



Cisco Physical Security Vision



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“ ...the physical security environment has been dominated by analog, stand alone control systems with **limited interconnectivity**, digital **communications**, or **integrated management capability.**”

Trends 2007: Physical and Logical Security Convergence
Forrester Research

Traditional Safety and Communication Systems

Access—
Buildings



Monitoring



Alarms



Paging



Video



Voice

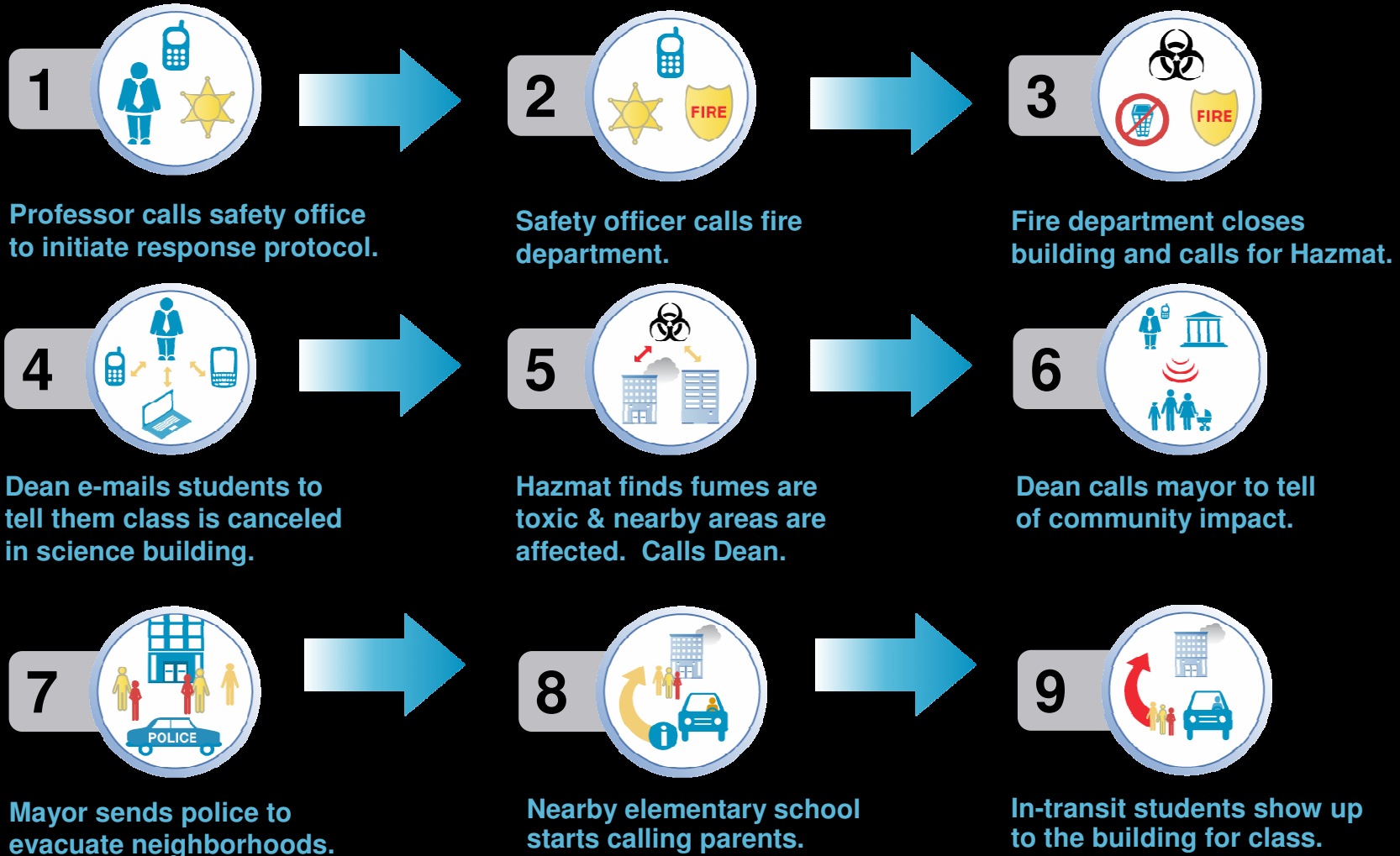


Radio



Example: Safety Incident w/ Traditional Systems

Chemical spill at College Science Building Sends Fumes in the Air



Traditional Systems Response



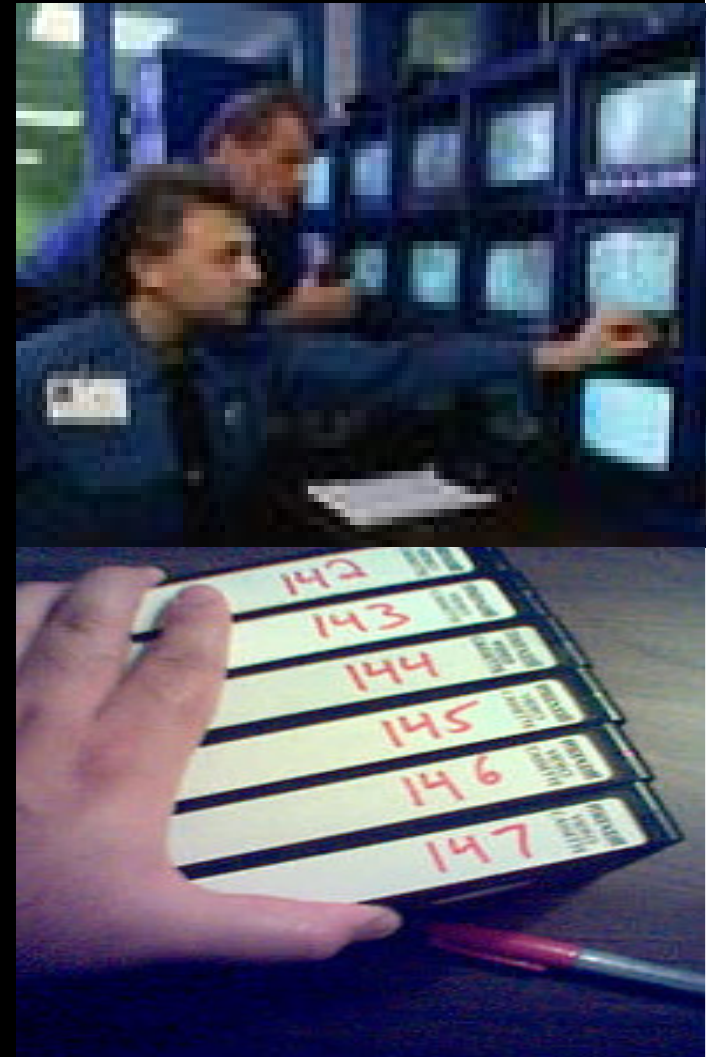
**Actions
are linear**

**Communication
and decision
support
systems are
independent**

**Relies heavily
on human
