Current Projects

- Statewide Interoperable Communication Grant Round 3
  - Microwave Network
  - Interoperable Radio System
- Tappan Zee Interop System
- Guard Hill Refurbish
- BIT 32 Trunk System Replacement
National Interoperability Systems

• FCC Designated Frequencies
  – LFIRE4D
    • 45.88 MHz Simplex (County to County Comms)
  – VTAC
    • 12 Channels Authorized
    • WC building 3 Channel, Countywide System
  – UTAC
    • 4 Channels Authorized
    • WC operating a 3 Channel, Countywide System
  – 7TAC (Digital only)
    • 32 Channels Authorized
    • WC Future Construction
  – 8TAC
    • 8 Channels Authorized
    • No Construction Plans
Statewide Interoperable Communications Grant
SICG Round 3

• Funding
  – NYS Division of Homeland Security and Emergency Services (DHSES)
  – DES obtained award of $5,991,125.
  – Completion Required by December 2014, with Extension to December 2015.

• Scope
  – Implement a Microwave Network as backup to Lightpath Fiber Network
  – Implement a First Responder Communication System via the VTAC National Interoperability Channels
  – Establish Connectivity among Westchester, Rockland, Putnam, and Orange Counties

• Status
  – Preliminary Requirements and Budgets Developed in September 2013
    • Microwave Network
    • VTAC System
  – Project Plan Developed to Combine Project Management of SICG and BIT32
    • Established Steering Committee and Project Team
    • Identified Critical Items
  – Working with a Prospective Vendor to Refine the Project’s Scope and Cost
    – Revised Proposal due Oct 20, 2014

• Renew and Extend Agreements with Site Owners
  – Adams Lane, Fox Lane, Mt Lakes, Wilmot Road, Maryknoll, Benefield Blvd, Summit Avenue
Notes:
Guard Hill: Deliver equipment only. No installation is required.
Each colored block represents a single channel station
VCALL and the Grasslands P-25 Control station connectivity is dependent on the proposed SKG microwave links, if the links are not available then TBD Lightpath circuits to Grashands and Grasslands to DPS HQ.
MVDO:
Plan A: Install the 4 base stations shown here in the room that will be remodeled by the County. Motorola will make the finished room ready for, and install the equipment all per "R-56".
Plan B: Install the equipment shown in the exterior cabinets as planned on the site walk (Exclude VTAC 37 and VCALL Connectivity TBD)

<table>
<thead>
<tr>
<th>Stations</th>
<th>VCALL</th>
<th>P25</th>
<th>VCALL-V</th>
<th>VCALL-RX Only</th>
<th>VTAC 36</th>
<th>VTAC 37</th>
<th>UTAC 42/43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adams Lane</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Dunwoodie</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Grasslands</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Guard Hill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mountain Lakes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mohansic</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MVDO</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Peekskill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPS FC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPS HQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Proposed Final VCALL-V/UTAC System Map
Rev 0.4.0 08-28-2014 Bob Wilson
Tappan Zee Bridge Interop System

- Waiting for Approval from TZ Construction
Guard Hill

• Relocate DES Fire & EMS Radios from NW Hospital
  – Obtain Better Coverage for Fire & EMS
  – Eliminate Tie Line Charges
• DPW Retained Tectonic Engineering for Site Design
• Bedford & County Signed a Short Term Agreement for Site Access
  – Tectonic Engineering
  – County
• Statement of Work
  – Replace Existing Tower
  – Replace Generator
  – Add Automatic Transfer Switch and New Electrical Panels
  – Add Antennas
  – Relocate Radios from Hospital
• Current Status
  – DoIT Completed Project Plan and Procurement Specifications
  – Tectonic Completed Preliminary Drawings
  – Tectonic Agreement Amended to Extend Duration
  – Construction Date Not Set
Near Term Challenges

- Most Radio Infrastructure Will Reach End of Life DEC 2018
  - Fire/EMS/DOT UHF Trunk System
  - 60 Control Dispatch/ Paging System
  - County Police Dispatch and Interop System (F1/F3)
  - Transportation CAD/AVL System
- T-Band Frequencies will be withdrawn in 2023
  - Current Law Says All Public Safety Must Vacate These Frequencies
  - 11 Metropolitan Areas
- Paging System Modernization and Expansion
Fire, EMS, DOT Radio System Replacement (BIT 32)

* Approved for $30M Over 5 Years
  * Fire/EMS/Transportation UHF Trunk System
  * 60 Control Dispatch/Fire Paging System
  * County Police Dispatch and Interop System (F1/F3)
  * Voice Portion of Transportation CAD/AVL System

* Interdepartmental Management
  * DES
  * DPS
  * DPW&T
  * Law
  * Parks
  * Finance
  * Planning
  * DoIT (Project Management)
Replacement System
Technical Considerations

• Public Safety Standard is P25 Digital Radio
  * Uses Internet Protocol (IP) for Inter-site Connectivity
  * IP Carried on Lightpath Fiber with Microwave as a Backup
• 700 MHz P25 Trunk Radio System
  * 20 Frequency Pairs Licensed for County Use (10 North & 10 South)
    * Two Talk Channels per Pair
    * 36 Channel Equivalent (Two Channels are Control)
  * Mobile In-Street Coverage Requires Additional Sites
  * Handheld In-Building Coverage Requires Many More Sites
• 470 MHz Trunk UHF (T-Band) P25 Radio System
  * 12 Frequency Pairs Licensed for County Use (6 North & 6 South)
    * Two Talk Channels per Pair
    * 20 Channel Equivalent (Two Channels are Control)
  * Mobile In-Street Coverage with Existing Sites
  * Handheld In-Building Coverage Requires Additional Sites
• Fire Ground Frequencies Remain Unchanged
Replacement System Logistical Considerations

- **FCC Licensing**
  - 700 MHz May Need Relicensing
  - UHF Expansion (If Congress Reconsiders the Law)

- **Site Acquisition**
  - Site Selection
  - Public Hearings
  - Site Owner Agreements

- **Site Construction**
  - Vendor Selection
  - Permitting
  - Environmental

- **System Implementation**
  - Vendor Selection
  - System Design
  - Installation & Testing
  - User Migration

- Current Trunk System Took Over Seven Years to Design & Implement
Next Steps

* Steering Committee and Project Team Established
* Public Safety Consultant To Be Hired
  * Analyze External Influences
  * Analyze Current & Future County Radio Needs
  * Make Recommendations
  * Prepare Request For Bid
* Agreements with Site Owners
* Evolution of Ground Ops Channels & Paging