Arecont Vision

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Solutions Brief: Multi-Megapixel Solutions for the Healthcare Industry

Abstract

Preserving patient confidentiality, safeguarding prescription medications and protecting patients and highly-skilled staff are just three of the security needs faced by those in the healthcare industry. Multi-megapixel IP technology can be applied to specifically meet those needs more efficiently and at lower costs than analog or low-resolution VGA IP systems.

The Unique Needs of Healthcare

Preserving patient confidentiality, safeguarding prescription medications and protecting patients and highly-skilled staff are just three of the security needs faced by those in the healthcare industry.

Multi-megapixel IP technology can be applied to specifically meet those needs more efficiently and at lower costs than analog or low-resolution VGA IP systems.

Healthcare Statistics

Workplace violence is rampant in the healthcare sector. More than half of the 3,465 health workers surveyed last year by the Emergency Nurses Association reported they'd been hit, spat on or physically assaulted while on the job. About 25 percent said they had experienced 20 or more acts of physical abuse during the previous three years. And more than half of the nurses surveyed for Violence Against Nurses Working in U.S. Emergency Departments cited one or more of the following as precipitating factors when they experienced abuse:

- Patients or visitors under the influence of alcohol or illicit drugs
- Psychiatric patients being treated in the emergency department
- Crowding
- Prolonged wait times
- A shortage of emergency department nurses

In August, 2010, a new survey of healthcare security executives by the International Association for Healthcare Security & Safety (IAHSS) reveals increases in reported violent crimes in hospitals in 2009 compared to similar crimes reported in a survey five years ago.

Although overall crime in hospitals increased by 75% in 2009 compared to 2004, the survey reported that in four categories of violent crime (rape/sexual assault, robbery, aggravated assault, and simple assault) it increased by 200%.

In the five non-violent crime categories, which account for 76% of all hospital crime (burglary, larceny, arson, vandalism, and motor vehicle theft), the survey reported a 54% increase in crime incidents compared to 2004.

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JCAHO EC.1.10	JCAHO EC.2.10	OSHA #3148
The Hospital Manages Safety Risks	**The Hospital Identifies and Manages its Security Risks**	**Worksite Analysis**

Applications and Solutions: Megapixel for Healthcare

Healthcare facilities have specific surveillance and security needs that multi-megapixel technology is best suited to deliver.

- Provide overall security with enough detail for patient and employee identification. Uniforms make identification more challenging.
  - A common complaint regarding traditional surveillance systems is that the video images lack the definition and clarity for facial recognition. The greater resolution made possible through multi-megapixel video facilitates facial recognition both in recorded video and for use in automated identification systems.

- Protect employees and patients. Provide security, situational awareness and life safety. Monitor hallways and reception areas.
  - With multi-megapixel video, security people can clearly see what is happening in all areas and react appropriately.

- Improve employee productivity.
  - Multi-megapixel video provides managers an accurate view of employee activities.

- Resolve security/employee and patient disputes.
  - The clarity of multi-megapixel images provides prosecutable evidence.

- The ability to cover more with less (instead of manpower to control PTZs, panoramic cameras can cover it all of the time)
  - Budgetary considerations dictate products that provide the lowest cost of ownership and quantifiable return on investment. Multi-megapixel cameras take the place of multiple standard-resolution cameras, and further lower costs due to few installations and software licenses. In most cases, the reduction is security personnel is also significant.

- Increased detail equals better forensics and reduced time from police and healthcare security professionals in post event investigations. Forensic documentation makes it possible to build cases.