intervention**

Pain of Traditional CCTV...Limited Accessibility, Mobility

- ✦ Central station access only
 - No remote access
 - No on-scene collaborative access
- ✦ Investigation delays
 - Locate tape in archive
 - Ship from remote location
 - Review hours of video



Additional Convergence Drivers



IP-based physical security technology **takes advantage of existing network infrastructure**

Leverage network security features that authenticate users
Monitor rogue behavior
Implement **policy-based responses**

Industry groups are establishing technical **interoperability standards** between physical security systems and IT

Converged Systems

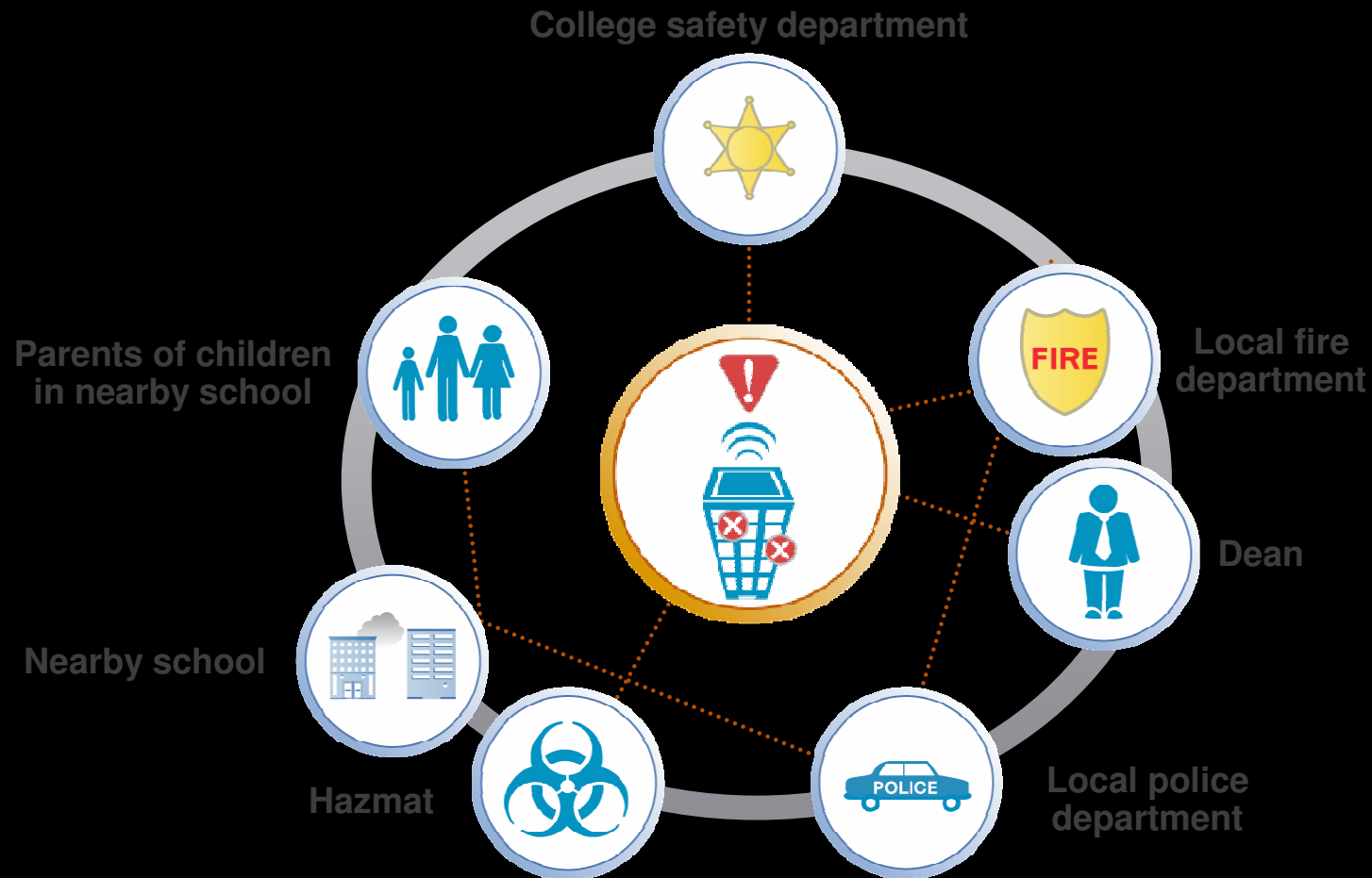


“ Convergence is not about the unification of security into one environment, but about **collaboration** between environments.”

