



สมาคมวิศวกรรมสถานแห่งประเทศไทย ในพระบรมราชูปถัมภ์ (วสท.)

วิศวกรรมแห่งชาติ 2011

National Engineering 2011

งานสัมมนา เรื่อง การป้องกันเหตุการณ์จลาจล และการก่อการร้าย

“เทคโนโลยีระบบอุปกรณ์รักษาความปลอดภัยอาคาร”

รพีรัฐ ธีญวัฒน์พรกุล

Honeywell Systems (Thailand) Ltd

LEED AP Building Design + Construction

อนุกรรมการวิชาการ สมาคมวิศวกรรมปรับอากาศแห่งประเทศไทย

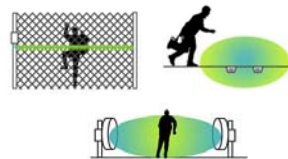
อนุกรรมการจัดทำหลักเกณฑ์การประเมินอาคารเขียว สถาบันอาคารเขียวไทย

Research & Promotion Committee, ASHRAE Thailand Chapter

Agenda

1. Perimeter Detection System
2. Access Control System
3. Video Surveillance System
4. Security Management System

Perimeter Detection System



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Perimeter Detection System – Fence Technology: Electro Magnetic



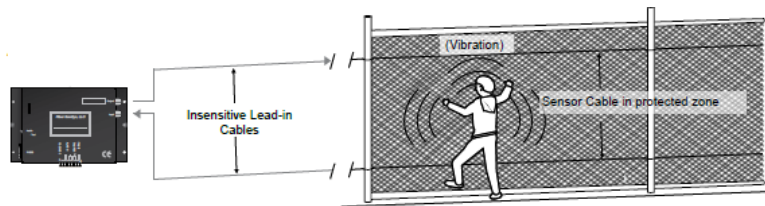
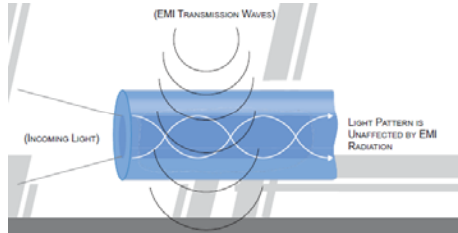
PERIMETER FENCE



Source: Southwest Microwave

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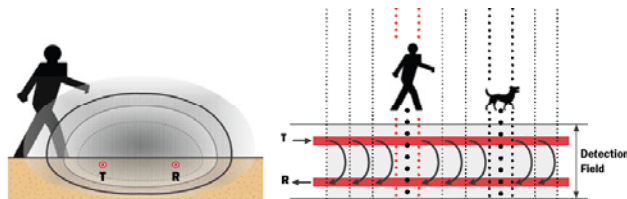
Perimeter Detection System – Fence Technology: Fiber Optic



Source: Fiber Sensys

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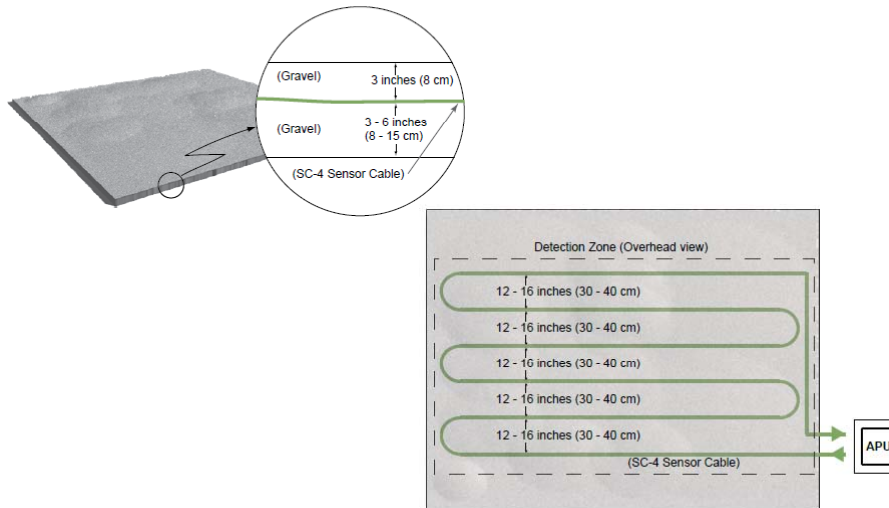
Perimeter Detection System – Buried Cable (Electro Magnetic)



