BayRICS Quarterly Update

Bay Area UASI Approval Authority

August 8, 2019

Radio Interoperability
Current Activities

- System Key Exchange
- Regional Radio Programming Analysis
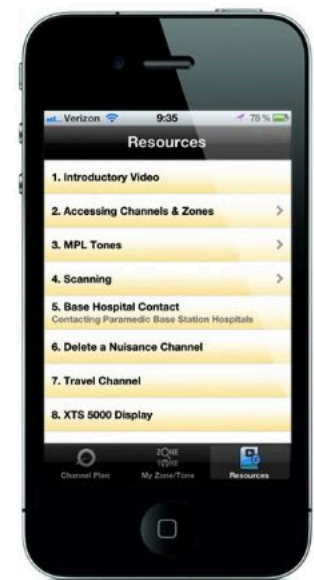- LOA/MOU Development
- Alias Scheme Consensus

FY18 UASI Grant:
Regional Tactical Interoperable Communications Plan (TICP)
Mobile Application and Operationalization

- Digitizes and operationalizes the TICP for use in the field
- Rapidly locate and display radio channel information, important contacts, which repeaters to access, and which zone to use

Public Safety Communications Evolution

Two-Way Land Mobile Radio (LMR)

Two-way wireless communication system

- Highly reliable
- Limited interconnectivity with other systems
- Mission-critical voice services
- Basic data transmission
- Public safety enhanced features (e.g., push-to-talk)
- Limited transmission range
- Enhanced performance enabled by Project 25 (P25)

Nationwide Public Safety Broadband Network

Public safety-grade data network

- Mission critical voice over LTE
- Single integrated device (voice & data) for certain user classes
- Dedicated network built to public safety requirements using dedicated and allocated 700 MHz spectrum

Existing Private/Commercial Mobile Data

Other data-enabling infrastructure

- Available to augment mission critical voice communications
- May include wireline, cellular, mesh, microwave, satellite, wireless local area (e.g., WiFi), paging, HF radio, and/or unlicensed wireless networks
- Sufficiency for public safety communications based on specific user group needs

Emerging Technologies

Device-to-device (D2D) communication

- Devices communicate directly with each other without routing the data paths through a network infrastructure
- Proximity services
- Resiliency options

Integrated Technologies

- Administrative Data
- Mission Critical Data
- Administrative Voice
- Mission Critical Voice

FirstNet

Adoption Update:

- Nationwide, 600,000+ connections to the network from more than 7,250 public-safety agencies

Buildout Update:

- New cell sites in CA updated to support operations on Band 14 spectrum
- Band 14 upgrades on existing sites

FirstNet Authority Update:

- Bay Area Contact: Chris Baker, Senior Public Safety Advisor
- Public Safety Advisory Committee (PSAC)

First Responder Network Authority Roadmap Domains

Core
- EPC
- IMS Core
- Services Platforms
- App Servers
- Service Enablers

Coverage & Capacity
- Macro Coverage
- Capacity
- In-building Solutions
- Temporary/On-Demand Coverage
- Range Extension
- Device-to-Device
- Air-to-Ground
- Maritime Operations
- Availability/Reliability/Resiliency/Hardening

Situational Awareness
- Location Services
- Sensors
- Wearables
- Cameras/Video
- Mapping/Geographic Information System (GIS)
- Data Analytics/Artificial Intelligence

Voice Communications
- Mission Critical Push-to-talk (MCPTT)
- PTT Interconnection

Secure Information Exchange
- Data Access
- Data Sharing
- Cybersecurity
- Identity, Credential and Access Management (ICAM)/Single Sign-On

User Experience
- Priority Services
- Applications
- Devices
- Accessories
- Hands Free Operations
- Augmented Virtual Reality
- Heads-Up Display

FirstNet
Other Considerations

- Response Operations Group
- Products and Services
  - Devices
  - Applications
  - Push-to-Talk
  - Local Control
- Early Adopter Network Performance Experience
  - Coverage
  - Capacity

Questions?

Corey Reynolds

BayRICS General Manager

corey.reynolds@bayrics.net

(925) 803-7882

Supporting Resources

FirstNet Buildout Timeline

Quality of Service with Priority and Preemption	March 30, 2018 thru March 29, 2019
Enhanced Voice over LTE (VoLTE) with Priority	March 30, 2019 thru March 29, 2020
3GPP Mission Critical Push-to-Talk (Unicast only)	March 30, 2020 thru March 29, 2021
3GPP Mission Critical Push-to-Talk (Broadcast), Mission Critical Voice/Data/IoT	March 30, 2021 thru March 29, 2022
"Final Operating Condition"	March 30, 2022