Interoperability: What it was, What it is, and What it will be

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Emerging Technology Forum
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1920’s - Nation’s First Statewide Land Mobile Radio System
1960’s - Michigan’s 911
1990’s - Michigan’s Public Safety Communications System (MPSCS)
2000’s - Michigan’s LGNET Wide Area Network
2010’s - Cyber Security (Michigan Cyber Range)
2010’s - Next Gen 911
2017’s - FirstNet Network

**Michigan’s Historical Approach**
**MPSCS Evolution**

Voice Interoperability - From One to Many

<table>
<thead>
<tr>
<th>2002</th>
<th>March 2017</th>
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<tbody>
<tr>
<td>8,000 mobile and portable radios</td>
<td>81,264 mobile and portable radios (916% increase)</td>
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<tr>
<td>180 tower sites</td>
<td>248 tower sites (64 sites are locally owned but integrated into the MPSCS)</td>
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<td>6 Dispatch Centers 38 console positions</td>
<td>66 Dispatch Centers (1000% increase) 330 console positions (768% increase)</td>
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<tr>
<td>2 million/month Push-To-Talks (PTT)</td>
<td>12 million/month Push-To-Talks (PTT) (500 % increase)</td>
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<tr>
<td>152 agencies with interoperable voice and data communications</td>
<td>1,576 agencies with interoperable voice and data communications (937% increase)</td>
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Radios Approved for System
5 Mobile Manufacturers = 21 models
7 Portable Manufacturers = 28 models
Remediation Project Phases

- Project will be completed in phases over multiple years from 2015 - 2022
- Minimal impact to users
  - Limited downtime (planned and communicated)
  - Does not impact subscriber radios
- State is funding the $150M project through General Fund Appropriation
Michigan’s Definition of Interoperability

Ability of emergency responders to work seamlessly with other systems or products without any special effort and refers to the ability of emergency response officials/public safety agencies to share information via voice and data signals on demand, in real time, when needed, and as authorized utilizing any number of technology sources such as, but not limited to, 911 services, radio communications, and/or public safety broadband.
Michigan’s forward-thinking strategy

Interoperability

Data services include

• 800 MHz Voice & Data Radio Services
• P25 800 MHz Trunked Paging Solution
• Shared Computer Aided Dispatch (CAD) Solution
• Automatic Resource Location (ARL) System for State of Michigan Agencies
Michigan’s forward-thinking strategy

Voice & Data Interoperability

P25 800 MHz Trunked Paging Solution

- First responder receives in and out of range indication for reliable notification and response
- Simplifies dispatcher process and reduces time needed to send critical messages
- Allows first responders to monitor other MPSCS radio traffic while in route to scene
- Provides a Fire Station alerting and Community Siren Activation using existing MPSCS dispatch infrastructure and eliminates maintenance fees of stand-alone siren control systems
Michigan’s forward-thinking strategy

Data Interoperability

MPSCS Computer-Aided Dispatch

• Currently utilized by 119 state & local agencies
• Operating statewide through 11 dispatch centers
• Managing approximately 420,000 calls for service per year
Michigan’s forward-thinking strategy

Data Interoperability

• MPSCS uses automatic vehicle and resource location systems (AVL/ARL) for state agencies
• Computer-Aided Dispatch ensures officer safety through constant tracking
Public Safety’s Vision

- Provide more reliable capabilities than consumer network
- Deliver service even when network is most likely to be down, congested, or not available
- Handle intricate and dynamic priority management required by Public Safety operations
- Manage and deploy security and resiliency on all levels required to meet First Responder, mission critical needs
- Allow controls by multiple entities such as national, state, regional, local and tribal agencies
- Address needs for coverage beyond commercial footprints
Internet of Things

• Today’s consumer devices = tomorrow’s service delivery solutions for public safety
• Odd today is normal tomorrow
• Your ideas are the foundation for change in public safety and for consumers
• Security risks and challenges
Questions

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