Source: Southwest Microwave

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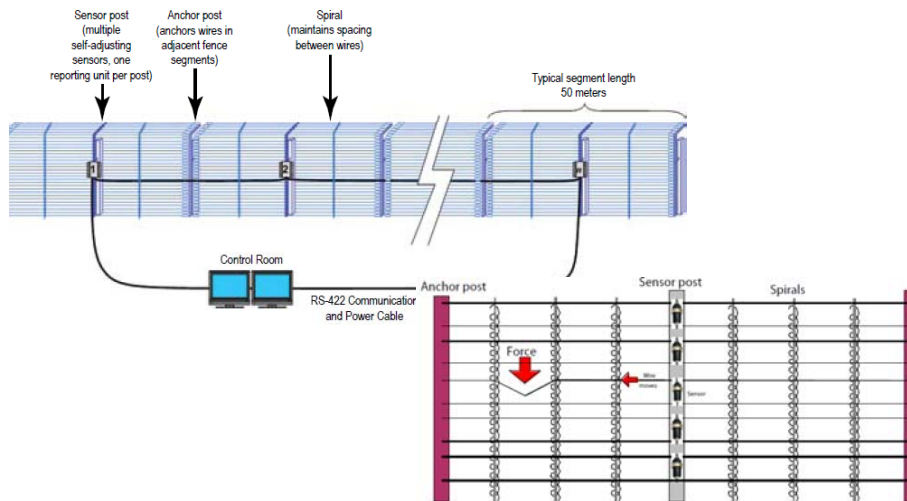
Perimeter Detection System – Buried Cable (Fiber Optic)



Source: Fiber Sensys

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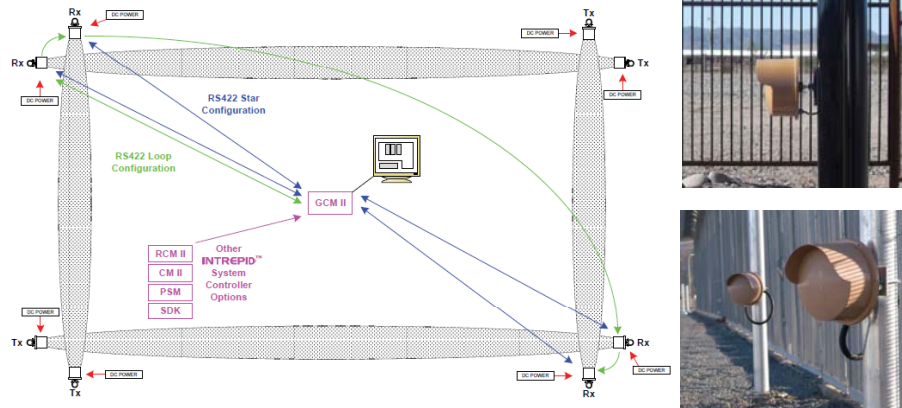
Perimeter Detection System – Taut wire



Source: Magal

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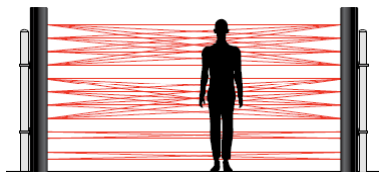
Perimeter Detection System – Microwave



