Presentation Overview

1. Next Gen 9-1-1 Update
2. CA 9-1-1 Branch Operation Manual Updates
3. Text to 9-1-1 – Deployment Status in California
4. Call Answer Time Letter
9-1-1 Branch

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9-1-1 in California Today

2016 California 9-1-1 Call Statistics
Total 9-1-1 Calls: 28,507,534

- 80% Wireless
- 16% Wireline
- 3% Voice over IP
- 1% Other to include Telematics
- ~ 5k Text Messages
Why Next Gen 9-1-1?

- Faster call delivery
- Increased routing accuracy and routing functionality
  - Call overflow and backup
- Updated Geographic Information System (GIS)
- Improved system and outage monitoring
- Prepared for wireless location data
- Facilitates Text-to-9-1-1 delivery
- Prepared for newer technologies
- Aging existing infrastructure
- Keeps California in driver’s seat
Next Gen 9-1-1 in California

NEXT GENERATION
9-1-1
CALIFORNIA

TECHNOLOGY
COLLABORATION
FUNDING
PROCUREMENT
Legacy to NG 9-1-1 Transition

- CPE – Customer Premise Equipment
- ESN - Emergency Service Number
- ALI – Automatic Location Information
- ANI – Automatic Number Identification
- pANI - Psuedo ANI
- VoIP – Voice over IP
- MSC – Mobile Switching Center
- VPC – VoIP Positioning Center

**Diagram:**
- Landline 9-1-1
- Wireless 9-1-1
- VoIP 9-1-1
- VoIP Service Provider
- Selective Router
- Phone Number and Voice
- Data Bases
- Location Info
- pANI
- VoIP Location Info
- Wireless Location Info
- CPE sends number to data base for caller location
- ESInet
- Text Control Center
- Text to 9-1-1

**Text:**
- CPE sends number to data base for caller location
- ESInet
- Text Control Center
- Text to 9-1-1
Next Gen 9-1-1 Design (UPDATE)

Responsibility of ESInet vendor
Will likely be a Tariff Service

SS7 or SIP
Aggregation Tariff

Originating Service Providers

Regional Aggregation

Prime ESInet

Regional ESInet x 4

CPE Contract

SIP

Carrier Grade IP Switch

Carrier Grade IP Switch
Next Gen 9-1-1 ESInet Regions Update

Northern Region
7,196,063 Calls / Year
163 PSAPS

Central Region
5,225,059 Calls / Year
110 PSAPS

Los Angeles Region
8,677,850 Calls / Year
79 PSAPS

Southern Region
7,195,801 Calls / Year
89 PSAPS

ESInet Prime

Map Depicts:
- 58 Counties
- 24 CHP Communications Centers (■)
- 4 Defined ESINET Regions plus Prime

All four identified regions shall have the capability to interconnect to all other regions.
Regional Task Force
Meetings Start in March 2018

- Coordinate Region-specific communications structure for feedback and input
- Make procedural decisions for regional ESInet

CA 9-1-1 Branch
- Establish statewide Strategy for ESInets
- Define technical Specifications for Regional ESInets
- Coordinate Stakeholders

PSAPs
- Service user
- Provide input on State provided specifications
- Utilize State provided policies and standards
Next Gen 9-1-1 PSAP Meetings

- July 14 - Bay Area: 57
- July 16 - Sacramento: 57
- July 20 - Northern: 45
- July 21 - Coastal: 17
- July 25 - Los Angeles: 77
- July 26 - Inland: 65
- July 27 - San Diego: 40

Total: 358

During August 2017 – 14 Vendor Meetings
During Sept 2017 – Meetings with 15 Local Exchange Carriers
During Oct 2017 – Working through contracts and funding
Funding Plan

- Near Term (FY 2017/2018)
  - Use fund balance to support Next Gen 9-1-1 deployment

- Long Term (FY 2018/2019)
  - Remove technology specific language from SETNA funding model to establish sustainable funding
## What will it cost?

<table>
<thead>
<tr>
<th>Year</th>
<th>Legacy 9-1-1 Costs</th>
<th>NG9-1-1 Costs</th>
<th>Estimated Total</th>
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<tbody>
<tr>
<td>FY 2017-18</td>
<td>$104,446,000</td>
<td>$10,000,000</td>
<td>$114,446,000</td>
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<td>FY 2018-19</td>
<td>$103,123,384</td>
<td>$25,000,000</td>
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<td>FY 2019-20</td>
<td>$94,441,114</td>
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<td>FY 2020-21</td>
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<td>FY 2021-22</td>
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<td>FY 2022-23</td>
<td>$59,641,114</td>
<td>$97,020,000</td>
<td>$156,661,114</td>
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Procurement Plan

- **Near Term (1 Month)**
  - Tariff Meeting Dec 19, 2017

- **Long Term (1-20 years)**
  - Develop Tariff
  - Use for all 9-1-1 services
Deployment Timeline

- Prime ESInet – June 2018 – June 2020
- Northern ESInet – July 2018 – July 2020
- LA County – Oct 2018 – Oct 2020
- Southern ESInet – Jan 2019 – Jan 2021
- Central ESInet – Mar 2019 – Mar 2021
- All selective routers decommissioned - 2022
CA 9-1-1 Operations Manual Updates

Chapter 3 of Operations Manual
  • Updated to support new CPE Contract
  • Add Hosted Solution
  • Refines Incremental Costs
  • Supports Text to 9-1-1 Deployment for CPE replacement

Chapter 10 of Operations Manual
  • Addresses Text-to-9-1-1 Deployment
  • Text-to-9-1-1 fully deployed by December 2018
## Text to 9-1-1 Status