- Prevent fraudulent claims.
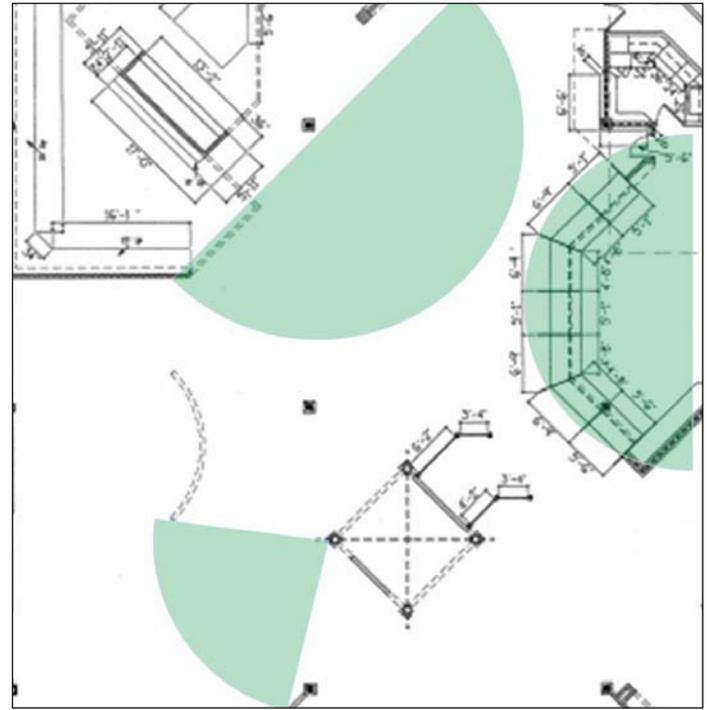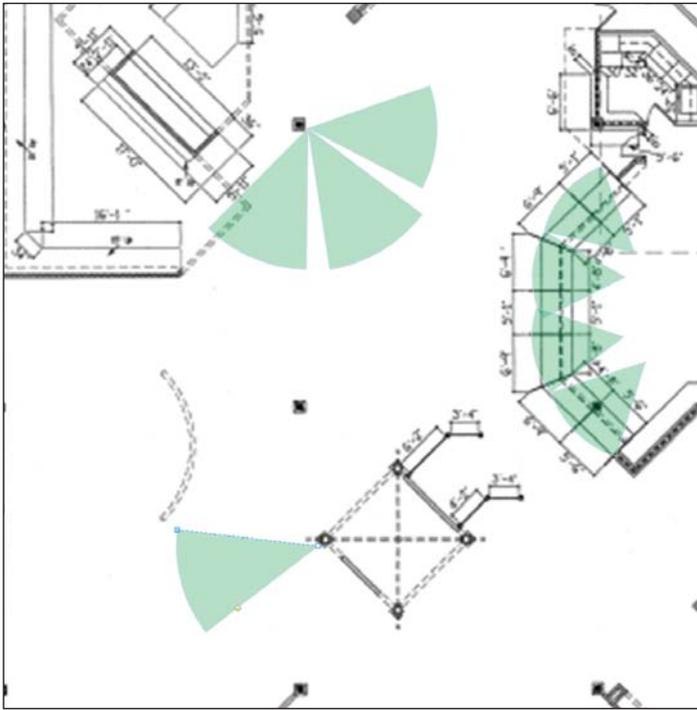 - Multi-megapixel video gives a clear view of any situation.

Healthcare Industry Applications

- Reception (emergency room)
- Waiting rooms
- Cafeteria
- Corridors
- Laundry
- Storage areas
- Open areas
- Parking lots

Healthcare Industry Benefits

- Remote accessibility
  - Monitor video between administration offices and remote locations within the campus and offsite
- Scalability and flexibility
  - Easily expand your system to meet growing needs via IP
- Easy future-proof integration
  - Multi-megapixel provides better image quality
  - Easily migrate existing system to megapixel
- Proven technology
  - Thousands of installations across the entire security market
  - Applicable to any installation

- Cost effectiveness – lower total cost of ownership
  - Fewer cameras, licenses and accessories
  - Use existing infrastructure
  - Lower maintenance
  - Lower operational costs
  - Increased investigations w/same or less manpower
- Distributed intelligence
  - Put intelligence where you want it – motion detection or system based analytics
  - Reduce false alarms

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Analog/VGA vs. Megapixel Cost Comparison — Reception

Analog

Eight VGA cameras offer incomplete coverage and little detail.

Multi-Megapixel

Three Arecont Vision multi-megapixel cameras offer more complete coverage with better detail.