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Safety Incident: Converged Systems

Chemical Sensors Note Incident in College Science Building and Trigger Notifications via Multiple Mediums



Converged Systems Response



**Actions occur
in parallel**

**Communication
and decision
support systems
are connected and
trigger policy-
related responses**

**Less dependent
on human
intervention**

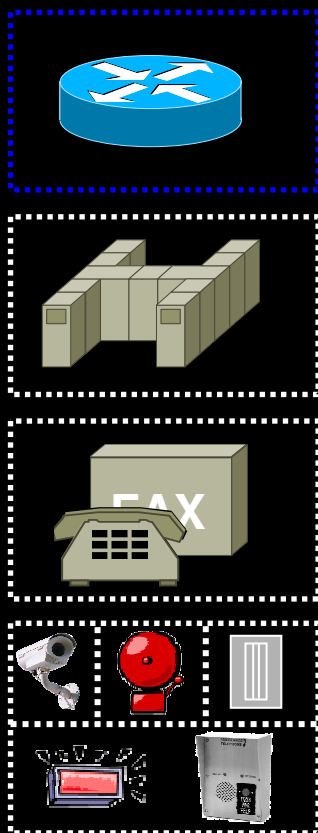
Comparison of Legacy vs IP-based Video Surveillance Systems

	Analog	IP
Wired and wireless cameras for anytime, anywhere surveillance on campus		✓
Video recorded digitally for immediate access, enabling real-time incident response, investigation, and resolution on campus		✓
Control and monitoring can be transferred to any other point on the network		✓
Feeds can be digitally monitored to detect and flag incidents		✓
Supports existing analog cameras or newer, IP-based cameras		✓
Flexibility to add sensors and apply analytics		✓
Network keeps operating, even if one link or switch goes down		✓
Every device can be continuously monitored, and an alarm raised if anything fails		✓
Open, standards-based infrastructure enables deployment of new security applications and maximizes value of total system		✓
Lowest total cost of ownership		✓