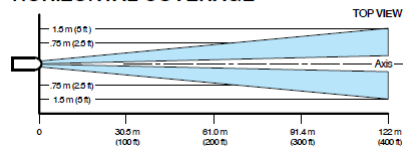
Source: Southwest Microwave

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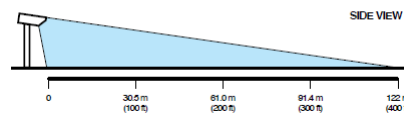
Perimeter Detection System – Active/Passive Infrared



HORIZONTAL COVERAGE



VERTICAL COVERAGE



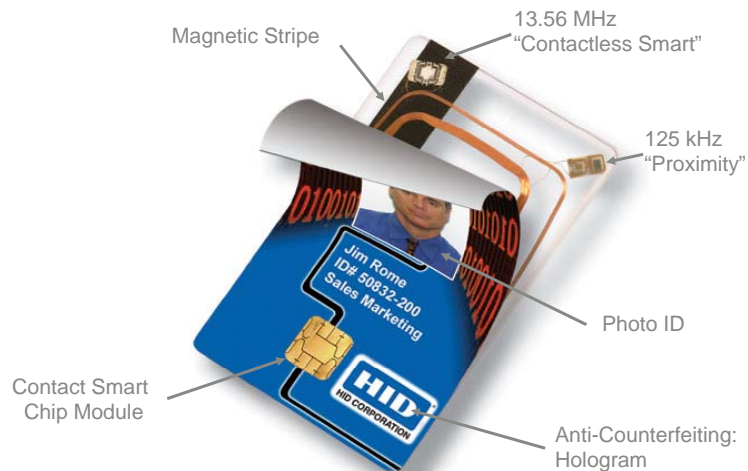
Source: Southwest Microwave

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Access Control System

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Access Control System - Card



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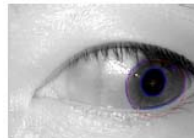
Access Control System – Multiple applications



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Access Control System – Biometric Applications

Combined Face and Iris Recognition System



Positive ID

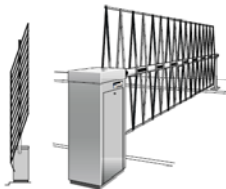


Video Based Smoke Detection



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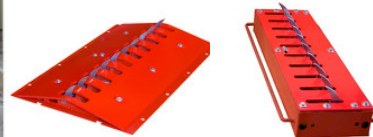
Access Control System for Perimeter – Gate Barrier



Source: Automatic Systems

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Access Control System for Perimeter – Road Blocker



Source: Automatic Systems

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Access Control System for Perimeter – Rising Bollard



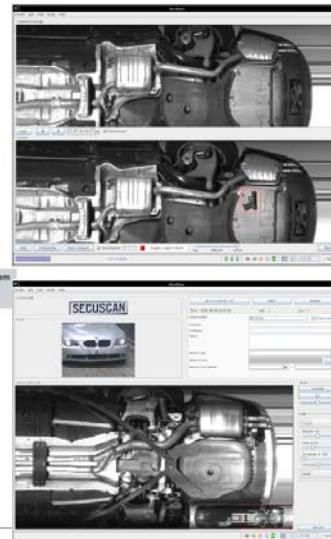
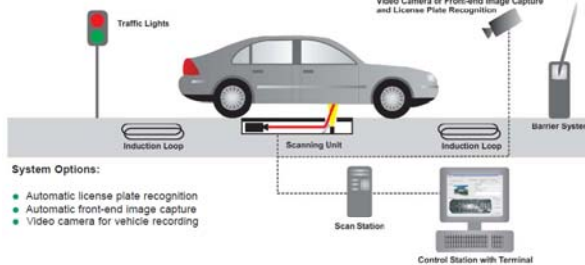
Source: Automatic Systems

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Access Control System for Perimeter – UVSS

Under Vehicle Scanning System (UVSS):