	Analog				**VGA (SD)**				**MegaPixel**		
	Qty	Cost	Extended		Qty	Cost	Extended		Qty	MSRP	Extended
Dome Cameras 768 x 494	8	$430	$3,440	**Dome Cameras** 640 x 480	8	$680	$5,440	**Dome Camera (1MP)** 1280 x 1024	1	$1,190	$1,190
								Panoramic (180°) 6400 x 1200	2	$2,990	$5,980
Encoder Channels	8	$200	$1,600								
NVR Lics	8	$300	$2,400	**NVR Lics**	8	$300	$2,400	**NVR Lics**	3	$300	$900
Cables	8	$150	$1,200	**Cables**	8	$100	$800	**Cables**	3	$100	$300
Power Supplies	8	$20	$160								
Labor (2/cam)	16	$95	$1,520	**Labor (3/cam)**	24	$95	$2,280	**Labor (3/cam)**	9	$95	$855
30 Days Storage (2TB drives)	1	$1,000	$1,000	**30 Days Storage (2TB drives)**	1	$1,000	$1,000	**30 Days Storage (2TB drives)**	2	$1,000	$2,000
System Cost			$11,320	**System Cost**			$11,920	**System Cost**			$11,225
Total System Pixels	3.03 MP			**Total System Pixels**	2.45 MP			**Total System Pixels**	17.3 MP		

Arecont Vision Product Applications For Healthcare

- Emergency room, situational awareness: Surround-Video®
- Over Reception, records management integration: 1.3MP Compact MegaVideo®
- Front Entrance Outdoor, Face ID: 2MP MegaView®
- Front Entrance Indoor, PVM (face recognition) integration: MegaDome®
- Parking Lot, Situational Awareness: Surround-Video®
- Parking Lot/Traffic, License Capture: Single Sensor and Dual Sensor MegaVideo®
- General Surveillance, Public Areas, Hallways: AV1315, AV2815, AV1355 (Compact MegaVideo®, MegaDome®)

Healthcare Case Study

CUSTOMER
A comprehensive healthcare system headquartered in the Eastern United States consists of four hospitals.

CHALLENGE
- Substantial investment in analog video
- Realized shortcomings: video resolution, coverage capabilities, usable recorded images.
- Pan-tilt-zoom cameras required operators, which further added fixed costs.

MULTI-MEGAPIXEL SOLUTION
- Hybrid migration to IP
- The image quality and digital PTZ capabilities of Arecont Vision megapixel cameras allow the company to capture and record extremely detailed video images over large coverage areas.

MULTI-MEGAPIXEL BENEFITS
The image quality and digital PTZ capabilities of multi-megapixel cameras far exceeds analog and conventional IP cameras allowing the healthcare system company to capture and record extremely detailed video images over large coverage areas. Combined with recent cost reductions in NVR storage and network switches, the use of fewer cameras allows the company to transition to high-quality video with the highest levels of cost-efficiency, which translates into lower total cost of ownership and overall higher ROI.

Multi-megapixel cameras also allow for significant upgrades in system functionality compared to standard-resolution IP cameras. In addition to lower bandwidth and storage requirements, multi-megapixel IP cameras dramatically decrease costs related to other elements of a system, including fewer software licenses, fewer lenses and a decrease in man-hours needed to install and operate systems. Additionally, multi-megapixel IP cameras' ability to provide highly accurate digital PTZ functionality translates into fewer moving parts than traditional PTZ systems, which reduces maintenance costs and the potential for failure.

The megapixel system proves its value on a daily basis monitoring more than 4 million square feet of coverage area. After a recent incident at one facility, the company's incident control center staff reviewed crystal clear multi-megapixel images within minutes and quickly distributed them to security managers and personnel throughout the enterprise for immediate action.

MegaVideo®
1.3 to 10 Megapixels
Single & Dual Sensors

MegaVideo® D4 Domes
1.3 to 10 Megapixels
All-in One

SurroundVideo®
8 & 20 Megapixels
180° & 360°

MegaDome® 2
1.3 to 10 Megapixels
All-in-One

MegaView®
1.3 to 5 Megapixels
IR Illuminator

H.264 | Superior Image | Unmatched Compression | Incomparable Compatibility

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Arecont Vision is the leading manufacturer of high-performance multi-megapixel IP cameras and associated software. Arecont Vision products are made in the USA and feature low-cost massively parallel image processing architectures MegaVideo® and SurroundVideo® that represent a drastic departure from traditional analog and network camera designs. All-in-one products such as the MegaDome®, MegaView™ and D4F/D4S/D4SO series provide installer friendly solutions. Compact JPEG and H.264 series of cameras address cost sensitive applications. These innovative technologies enable Arecont Vision to deliver multi-megapixel digital video at IP VGA camera price points.

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