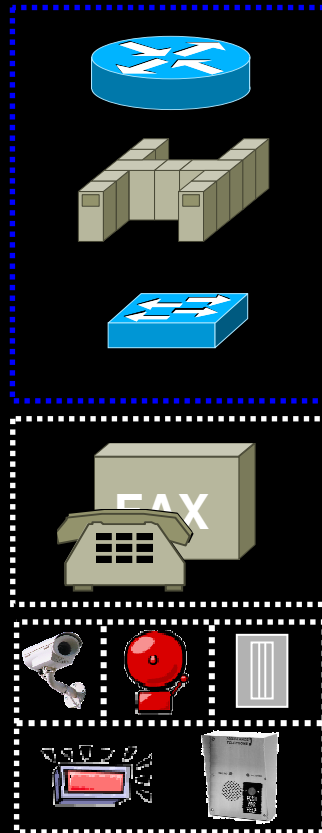
Cisco is experienced with Convergence

Waves of Convergence

1980s



1990s



2000



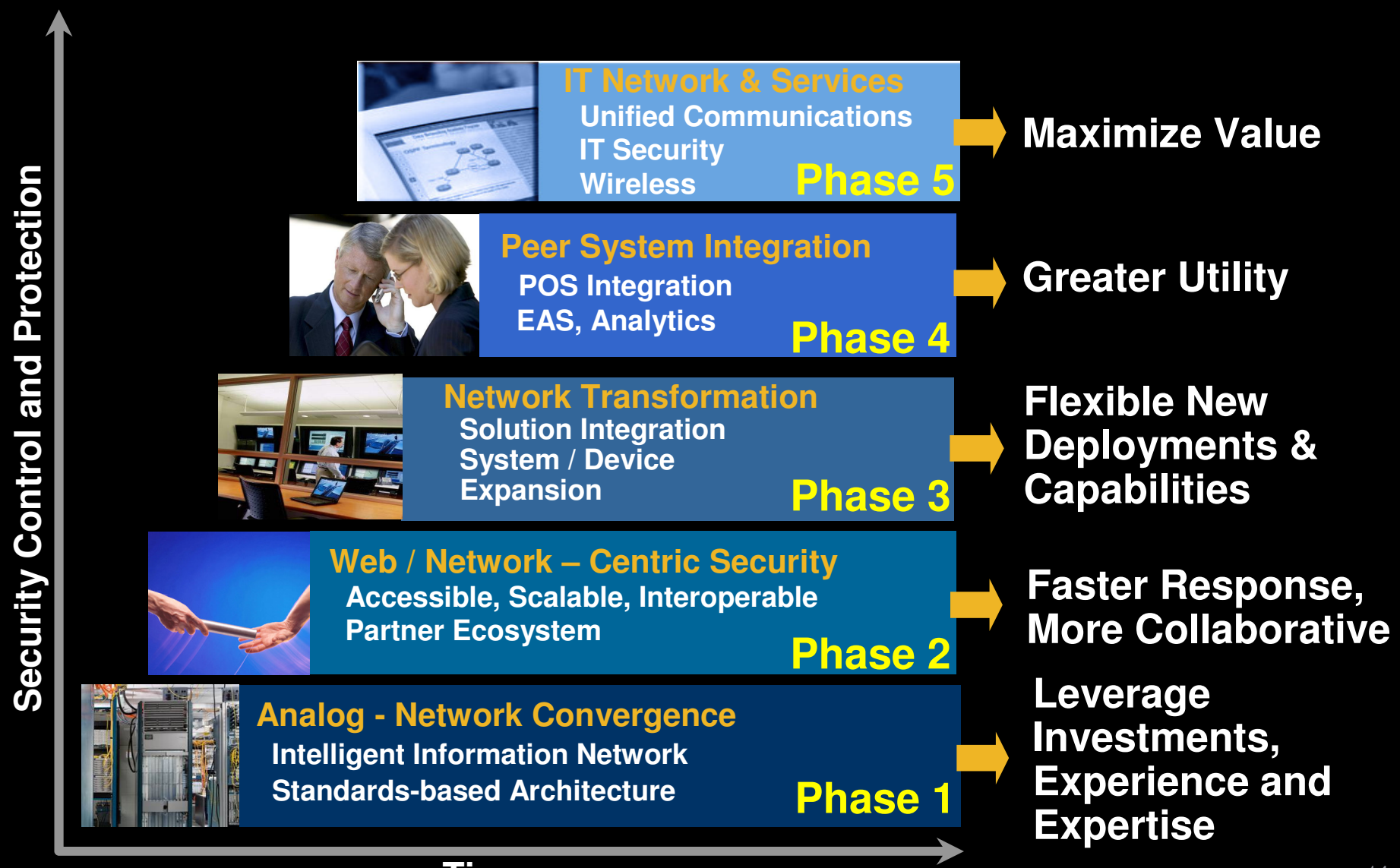
Today



Network Consolidation

Cisco's Vision for Safety and Security

Delivering the Intelligent Converged Environment

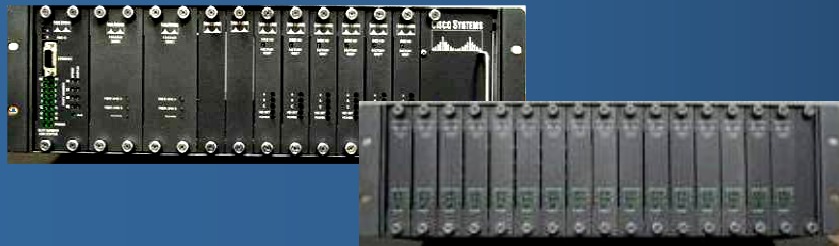


Analog – Network Convergence

Cisco Stream Manager



IP Gateways



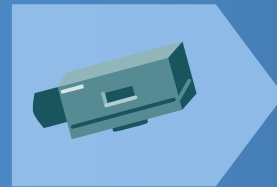
Convergence Chassis



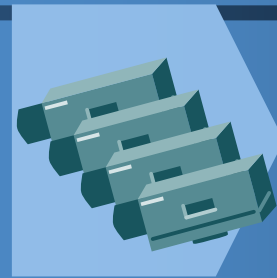
Integrated Services Platforms



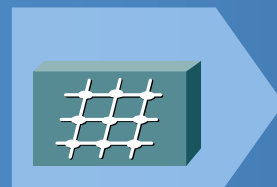
Services Platforms



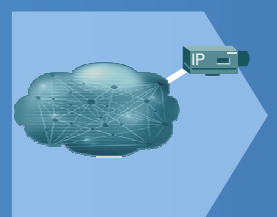
- ▶ Video Encoding / Decoding
MPEG 4 DSP / ASIC-based
1 and 4 port
Protects Investments



- ▶ Video Aggregation & Switching
GE and FE Network or USB
Up to 64 ports / 3RU chassis
Compact Manageability



- ▶ Hybrid Analog / Network Recording
Matrix Switch Interoperable
Smooth Migration



- ▶ Network Video Recording and Archival
JBoD, RAID5
Fiber Channel, SCSI
IT-Caliber Storage