<table>
<thead>
<tr>
<th>Deployed Counties/PSAPs</th>
<th>Deployed</th>
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</thead>
<tbody>
<tr>
<td>Contra Costa (Richmond, Antioch &amp; Martinez)</td>
<td>3</td>
</tr>
<tr>
<td>CSU Long Beach</td>
<td>1</td>
</tr>
<tr>
<td>Riverside County (partial)</td>
<td>5</td>
</tr>
<tr>
<td>San Bernardino County (includes 2 CHP)</td>
<td>17</td>
</tr>
<tr>
<td>Santa Cruz/San Benito (includes 1 CHP)</td>
<td>2</td>
</tr>
<tr>
<td>Butte (includes 1 CHP)</td>
<td>8</td>
</tr>
<tr>
<td>Los Angeles County Phase 1 &amp; 2 (includes 1 CHP) Public Notification Dec 2017</td>
<td>45</td>
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<tr>
<td>Monterey County (Monterey EC c4 entire Co)</td>
<td>4</td>
</tr>
<tr>
<td>Imperial County</td>
<td>3</td>
</tr>
<tr>
<td>Santa Clara (Sunnyvale DPS, Santa Clara PD)</td>
<td>2</td>
</tr>
</tbody>
</table>

| Summed Deployed Count | 90       |

<table>
<thead>
<tr>
<th>Selected TCC</th>
<th>Count</th>
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<tbody>
<tr>
<td>San Joaquin (Partial)</td>
<td>3</td>
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<tr>
<td>San Luis Obispo County</td>
<td>7</td>
</tr>
<tr>
<td>Merced County</td>
<td>8</td>
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<tr>
<td>Santa Clara (partial)</td>
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<tr>
<td>Alameda (Partial)</td>
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<tr>
<td>Kern County</td>
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<tr>
<td>Shasta County</td>
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<td>Santa Cruz (Scotts Vly PD)</td>
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<tr>
<td>Riverside County partial</td>
<td>2</td>
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<tr>
<td>LA County Sheriff</td>
<td>22</td>
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<tr>
<td>Contra Costa County (Partial)</td>
<td>7</td>
</tr>
<tr>
<td>San Mateo County</td>
<td>12</td>
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</table>

| Summed Selected TCC Count | 81 |

San Bernardino, Monterey, Santa Cruz, and San Benito have held media events

**LA County media event Dec 1, 2017**

**Text – to – 9-1-1 Letter**

As of 10/1/17

<table>
<thead>
<tr>
<th>Submitted letter to FCC</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA County (partial)</td>
<td>4</td>
</tr>
<tr>
<td>Remaining CHP CC’s Statewide</td>
<td>20</td>
</tr>
</tbody>
</table>

| Summed Submitted letter to FCC Count                   | 24    |
Fiscal and Operational Reviews (FORs)

1. The CA 9-1-1 Branch is mandated to monitor all 9-1-1 emergency telephone systems to ensure they comply with minimal operational and technical standards as described in Government Code Section 53115.

2. The Fiscal and Operational Review (FOR) process is an onsite review completed at each PSAP at least once every five years.

3. The Branch completed 33 FORs during the period of May 2017 thru September 15, 2017.

4. Approximately 30 FORs are being scheduled and completed during each quarter of the year – equates to ~ 120/year.
Call Answer Time Letter

• Letter sent to PSAPs if below 85% of calls answered in 15 seconds or less
• Goal of letter is to start collaborative process and provide assistance needed to meet standard
  • We understand that call answer times are influenced by a variety of factors, some of which are beyond PSAP control
  • We understand that staffing is often the biggest obstacle
  • We will work with you to identify the source and develop a solution
• Please contact 9-1-1 Branch if receive letter
• Responses due by Nov 10, 2017
FirstNet: State Plan Review

• California conducted parallel review streams:
  – Technical Advisory Group (TAG) Evaluation
    • Comprised of 22 Members
    • Focused on Reviewing Information in Portal
      – Portal Updates – FirstNet Delivered on time: 9/19/17
      – AT&T Letter – Delivered 2 days late: 9/21/17
      – Answers to 687 Comments - Delivered 3 days late: 9/22/17
      – Official Governor’s Notice – Delivered 10 days late: 9/29/17
  – Subject Matter Expert (SME) Analysis
    • Comprised of SAIC Subject Matter Experts
    • Focused on all data available
FirstNet: Review Working Groups

Group A: Coverage and Deployment
Phasing, Rural, Tribal, and Deployables

Group B: Network Resiliency and Security

Group C: Service Plans, Devices, Operations and Local Control, and Applications
FirstNet: Evaluation Score Results

- Coverage Average Score: 1.9
- Network Average Score: 1.9
- Service Plans Average Score: 2.2
- Overall Weighted Score: 2.0

Scoring Legend

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>5</td>
<td>Exceeds</td>
</tr>
<tr>
<td>3</td>
<td>Meets</td>
</tr>
<tr>
<td>1</td>
<td>Does Not Meet</td>
</tr>
</tbody>
</table>
FirstNet: Opt-In – Not an Option

- Does not guarantee sites will be built to support needed public safety coverage
- Does not guarantee sites will be hardened to public safety grade
- Does not guarantee that applications will support interoperability between all carriers or other systems
- Does not guarantee that user portal will meet stakeholder needs
- Does not guarantee integration of LA-RICS equipment and users
- Does not guarantee a suitable plan for deployables
FirstNet: Opt-Out – Not an Option

• Requires an unrealistic number of subscriptions / connections – over 200,000 primary and 100,000 extended primary users

• Requires almost $3 billion of Spectrum Lease Payments

• Penalties exceed $15 billion if we fail to build radio access network