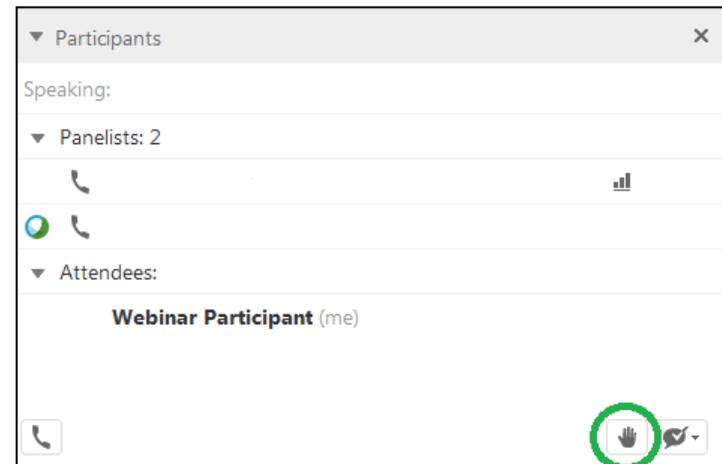
Questions?

For WebEx Technical Assistance, please call: (866) 229-3239, Option 1

To ask a question, please use WebEx's "Chat" feature located on the right-hand side of your screen.



During the Q&A portion of the webinar, please click on "Raise Hand" and your phone will be unmuted.



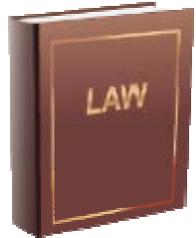


FirstNet & NG9-1-1

The Future of End-To-End Public Safety Communication

Presented by: Bill Hinkle, FirstNet Senior 9-1-1 Advisor

Implementing the Vision



THE LAW 2.22.12

FirstNet becomes law
PL 112-96

FUNDING



\$7B authorized to build the FirstNet network. Funded by spectrum auctions through 2022.

GOVERNANCE



The FirstNet Board has **15** members, including those with telecommunications and public safety backgrounds

Each Governor appoints **1** Single Point of Contact (SPOC) and governing body to represent the State's interests to FirstNet.

42 member Public Safety Advisory Committee (PSAC) advises FirstNet on public safety intergovernmental matters.

BAND CLASS (BC) 14

20MHz of bandwidth has been dedicated to public safety in the prime upper **700MHz** frequency range.

BC 17		BC 17		BC 17		BC 17		BC 17		BC 17	
BC 12	BC 29	BC 12	BC 13	BC 14	LMR	BC 13	BC 14	LMR	BC 13	BC 14	LMR
T-Mobile Mobile	AT&T	AT&T Dish	T-Mobile Mobile	Verizon	PS Broadband	Verizon	PS Broadband	PS Narrowband	Verizon	PS Broadband	PS Narrowband
US Cellular	AT&T	dish	US Cellular	Verizon	FirstNet	Verizon	FirstNet	Verizon	Verizon	FirstNet	Verizon
DL	ULINK	DOWNLINK	DL	DOWNLINK	DOWNLINK	UPLINK	UPLINK	DOWNLINK	UPLINK	UPLINK	DOWNLINK
6 MHz	12 MHz	12 MHz	6 MHz	12 MHz	11 MHz	10 MHz	6 MHz	11 MHz	10 MHz	6 MHz	6 MHz
↑ 1 MHz Guard Bands											



FirstNet is committed to insuring that the concerns and interests of the public safety communications community are being considered in the development and operation of the Nationwide Public Safety Broadband Network

Initial Outreach Questions



- Relationship to NG9-1-1 Networks (ESINets)?
- Interconnection with NG9-1-1?
- Coverage?
- Costs?

The FirstNet Network Will Benefit Public Safety Communications



- FirstNet will provide a mission critical tool for our Nation's Public Safety Answering Points (PSAP) that will facilitate:
- Information management
- Network connectivity between the PSAP and the First Responders.
- Operational planning tools.