Web/Network – Centric Security

Cisco Video Surveillance Manager Solution



Cisco IP Video Surveillance Camera 2500 Series

- Cisco Standard Definition IP Cameras
 - Wired Power over Ethernet (POE)
 - Wireless 802.11b, g, n
- Cisco Design for Physical Security Camera – Not just web cams
- High Quality, Excellent Video Images – On Par with Analog Cameras (NTSC, PAL)
- Fully Featured - Day/Night, Audio, Contacts, Alarms
- One camera suitable for many applications – Indoor/Outdoor Variable Lighting
- Networking Features



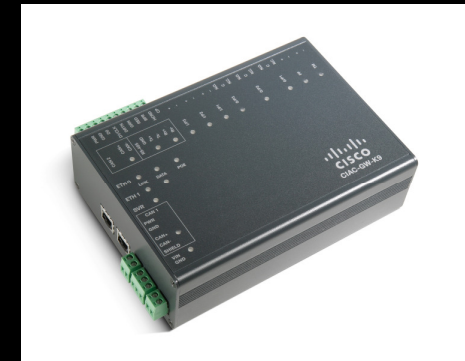
Camera shown with optional DC auto iris lens, available separately

Cisco Access Control

- Hardware:

Cisco Access Gateway controlling a door

Additional modules for readers, inputs and outputs can be connected to the Access Gateway via a CAN bus

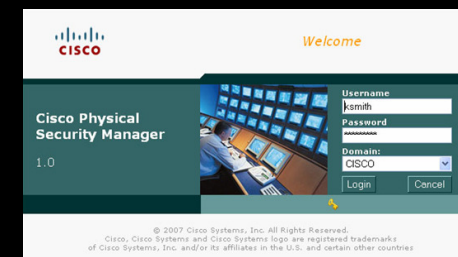


- Software:

Cisco Physical Access Manager (Cisco PAM): Enterprise class Management application with rich interfaces to IT applications and Identity stores.

