



CASE STUDY

MEGACENTER SYSTEMS UPGRADE & MAINTENANCE

New, networked telephone and voice recording systems solution at four MegaCenters



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WWW.COMMDEX.COM ◆

◆ CALL
(770) 349-0400 ◆

◆ EMAIL
SALES@COMMDEX.COM ◆



CUSTOMER

The Federal Protective Service protects over 9,000 Federal Facilities, their occupants, and visitors by providing superior law enforcement and protective security services. FPS has four MegaCenters that monitor multiple types of alarm systems, closed circuit television, and wireless dispatch communications within federal facilities throughout the nation. These centers—located in Michigan, Colorado, Pennsylvania, and Maryland—are equipped with state-of-the-art communication systems and are in operation 24 hours a day, 7 days a week. These MegaCenters provide responses to over 534,000 calls for service annually.



BUSINESS SITUATION

FPS had a need for the upgrade and maintenance of a new networked telephone and voice recording systems to replace the legacy systems located at its four (4) MegaCenters. The FPS MegaCenters are in operation 24 hours a day, 7 days a week (24x7). The MegaCenters monitor closed circuit televisions (CCTVs), answer emergency and non-emergency calls, and dispatch appropriate resources to federal facilities nationwide.

The Solution

As a prime contractor, Commdex developed a new engineering design that incorporated an all IP network that would connect the four MegaCenters together into a single unified voice system architecture over a new Layer 2 MPLS network, integrating these facilities on a common voice network serving nearly 300 operators across all the centers.

Additionally, Commdex did the following:

- Developed an IT Security Plan to protect the infrastructure against growing cyber-security threats.
- Provided a new IP networked logging recorder system to not only archive recordings for future retrieval, but also to provide operators with immediate playback of current or recent calls, allowing them to capture critical information as calls come in from incidents.
- Is providing ongoing operations and maintenance of the systems at all four MegaCenters.



PROJECT HIGHLIGHTS

- Replacement of voice communications systems at FPS MegaCenters across the country
- System design, integration, maintenance and training
 - Over 300 operator positions
 - Security Plan/Architecture
 - Fully redundant WAN connectivity between the centers across the country
 - Replace VoIP and Logging systems
 - Integration with administrative phone systems and 3rd party workstations
 - 24/7 system & network maintenance

HIGH QUALITY NETWORK BUILDOUT

After contract award, Commdex conducted a detailed site survey at each of the FPS Mega Centers to determine the locations for the new telephone systems, digital and analog ports, and demarcation points to connect to the Centracom Gold Elite system and future planned MCC7500 consoles. These surveys finalized detailed equipment list, demarcation points for NICE and telephone systems, cable routing, signal and power requirements, equipment racking, and product placement details, as well as any special instructions for installers.

CommDEX then reviewed existing legacy systems for all four MegaCenters and analyzed the information gathered during the site surveys to produce new installation plans. These plans determined the detailed implementation plan and scope for the necessary work effort for each Mega Center. Commdex held a Critical Design Review (CDR) of the proposed new telephone and voice recording systems to verify and finalize agreement on the overall system design, base implementation plan, and deliverables. Commdex provided the design documents to FPS for its review and approval.

CommDEX installed all equipment based upon the agreed-to-installation plans with FPS during the Design Review. All equipment and associated cabling was installed to Motorola's R56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, and FCC standards and regulations. Upon completion of installation, Commdex will perform final site quality audits to verify proper physical installation and operational configurations of each individual site.

SYSTEM INTEGRATION EXPERTISE

CommDEX provided systems integration services to the FPS to plan, design, and implement a new Voice over Internet Protocol (VoIP) system, along with voice recording system over a new wide area network (WAN) provided by CommDEX that interconnects four major FPS MegaCenters via layer-2 MPLS network established by CommDEX. The scope of work included development of the system's IT Security Plan, Local Area Network and VoIP system design for the computer terminals at each MegaCenter, including software programming, optimization, testing oversight, user training and acceptance.

INTEGRATED VOICE LOGGING RECORDER SOLUTION

CommDEX's solution included a voice logging recorder system that was fully compliant with RFP requirements. The NICE recording system was based on the innovative NICE Inform suite of applications and the NICE Recording Express (NRX) servers to record the new OpenTouch VoIP phone system and radio traffic. The audio is retrieved, reconstructed, and played back using the NICE Inform application suite. The audio system can integrate with third-party systems to capture the interaction content, as well as its related metadata. The system for the FPS Enterprise Network consists of the following components:

1. Redundant NICE Recording Express servers at each Mega Center (8 total)
2. NICE Inform System which includes primary and resilient Inform servers (4 total)
3. Administrative Applications (68 combined applications licenses)
4. Archiving and Offline Storage devices at each Mega Center (4 total)
5. Alarm Monitoring and Administration SNMP manager at each Mega Center (4 total)
6. Playback workstations running NICE Inform client Applications (Philadelphia: 14, Denver: 10, Battle Creek:12, Suitland: 10)

COMPREHENSIVE MAINTENANCE PACKAGE

CommDEX is currently providing a comprehensive maintenance package for FPS to cover all aspects of the telephone and logging system.

- **Emergency Maintenance:** Our Dispatch and On-Site Infrastructure Response services are designed to efficiently dispatch a trained and qualified technician to diagnose and restore the communications network. Following a quality audited response and restore process, Dispatch initiates the call to arrange for a qualified technician to arrive on site. An automated escalation and case management process documents the successful arrival of the technician and ensure that the system restoration complies with all contracted response times.
- **Preventive Maintenance:** Network Preventive Maintenance detects potential issues before they have a chance to cause malfunctions or operational interruptions. Once per year, a trained technician measures, records, aligns, and adjusts the equipment to meet original manufacturer's specifications.



SOUND PROJECT MANAGEMENT

Commdux leads a team of 30+ technical resources, in the fields of network design, emergency communications, telephony, voice recording and dispatch solutions, to replace the legacy systems at the four FPS MegaCenters that are providing services in support of this contract. The Commdux Project Manager leads the systems integration services to the Federal Protective Services (FPS) to plan and implement a new Voice over Internet Protocol (VoIP) system with along with voice recording system over a new wide area network (WAN) provided.

COMMDEX

Commdux has been serving the needs of telecom clients since 2001. Commdux is an Atlanta based minority owned telecommunications integration firm with experience in over 40 states nationwide to meet customer needs anywhere. Capabilities include turnkey system installation and implementation, network management, technology selection and expertise in Microwave/MPLS, Fiber/SONET, LMR, Mobile Applications, 4G WiMAX/LTE Broadband, etc. Other company capabilities include program management, engineering (wireless, cellular, mobile handsets, etc), IT, Staff Augmentation, and Administrative Services.

For more information about Commdux, go to www.commdex.com

For More Information

For more information about Commdux's products and services, call Commdux Sales at (770) 349-0400 or via email at sales@commdex.com

For more information about the Federal Protective Service, visit the website at: <https://www.dhs.gov/topic/federal-protective-service>

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