NG9-1-1 & FirstNet Integration



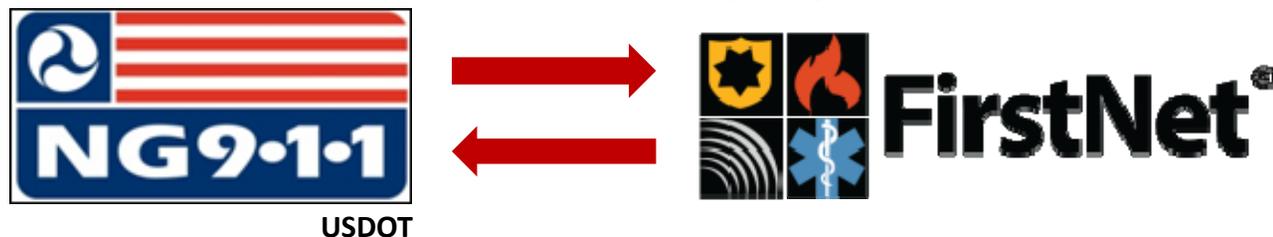
- Integration between the FirstNet network and NG9-1-1 is critical in order to achieve success for public safety.
- NG9-1-1 and the FirstNet network represent the two halves of the public safety request for service and the response.
- The PSAP becomes the nerve center in the middle.
- The need for establishing uniform non-proprietary standards will become crucial to interoperability.
- The PSAP of the future will require personnel with more specialized skills.



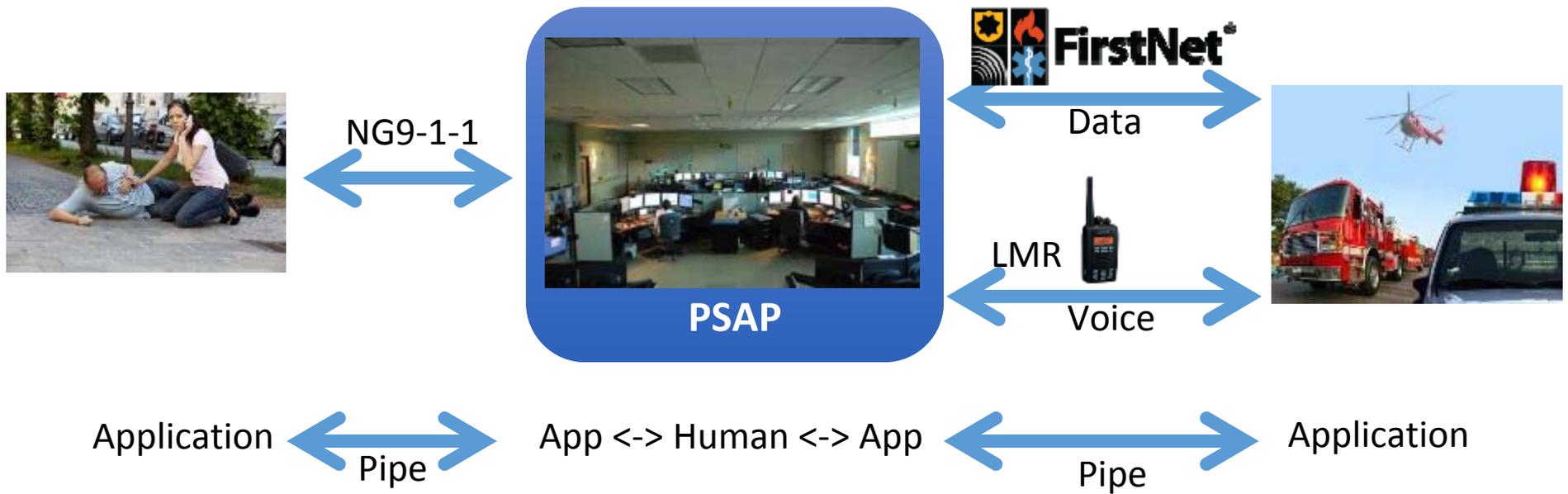
FirstNet Shared Goals With NG9-1-1



- Technology Modernization: Both represent efforts to update voice-centric legacy systems to IP-based architecture to allow telecommunicators and first responders to leverage information in multiple media formats
- National Focus: Both will support broadband connectivity in urban, rural, remote communities
- Improved Emergency Response: Both seek to enhance communications and coordination of responses to requests for public safety assistance
- Planning & Governance: Both require planning and governance to ensure successful deployments



Basic Architecture



The **PSAP** Integrates **NG911** and  **FirstNet**

- With advancement of technology comes an increased threat of infiltration and exploitation of the system.
- NG9-1-1 systems and ESINets will be vulnerable to the same threats as existing IP networks and systems.
- Training and awareness are important considerations.