Web interface to Gateway for local management and monitoring

Enterprise Application Integration Studio for IT integration



Cisco IPICS Facilitates Coordinated, Interagency Response for Emergency and Everyday Use



IPICS Server

- Dynamic resource management
- RMS
- Centralized management
- Ops view
- Web interface
- Activity logging
- Database backup/restore
- User roles
- Licensing



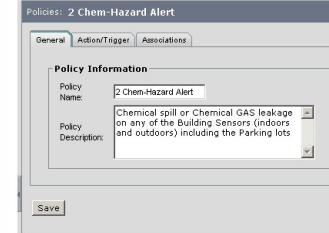
IP Phone Client

- Enables push-to-talk
- Extends voice reach
- Channel communication
- Situational awareness
- Notification broadcast



PMC Client

- Multicast/unicast
- Offline/disaster mode
- DTMF
- PTT keyboard mapping
- Cached channel settings
- Multiselect for transmit
- Disable user feature



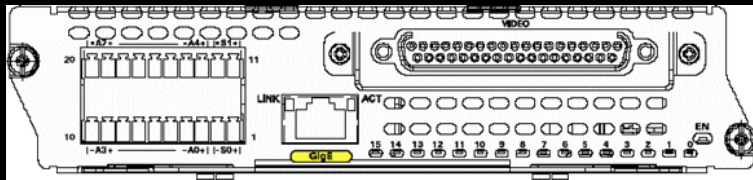
Policy Engine

- E-mail/SMS/pager alerts
- Force mute/unmute/logout
- Policy automation
- Telephony interface
- SIP interoperability (Cisco CallManager/Call Manager Express)

Network Transformation

Cisco Integrated Video Surveillance

The Cisco Integrated Video Surveillance Solution provides a cost effective way to deploy globally accessible surveillance to your remote sites



Integrated Analog Video Gateway



Integrated Video Management and Storage System

- ***EVM-IPVS-16A: Analog Video Gateway***

Offers analog video interface for IP Video Surveillance Solutions

16 Analog Video Ports: MJPEG, MPEG-4, H.264

8 Contact Closure Ports

2 RS-485 ports for device Pan/Tilt/Zoom control

- ***Integrated Video Management and Storage System***

Targeted at <32 stream (camera) deployments

Utilizes pre-packaged **VS Operation Manager** and **VS Media Server**

Manage, view and archive surveillance data for up to 32 devices simultaneously

Unified interface into IP Cameras and Analog devices (through the AVG)

Key Benefits

Single Box Solution for UC and Surveillance

Remote access to surveillance data for alarm/event validation

Wireless / Mobile Video Surveillance



Integrated, Rugged Video Surveillance + Data Communications

- More Effective Use of Data
- Efficient use of Network resources
- Shared Information in Real Time
- More Cost Effective Deployments
- Integration with other sensor applications

Best in Class Wireless Networking

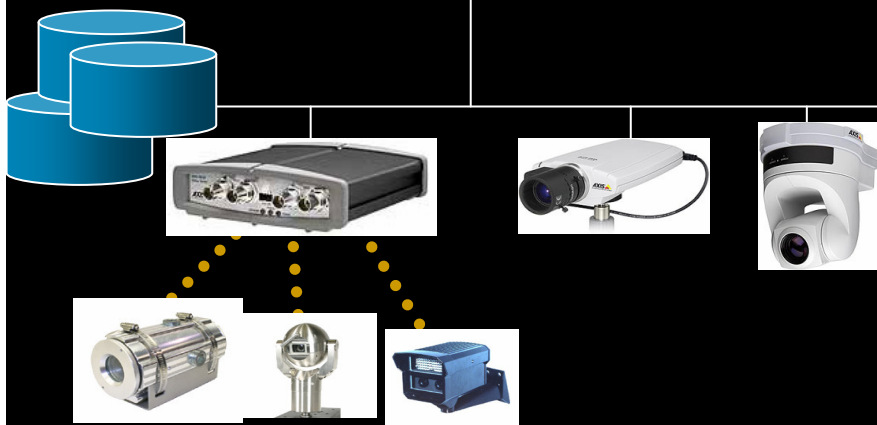
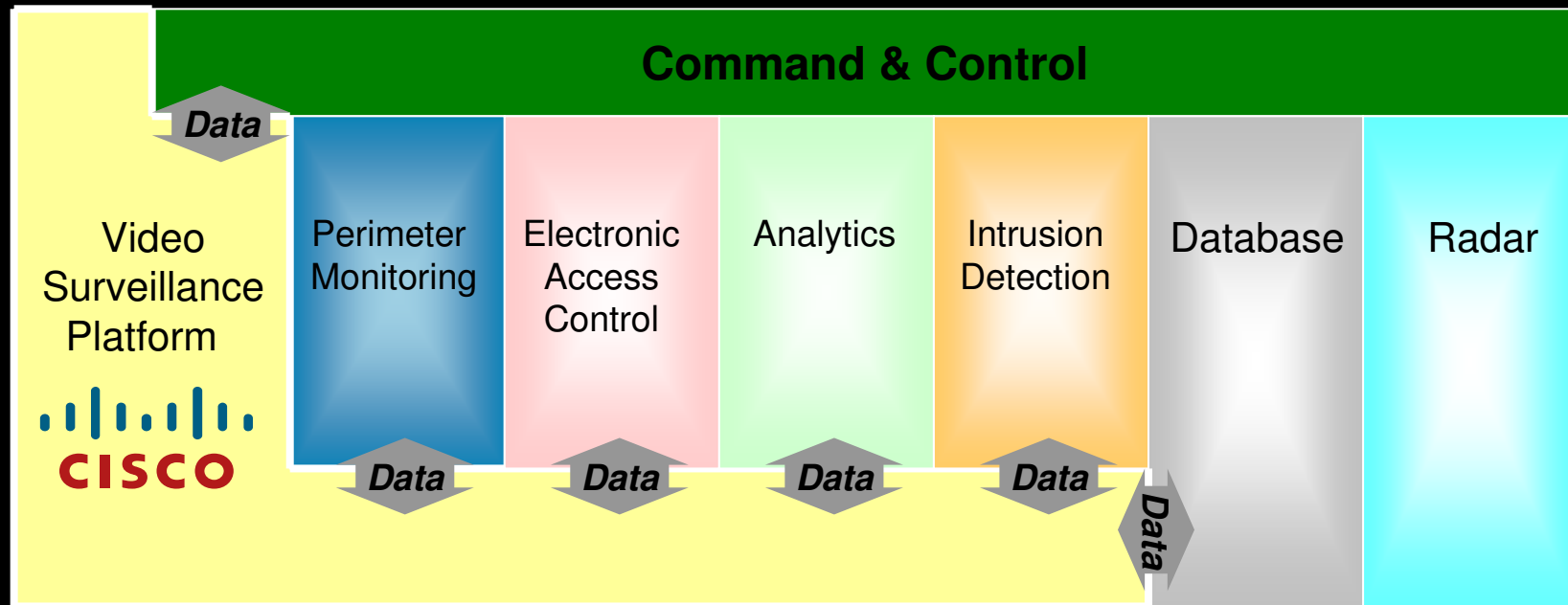
- Wireless Mesh Architecture
- Support for Multiple Wired & Wireless Backhuls
- Multicast & QoS
- Multiple Layers of IP Security

