Technology in Airport Operations Centers: Integrated Operations Centers and Emerging Trends

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About the Presenter

- Over 30 years industry experience
- 14-year BICSI member
  - RCDD (2006)
    - Design
    - Project Management
    - Construction Management
    - Commissioning
- Project Experience
  - Transportation
    - Light Rail
    - Airports
  - Data Centers
  - Government/Military
Faith Group drives client success by partnering with clients to deliver thoughtful, innovative and specialized planning, design, and program support related to technology, security, and building systems.
Today’s Modern Airports

- High Traffic Environments
- National and International Gateways
- Local and National Responsibilities
- Transportation Hubs
  - Light and Heavy Rail
  - Metropolitan Bus Centers
  - Rental Car Centers
Airport Security Operations

- Communications Center/PSAP
- Security Operations Center
- COM Training Center
- AVSEC (Aviation Security)
- EOC (Emergency Operations Center)
Communications Center/PSAP

- E-911 PSAP
- LETS/JIS/NCIC
- PD Dispatch
- PD Traffic
- FACP Monitoring
- FD Monitoring
- ATC Tower Hotline

- CAD System
- CCTV Monitoring
- ACS Monitoring
- Radio Monitoring
- Crash Alarm
- Airport Paging
- Announcements
Security Operations Center

- CCTV Monitoring
- ACS Event Reporting (ACE)
- PD Coordination/Support
- PIDS (Perimeter Security)
- TABS Credentialing
- PSIM
Communications Training Center

- E-911 Operation
  - AT&T Vesta
  - Radio Dispatch
- CAD Training
  - CAD
  - LETS
  - JIS
  - NCIC
AVSEC (Aviation Security)

- General Management of AVSEC
  - Surveillance (CCTV)
  - Perimeter Security (PIDS)
  - Portal Security (ACS)
  - Facility Security
  - Public Safety
  - Aviation Assets Security
  - Cyber Security
  - CBP / FIS / ICE
The EOC is activated in the event of any qualifying emergency to either prepare for an event or to address emergency conditions once an event has occurred:

- Aircraft Emergency
- Terror Event
- HazMat Event
- Weather Event
  - Storm
  - Earthquake
EOC: Active Participants

- **Airport Operations**
  - Airport Facilities and Maintenance
  - Airport General Operations
  - Airport Comm Operations
  - Airport Security Operations
  - Airport Ground Operations
  - Airport Ground Transportation
  - Airport Gate Management
  - Airport Public Relations
EOC: Active Participants

- **Local Authorities**
  - Police Department
  - PD SWAT
  - PD Hostage Rescue Team
  - Counter Terrorism
  - Fire Department
  - Mayor’s Office/Administration
  - County Administration
  - Public/Media Relations
EOC: Active Participants

- Federal Authorities
  - FAA/NTSB
  - FCC
  - FBI/HRT
  - Homeland Security/TSA
  - FEMA
  - US Navy/Coast Guard
  - Air National Guard
  - US National Response Team
  - Central Intelligence (CIA)
  - Dept. of Defense
  - Dept. of Energy
  - Dept. of Justice
  - State Dept
  - .......
Emerging Trends

• Movement towards Integrated Facilities (AIOC)
  – Communications (PBX, Courtesy, Paging, Radio, etc...)
  – Aviation and Facility Security
  – Operations/Maintenance
  – Safety (PSAP, Police, Fire, Other Response Organizations)
  – Operations Transportation (Airside operations, Carrier services)
  – Public Transportation (Traffic, Rail, etc...)
AIOC: Design Considerations

• **Flexibility in Technology Support**
  – Agency Operations (secure and non-secure VPN)
  – Shared Resources (multi-input Video Displays)
  – Security (restricted and sensitive information)
  – Emergency Notifications (radio, audio, visual)
  – Power availability (laptops, projectors, etc...)
  – WiFi?
  – DAS?
AIOC: Design Considerations

- **Challenges to Consider**
  - Structure
  - Infrastructure
  - Survivability
  - Technology
  - Logistics
  - Territorialism
  - Politics
AIOC: Design Considerations

- **Structure**
  - Raised Floor?
  - Ceiling Height
  - Air Circulation
  - Windows?
  - Colors
  - Hardening
AIOC: Design Considerations

- **Infrastructure**
  - Pathways
  - TR/ER Space
  - Workstation Type and Layout
  - Fields of View
  - Workstation Storage for multiple PCs
  - Workstation Storage for Radio equipment
  - Workstation Storage for Specialized Servers
AIOC: Design Considerations

- **Facility Survivability**
  - Far from active aircraft operations
  - Hardened Facility
  - Limited Public Access
  - Parking for EOC Activation
  - Backup Generator / UPS
  - Failover CRACs
AIOC: Design Considerations

• Technology
  – Different Groups = Different Technology
  – Sensitive Security Information (SSI)
  – Network Segmenting / Separation
  – Agency Standards
  – Emerging Technologies
AIOC: Design Considerations

• Logistics
  – Local Operation and Remote Facilities
  – Physical and Electronic Visibility
  – Integration of Dissimilar Feeds
AIOC: Design Considerations

- Territorialism
  - Operational Group Dynamics
  - Reporting Structure
  - Turf Battles
AIOC: Design Considerations

- **Politics**
  - Airports are highly-political environments
  - Segmented budgets may impact technology
  - Local and Federal jurisdictions may overlap
  - Shared resources = Shared control
AIOC Implementation

• **Migration Planning**
  – Technology Assessment
  – Hardware Inventory
  – Licensing
  – Compatibility
  – CONOPS
AIOC Implementation

• Migration Planning
  – Impact Review
  – Migration Schedule
  – Resource Planning
  – Agency Coordination
  – Badging/Credentialing
AIOC Implementation

- **Training**
  - Some systems may be new
  - Coordinate with Operator schedules
  - Coordination with vendor trainers or
  - Train-the-Trainer
AIOC Implementation

- **Migration Coordination**
  - After-hours or phased during normal operation?
  - Security Coordination
  - Avoid outage during cutover and
  - Create and publish a fallback plan
AIOC Implementation

- Commissioning and Validation
  - Publish a Commissioning Plan
  - Hardware and Software Validation
  - Test Scripts
  - Checklists
  - Test Expectations
  - Punch List
  - Final Report
AIOC: Summary

• Successfully Moving towards Integrated Facilities
  – Required: A comprehensive view
  – Required: Specialized facility design
  – Required: Overall design expertise
  – Required: “Out-of-the-box” thinking
  – Required: Specialized Technology
  – Required: A Qualified BICSI RCDD!
Thank You

Faith Group

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