Early Builders



FirstNet Business Model



- **Win-Win-Win business Model**
- **Providing Services that Public Safety wants**
- **Financially Attractive to Potential Contractor(s)**
- **Meets FirstNet program needs, including Congress**
- **FirstNet becomes Financially Self-sufficient**

CEO Mike Poth discusses
FirstNet's business model
during Industry Day

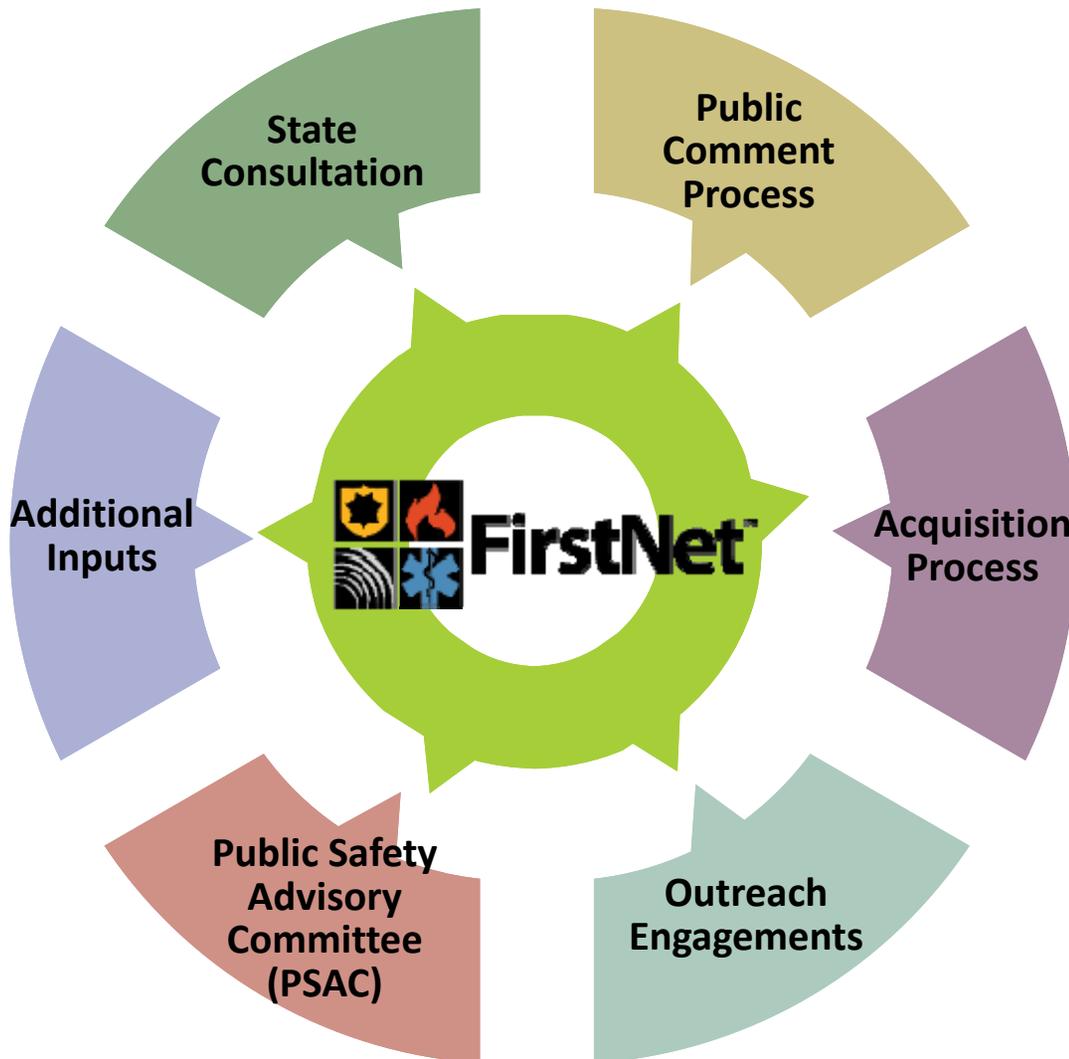


Important RFP Dates



- January 13: RFP Released
- January 15: RFP Webinar held, 645 recorded attendees
- February 12: Questions due
- March 10: Pre-Proposal Conference
- March 31: Capabilities statements due
- May 31: Proposals due
- November 1, 2016: Target date for RFP award