Full-featured Video

- Interoperability with Analog & IP Cameras
- Flexible compression codecs
- Integrated Video Analytics options

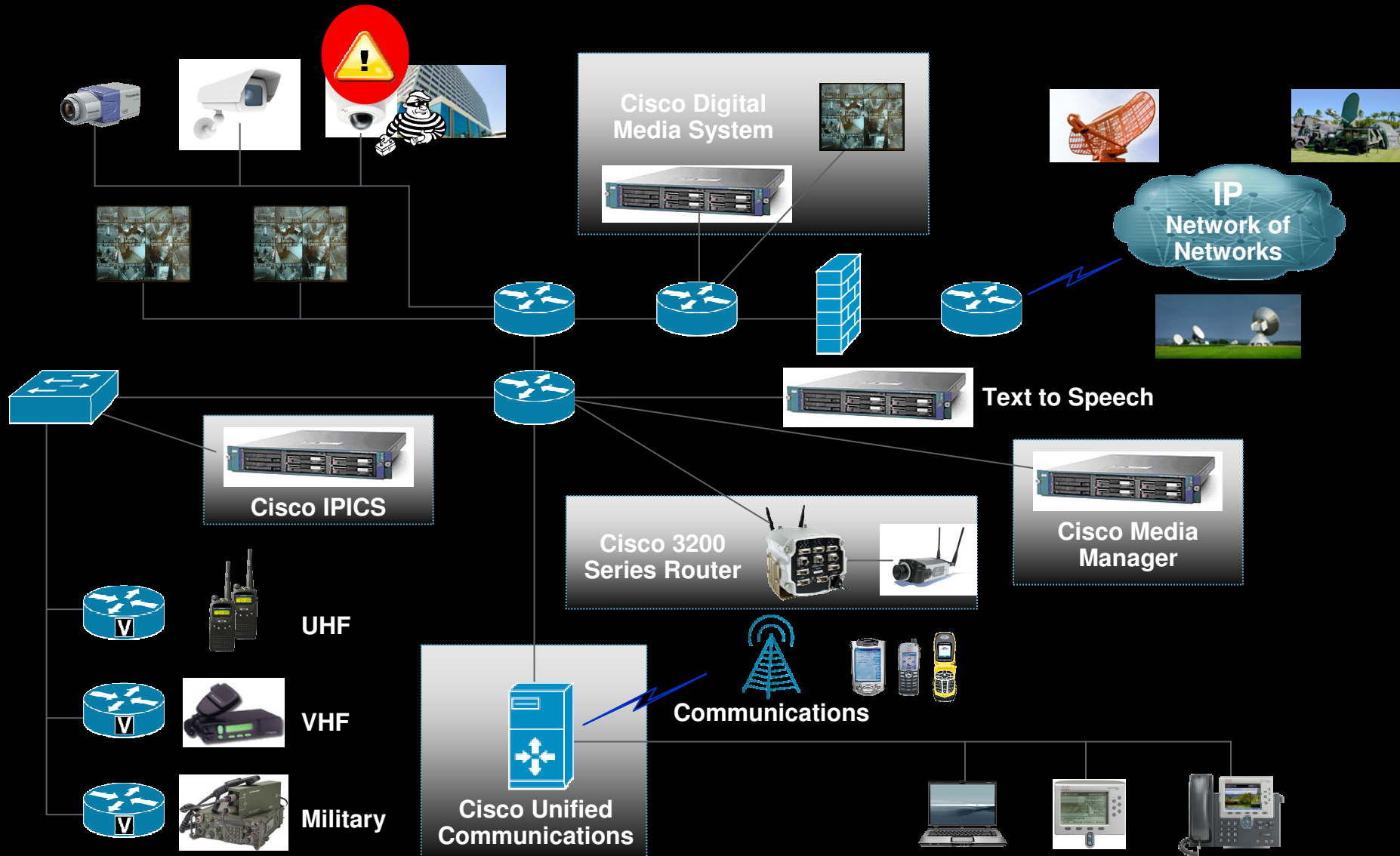
Peer Systems Integration

Open Architecture “Enables” other App’s

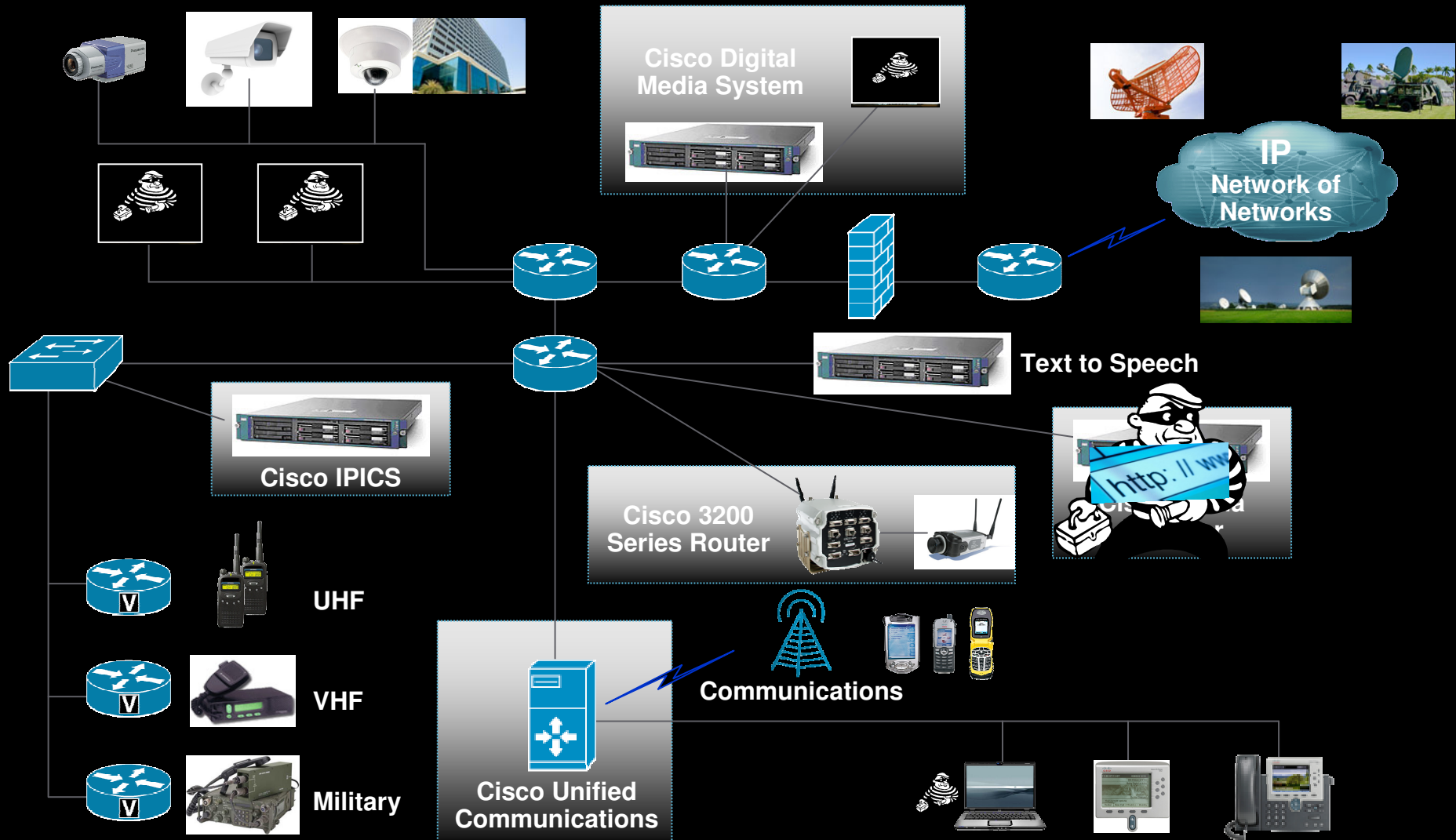


- Digital Video enables other applications
- Need to deliver different video for different applications
 - Viewing; analysis, storage