Exemplary Application



Source: SecuScan

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Access Control System for Perimeter – Full Height Turnstile



Source: Automatic Systems

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Access Control System for Perimeter – Turnstiles



Source: Automatic Systems

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Access Control System for Perimeter – High Security Gates



Source: Gunnebo

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Access Control System for Perimeter – Visitor Management System



Source: Honeywell

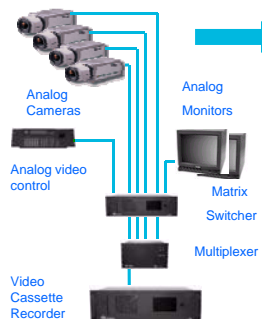
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Video Surveillance System

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Video Surveillance System – Evolution of Digital Video Systems

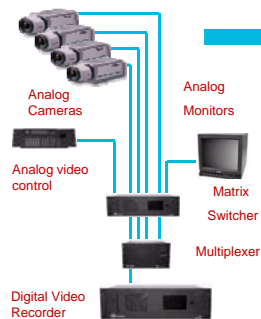
Analogue



VCR Solutions

- Standalone box
- Proprietary hardware
- Expensive, home run cabling
- Lower image quality
- Hard to search
- Analog cameras only

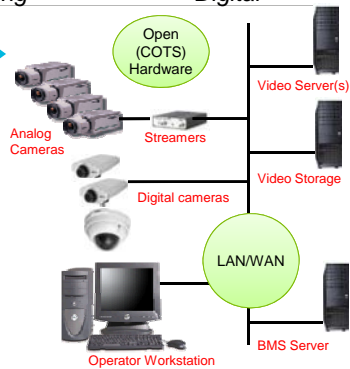
Analogue with digital recording



DVR Solutions

- Similar to VCR but
- Easier to search
- Consistent quality
- Storage limitations
- Limited network connection
- Limited features & capacity

Digital

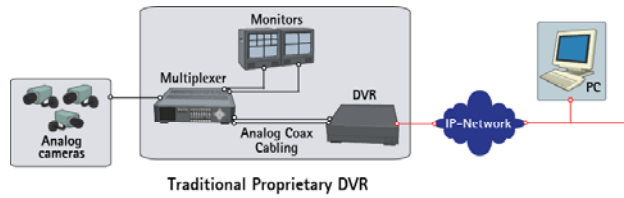


Digital Video Solutions

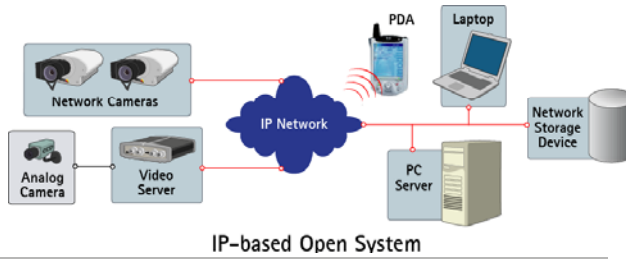
- Enterprise-class video management
- High-availability
- Flexible and scalable
- Engineered for integration (Open system)

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Video Surveillance System – Evolution of Digital Video Systems



Open System = IP Based Technology + Infrastructure + Integration + Cost efficient