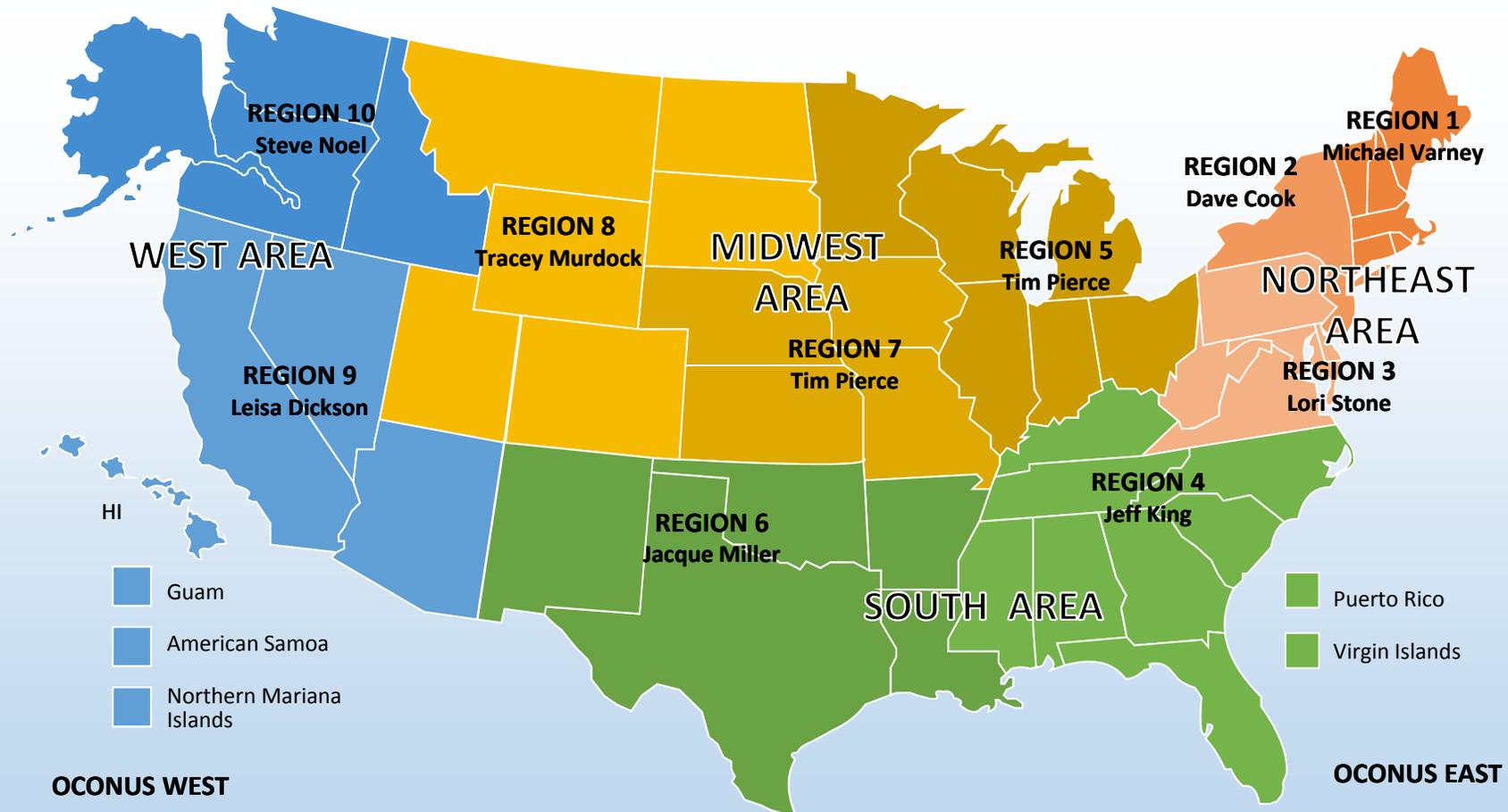
Stakeholder Inputs



State Consultation

1. Construction of a Core and RAN build out
2. Placement of towers
3. Coverage areas of the network
4. Adequacy of hardening, security, reliability, and resiliency
5. Assignment of priority to local users
6. Assignment of priority and selection of entities seeking access to or use of the network
7. Training needs of local users