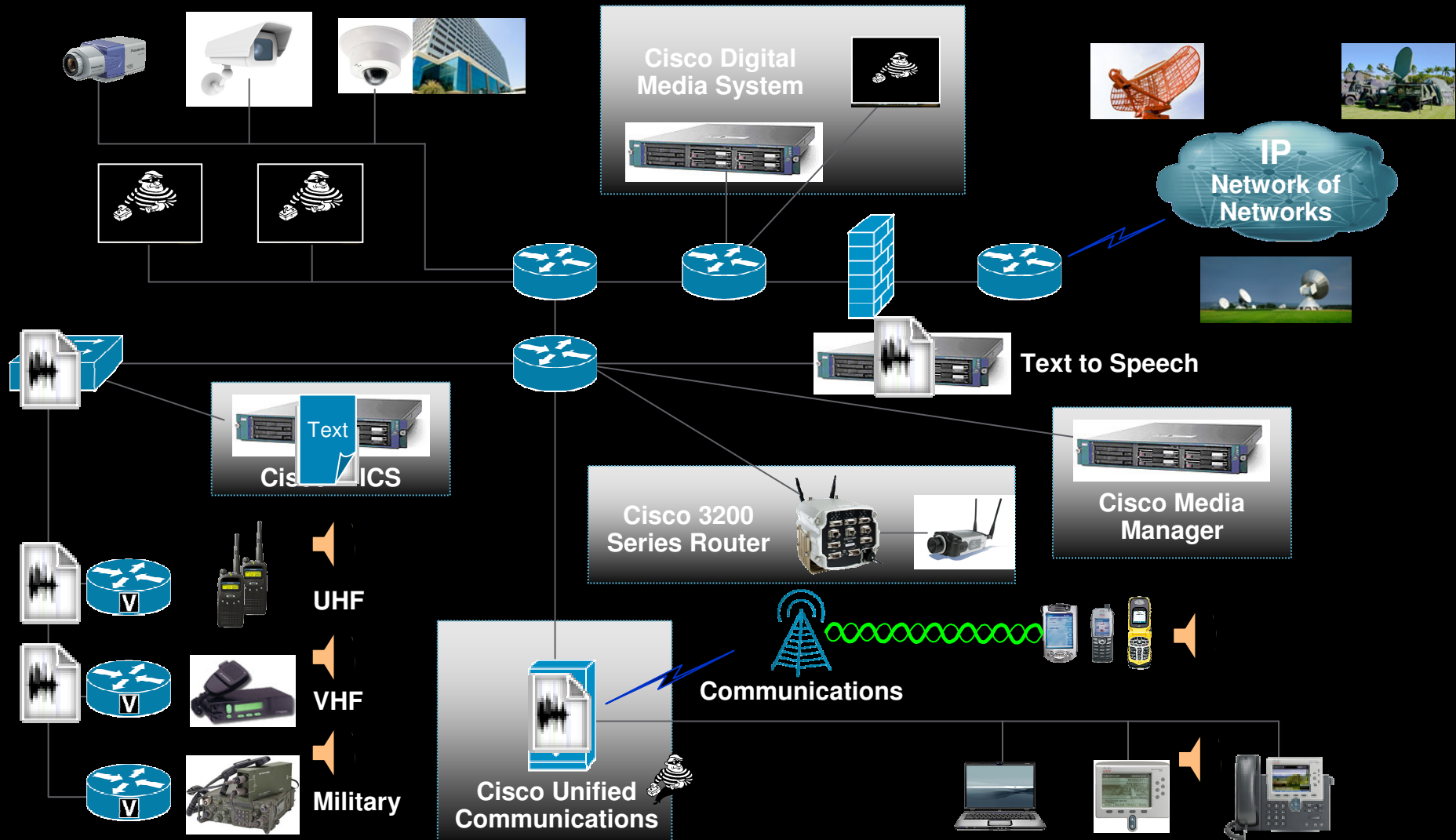
COPSS



COPSS



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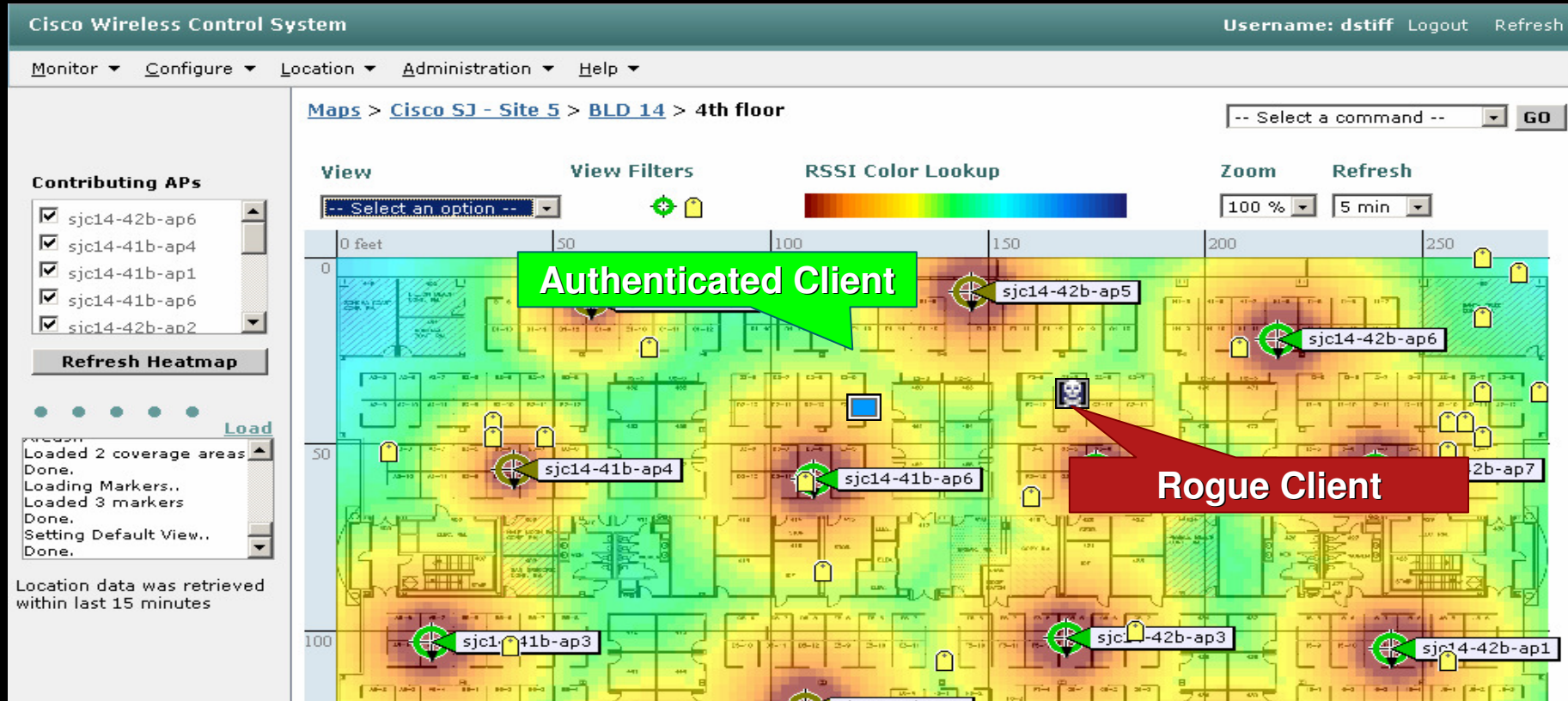
IT Network and Services Integration

Integration with other network end points



Converged Security & WLAN Management

Presence-based Services for Network and Wi-Fi Devices



- Mobility, Network and Physical Secure Access
- Event-tagged video
- Remote Management and Authentication
- Location-based Security

Why Cisco?

- ▶ **Cisco is the most experienced in Convergence**
- ▶ **One IP system of systems offers an intelligent, converged environment**
- ▶ **Secure network as the platform delivers ubiquitous utility**
- ▶ **Foundation for third-party applications to provide breadth of capabilities across the enterprise**