Source: Milestones

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Video Surveillance System

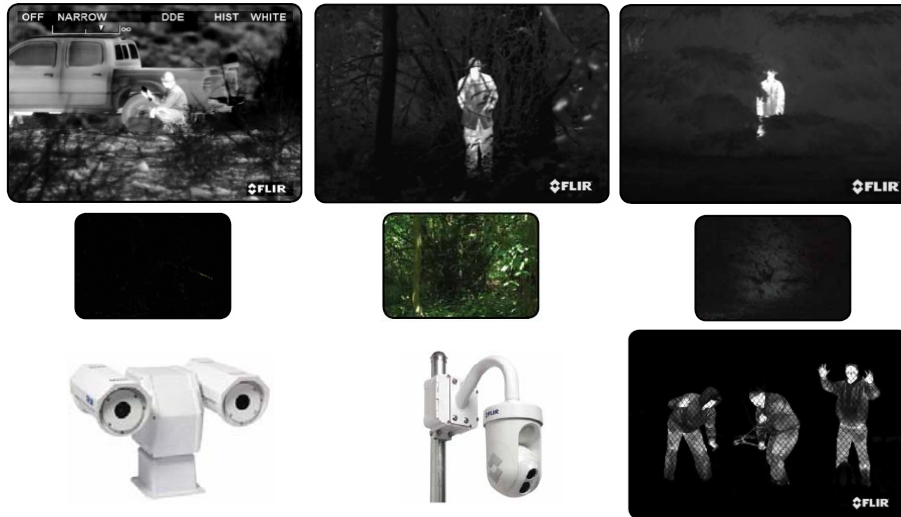
Driving IP-based physical security through global standardization



Source: Onvif, PSIA

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Video Surveillance System – Thermal Imaging Camera

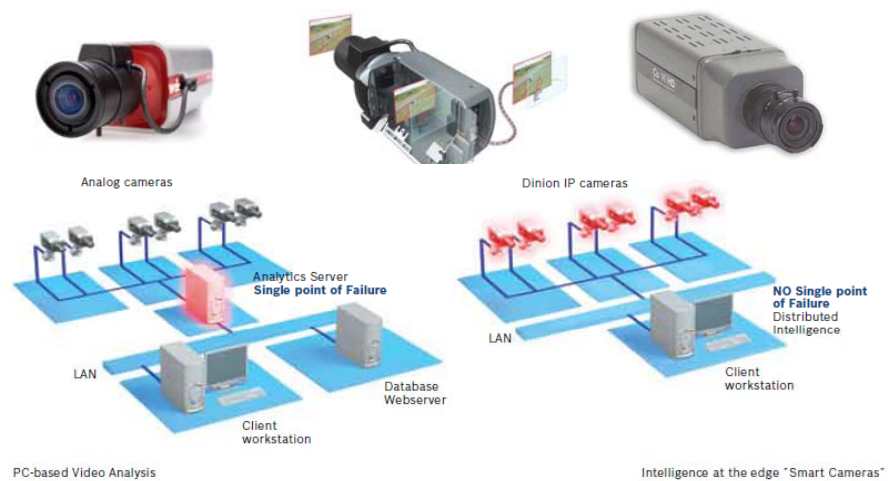


Source: Flir

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Video Surveillance System – Video Analytic (Camera Based)

Intelligent IP Camera with Video Analytic



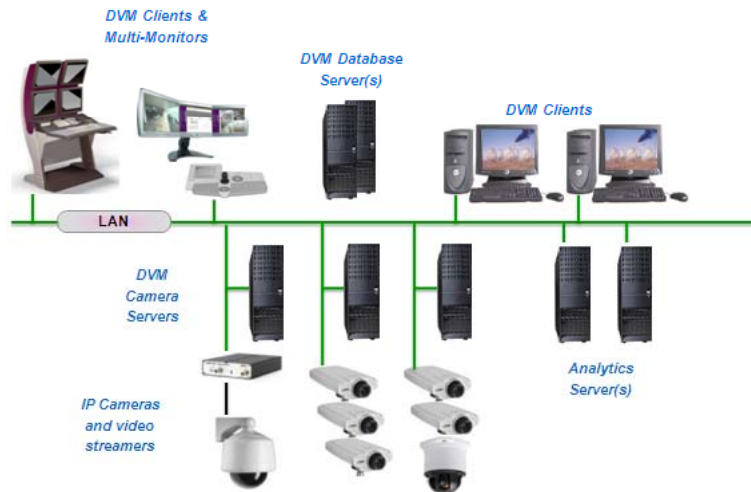
PC-based Video Analysis

Intelligence at the edge "Smart Cameras"

Source: Bosch, ioicam, Covi

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Video Surveillance System – Video Analytic (PC Based)



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Video Surveillance System – Video Analytic Applications



Perimeter Monitoring

Purpose: To detect intrusion across the perimeter (e.g. fence, gate, virtual perimeter line)



General Intrusion

Purpose: To detect intrusion into certain area – e.g. detect people (or vehicles) who show up at places where they shouldn't be.