Regional Assignments

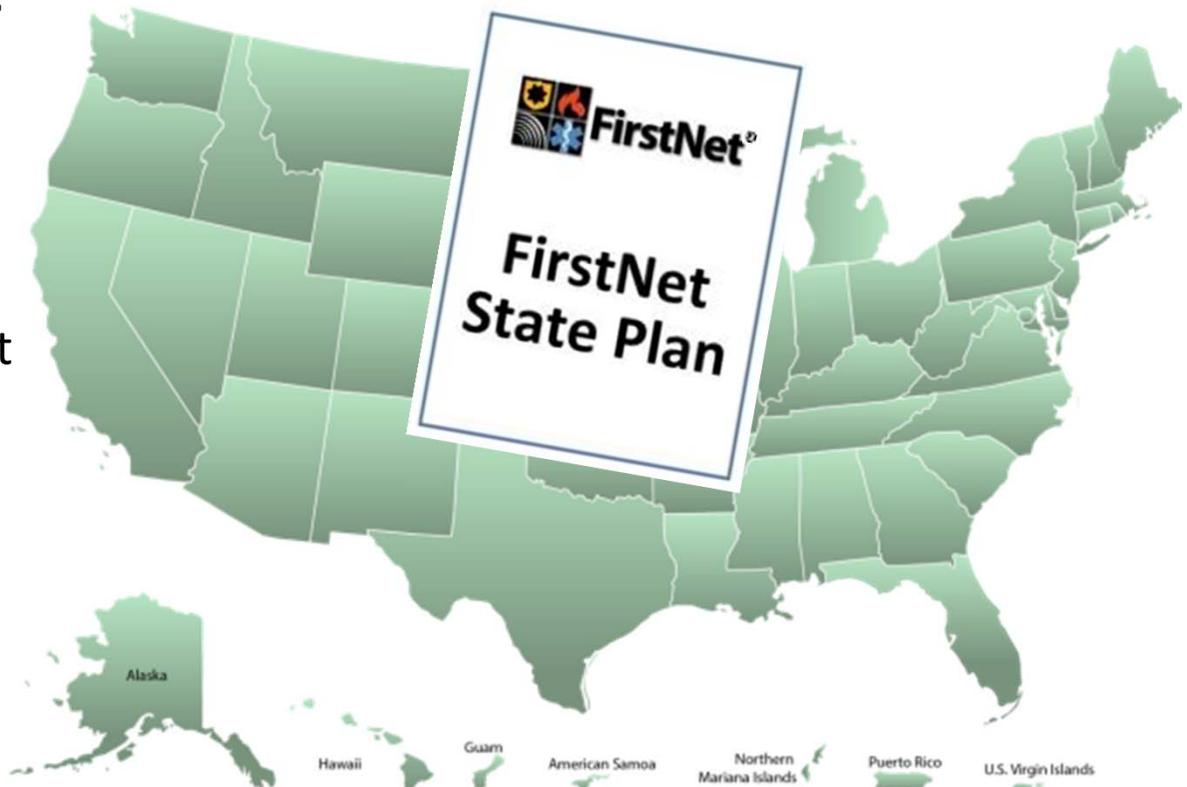


State Plan Process



Under the Act, the Governor has 90 days to choose whether to

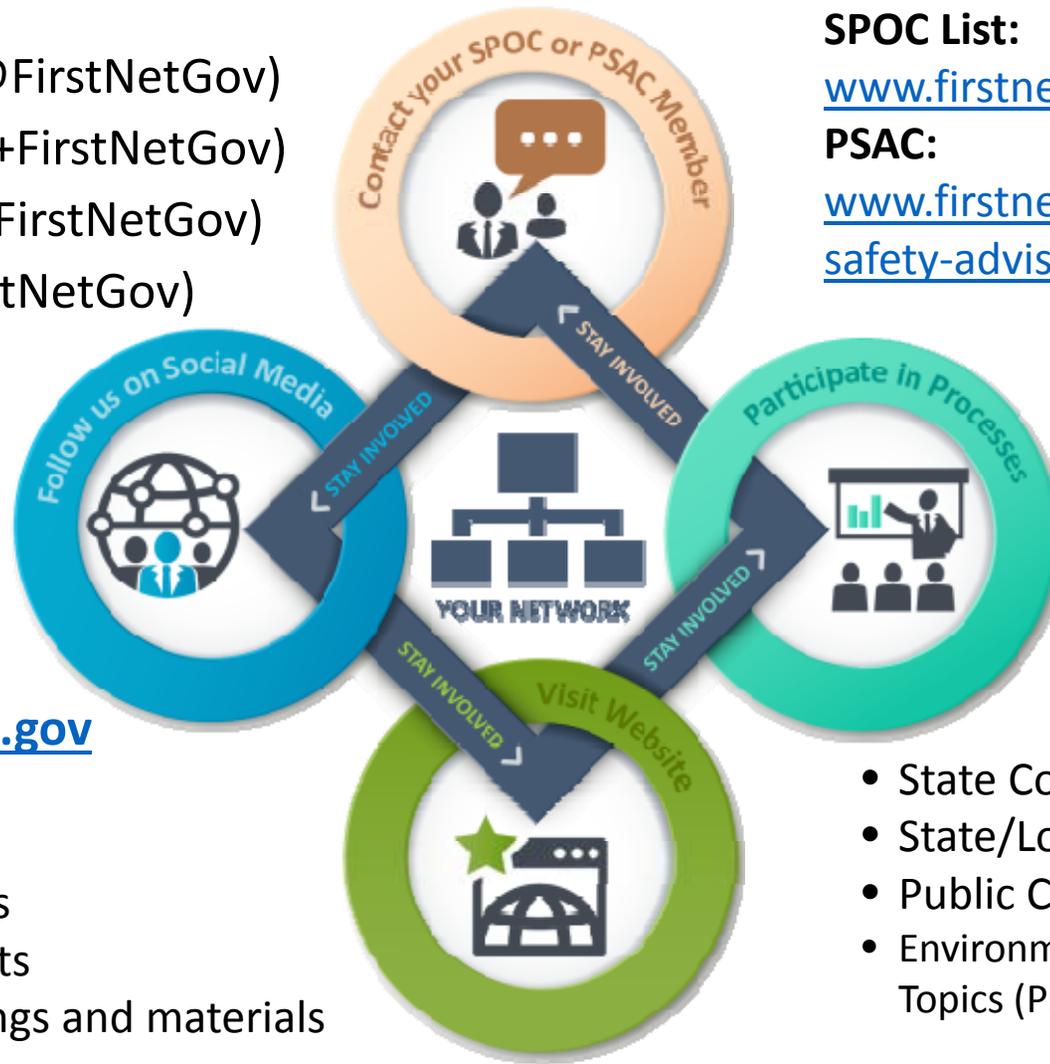
1. Participate in the FirstNet proposed radio access network (RAN) deployment or
2. Assume responsibility to conduct its own state RAN deployment



