

# Newsletter

## High Definition Security Cameras...The New Standard

High definition (HD) has become the new standard with respect to consumer electronics. Cell phone cameras, digital cameras and even our televisions have all undergone the transformation to HD. As consumers, we quickly understood that the higher the pixel count, the better the image quality and a new standard was established. However, when it comes to security cameras, the advancement from analog to digital has been somewhat stagnant...until now.

### Megapixel Cameras by the numbers

- **3 megapixel** - average for cell phones cameras
- **8 megapixels** - average for personal cameras.
- **Less than 0.4 megapixel** - average for non-megapixel security cameras.

These levels of resolution show why we're able to email quality photos from our cell phones and why we can't obtain a positive ID of a person captured on video from a security camera.



### Camera Selection

With all the various types of cameras and levels of resolution available, the task of selecting a camera can be overwhelming. The most effective method is to use reverse engineering. First and foremost, you need to define your target at each camera location and determine exactly how much detail you need, an approach otherwise known as 'pixels-on-target'.

For example; in a parking lot situation, would you need to see the entire parking lot, identify a vehicle or the person driving the car? The target will define the level



of resolution and lens required. Once this is determined, it is time to build your system.

Key features to look for that ensures superior imaging performance and evidence integrity include:

- Camera resolution options ranging up to 16 megapixels
- Excellent low-light performance and sensitivity into the near infrared spectrum
- 14 bit dynamic range
- Progressive scan, scientific grade CCD image sensors
- Images stored in JPEG2000 that can preserve the image data exactly as it was produced from the camera's sensor
- Complete image audit trail that includes a timestamp and a digitally signed secure hash generated in the camera
- Industry standard export formats including JPEG, PNG, AVI, and RAW

### **Vendor Selection**

Many times undervalued, vendors can become an excellent source and wealth of information. Partnering with the proper vendor/consultant to design a system will maximize your investment and provide you with quality solutions. Key word 'proper', new demands and continuous changes in technology may require a re-evaluation of your service providers. Vendors need to have a more comprehensive skill set, and the ability and experience to teach and consult. Since no one person can have all the knowledge, vendors should also be evaluated based on their support group and level of resources.

### **Design**

Attention needs to be given to the entire design. The value of having the proper vender/consultant will truly be exemplified in this phase. An area of caution, proposals will most likely specify both key items and the more expensive equipment. Other equipment such as switching devices, brand of cable, encoders and POE devices are usually listed in general terms or under miscellaneous. Keep in mind, the goal is to design a total quality system; **the value of the system is equal to the sum of all parts.**

The supporting equipment must be based on the complexity and future expandability of the system. Even the quality of cable can have a major impact on your system. It should be noted that the result of the flaws or short cuts taken in the design may not be apparent during start-up. These problems could appear with age, causing billable service calls which could go to the vendor who failed to properly design the system in the first place.

### **Cost**

The most common misconception is the cost of the system. It is assumed that since unit cost of megapixel cameras is sometimes higher than standard resolution IP/analog cameras; the overall cost of the system is higher. However, when properly designed, one megapixel camera can replace multiple IP/analog

cameras, thus reducing the number of cameras required and installation cost to provide you with an overall savings.

### **Growth**

For a rapidly growing number of customers, both nationally and globally, HD surveillance is no longer a concept or emerging technology but rather, the new standard. Benefits are quickly being realized and expectations are being exceeded. Many of these companies have actually gone public in participating in case studies supporting this technology.



Most recently, Jones Lang LaSalle, a financial and professional services firm specializing in real estate services and investment management with more than 30,000 people in 750 locations in 60 countries who serve the local, regional and global real estate needs participated in such a case study. Here are a few of their comments:

*Responsible for the daily operations of The United Building in downtown Chicago, the Jones Lang LaSalle team is no exception, using innovative property management strategies to create a sophisticated and modern workplace. To secure the well-designed office space at The United Building, Jones Lang LaSalle deployed the Avigilon High Definition Surveillance System for overall tenant safety and protection.*

*When United Air Lines relocated its corporate headquarters to 77 West Wacker Drive in Chicago, the building was promptly renamed The United Building as part of the lease agreement. "The acquisition of United Air Lines as our primary tenant compelled us to rethink our operational strategy to more effectively represent this high-profile corporate identity, including reevaluating the building's security," explains Myrna Coronado, Jones Lang LaSalle vice president and general manager for The United Building. Previously, the facility had an analog-based video surveillance system that was unreliable, obsolete, and ineffective. "We also had to consider the needs of the remaining tenants – mostly prominent law firms – who did not want us to deploy obtrusive security measures such as turn stiles and metal detectors."*

*Source: Avigilon United Building Case Study  
To download the complete case study*

[www.integrasecurity.org](http://www.integrasecurity.org)



**Other companies who have gone HD include;**

**Avaya**

**The Genomics Institute of the Novartis Research Foundation (GNF)**

**Pan Nordic Logistics**

**Community Transit (Snohomish County, Washington)**

**Canberra Stadium**

**Coffeyville United School District**

**Exempla Good Samaritan Medical Center**

**Muskogee Community Hospital**

**Fairfield City School System**

### **Summary**

High definition surveillance is the future of video surveillance technology. This is the direction the industry is heading. Users can derive very tangible benefits from implementing high definition surveillance systems (multi-megapixel camera systems) such as reduced operating costs, increased ability to use surveillance video for forensics, and higher level of detail for advanced video analytics.

### ***About the Author***

Tony Ramos is founder of Integra Security Alliance, Inc. [www.integrasecurity.org](http://www.integrasecurity.org) with more than 25-years of private security experience which has included Vice President of Sales for USMA a Division of USIS and Corporate Security Director for Carson Pirie Scott, Inc..