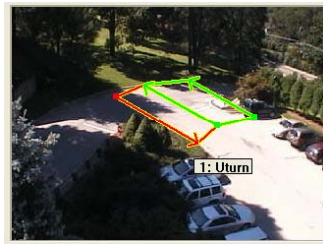


Wrong Way Detection

Purpose: To detect wrong-way travel when a person or a vehicle does not follow the designated travel direction.

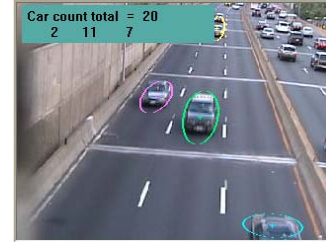
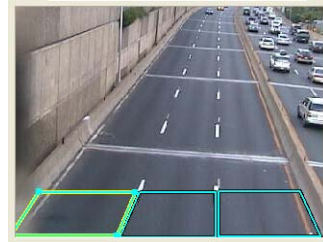
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Video Surveillance System – Video Analytic Applications



Illegal U-Turn

Incident Detection



Car Counting

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Video Surveillance System – Video Analytic Applications



People Counting

Purpose: To count number of people entering and exiting through a door or entrance area



Objects left unattended



Objects Removed

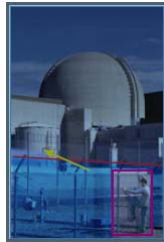
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Video Surveillance System – Video Analytic Applications



Detect Possible Theft - Retail Scenario

Purpose: Detect suspicious shopper behavior when the shopper reaches in the shelf to grab merchandise for an excessive number of times within a short period.



Source: Nextiva

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Security Management System

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Security Management System – value of integration

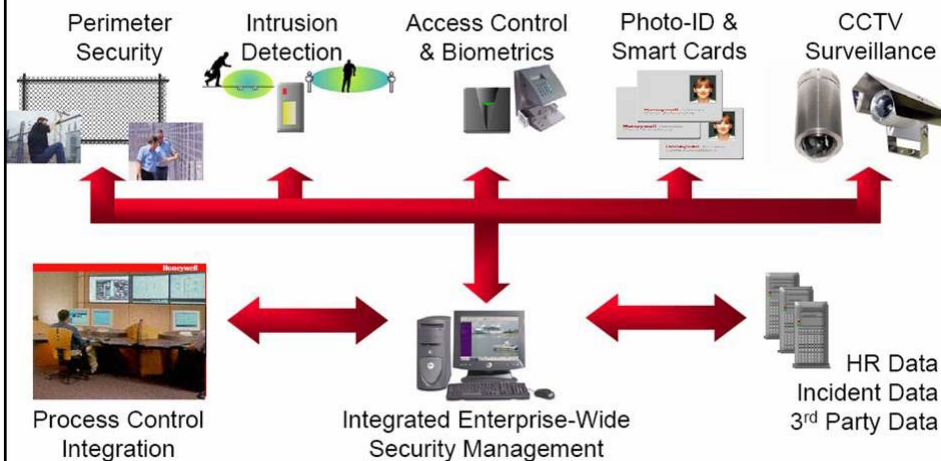


- IP – Technology Driven
- Open System
- Highly integration with other systems: BMS, Fire and etc
- Single Seat of Control & Monitor
- Better response and flexible

Source: Milestones

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Security Management System – value of integration



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Q & A

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