Outreach and Education



-  Twitter (@FirstNetGov)
-  Google+ (+FirstNetGov)
-  YouTube (FirstNetGov)
-  Flickr (FirstNetGov)
-  LinkedIn



SPOC List:

www.firstnet.gov/consultation

PSAC:

www.firstnet.gov/about/public-safety-advisory-committee

www.firstnet.gov

- Fact Sheets
- Blogs
- Presentations
- Current Events
- Board meetings and materials

- State Consultation
- State/Local Outreach Activities
- Public Comment
- Environmental & Historic/Cultural Topics (PEIScomments@firstnet.gov)

FirstNet Network Benefits



**Dedicated to
Public Safety**



**Public Safety
Apps /
Services**

**QoS, Priority
& Preemption
(QPP)**



**Situational
Awareness**



**Local
Control**



**Public Safety
Grade**

Contact Information



For more information about FirstNet please visit us at:

www.firstnet.gov

www.firstnet.gov (Video) Go to “Newsroom” tab, select “Digital and Social Media” link.

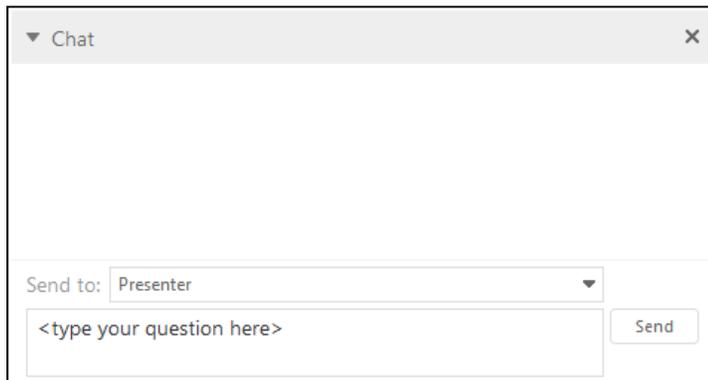
If you would like to have a FirstNet speaker at your state or regional 9-1-1 event. Contact me at:

Bill.Hinkle@FirstNet.gov

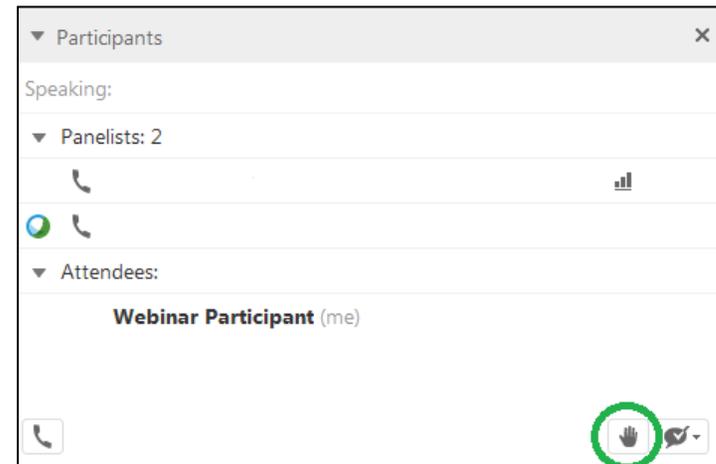
Or call (Mobile) 202-641-5682

Q&A Period

WebEx's "Chat" feature located on the right-hand side of your screen.



Click on "Raise Hand" and your phone will be unmuted.





Tennessee Emergency
Communications Board

“State of 911” Webinar

Curtis Sutton

June 21, 2016



Tennessee's NG911 Project Stages:

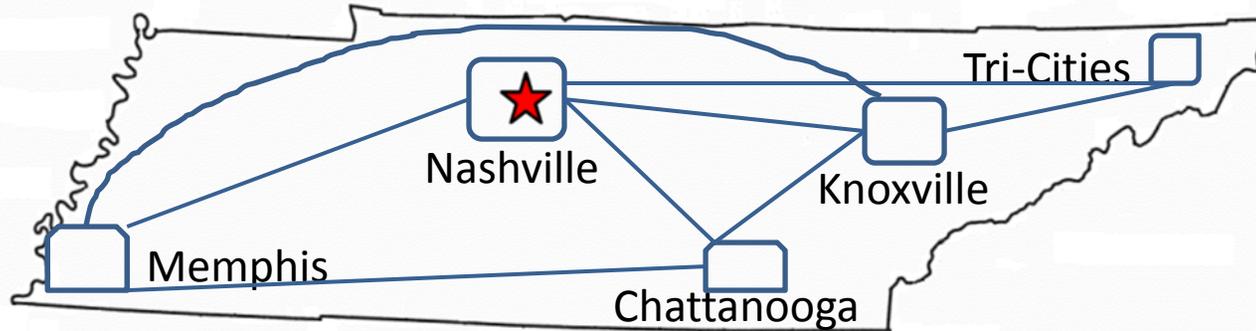
- Deploy core equipment; point wireless carriers to NG911 aggregation centers and use NG911 to determine where to route the calls
- Deploy edge/PSAP equipment; migrate wireless call aggregation and call delivery to NG911
- Migrate all other 911 traffic to NG911; install statewide ALI Database.



- TECB is funding:
 - NG911 core infrastructure, deployment and maintenance
 - IP Capable Controllers in the PSAPs
 - 24x7x365 Network Operations Center
 - Statewide automatic location information (ALI) Database



- All PSAPs are currently receiving wireless 911 calls via the NG911 network.
- Transition of wireline calls and ALI database began early 2016.
- Traditional CAMA trunks will remain in service as long as the districts want as a backup route.



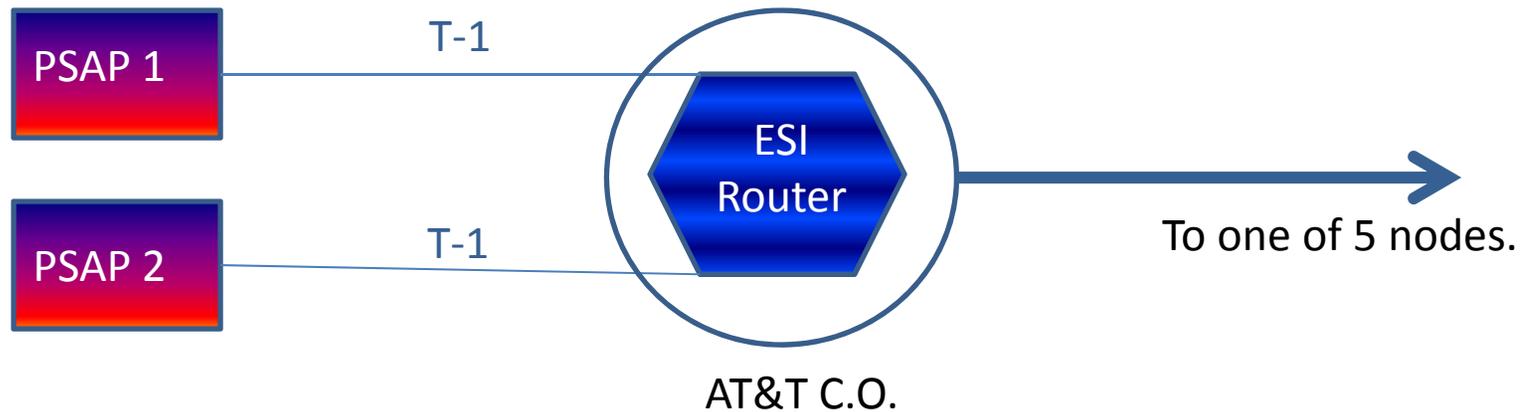
Tennessee - The Volunteer State

Basic NetTN ESI Network Diagram. Nashville and Knoxville nodes are routing centers and aggregation points. Memphis and Chattanooga are aggregation/connection nodes only. Tri-Cities is a remote node. The links are 10 Gb fiber connections provided by NetTN/AT&T (except TRI).



Tennessee - The Volunteer State

Each of the 4 main nodes serve as aggregation points. Each Communications Service Provider (CSP) must connect to a minimum of 2 nodes to deliver 911 calls into the NG911 network. Most of the wireless carriers connect to all 4. Presently, these connections are SS7 trunks but will be migrated to IP trunking in the future.



Typically, each PSAP is connected to the PE Router at its corresponding C.O. in the network via T-1. The T-1s are limited to 8 virtual i3 trunks vs. the normal 24 trunks used in a T-1 to allow for overhead and the transmission of additional data (text, photos, etc). Eventually, these will be migrated to 2 or 4 Mb Ethernet connections.



Statewide ALI database:

- More than 6 million address points
- MSAG validation to address point instead of Hi – Lo ranges
- No cost to local districts for ALI services
- Local districts have access to data
- CSPs will upload SOI files directly to the Administrative ALI

Customer	
ANI	(555) 555-5555
Name	TEST RECORD
House No.	215
Suffix	
Location	STE 10A <input type="checkbox"/> LocCom Flag
ZIP	ZIP+4
Main Phone	
Comment	
Latitude	Longitude
Elevation	
Svc Class	1 (RES) - Residence
Svc Type	0 - Not FX nor Non-Published
Exchange	
County	
Cust Code	
Current FOC	1
Private Citizen	<input type="checkbox"/>
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

MSAG	
Low:	215
High:	215
Address:	HAWKS RD., MARTIN, TN
Range Type:	H
Parity:	0
ESN:	277

Questions?

For further information you may contact the TN Emergency Communications Board at: 615.253.2164, or one of the following:

Curtis Sutton, Executive Director

curtis.sutton@tn.gov

Lee Pope, General Counsel/Assistant Director

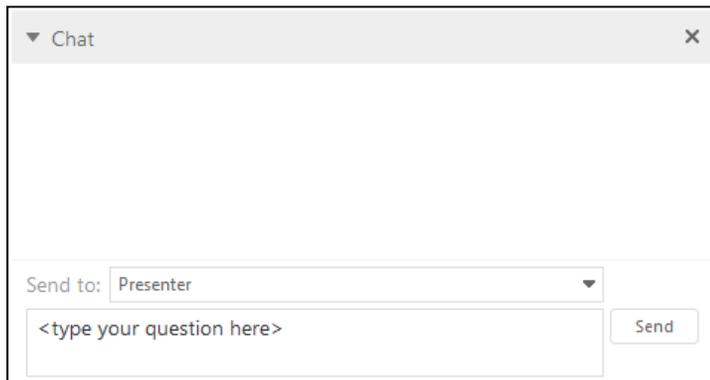
james.l.pope@tn.gov

Eddie Burchell, Chief of Technology
615.253.3705

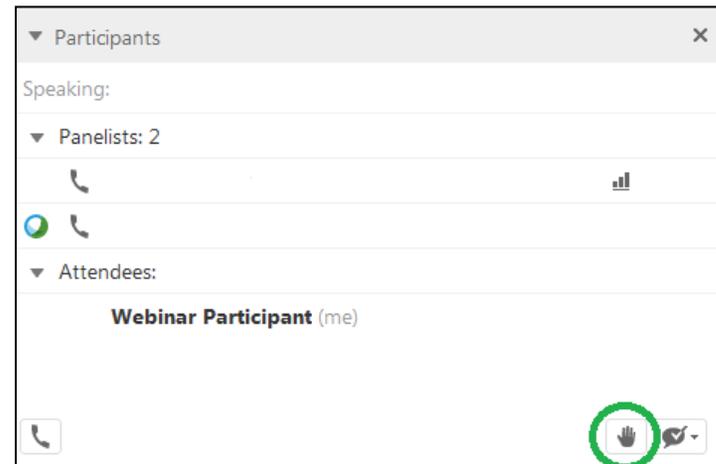
eddie.burchell@tn.gov

Q&A Period

WebEx's "Chat" feature located on the right-hand side of your screen.



Click on "Raise Hand" and your phone will be unmuted.



Future Webinars

- Next Scheduled Webinar: Tuesday, August 9, 2016 at 12 noon ET
- Presenters will be Steve Lewis from the USDOT, Thomas Conray and Judy Doldorf from Fairfax County VA
- To register, visit: <https://mcp911events.webex.com> and click on “2016 ‘State of 911’ Webinar Series”.
- Visit 911.gov/webinars.html to access archived webinars

National 911 Program

- Laurie Flaherty
Program Coordinator
202-366-2705
laurie.flaherty@dot.gov
- Feedback or questions can be sent to:
National911Team@mcp911.com