THE EVOLUTION OF VIDEO SURVEILLANCE

Why Change is Inevitable in this Market
By: Sarah Colson

If you have been in the video surveillance market for any length of time, you are well aware of the transition from analog to IP technology. This topic has been ongoing for many years now with a well-defined list of obstacles and benefits for both supporting strategies and technologies. The move to IP started off as an up and coming trend in this market to capture evolving technologies and improvements for an overall enhanced video surveillance system. However the switch to IP is no longer a trend and well underway to becoming the standard in video surveillance. Why change? Everyone is well aware of the slogan “if it is not broken, do not fix it.” I argue that analog is a very broken technology for a few key reasons. To start off, the future of video surveillance is all about providing the best solution and being able to predict and prevent future alerts, which analog is simply not capable of doing. In addition, IP provides features such as high definition image quality, remote monitoring, future expandability, and integration with current or additional security systems.

Analog is still well entrenched in the video surveillance market for a number of reasons. Many markets, such as K-12 Education, are slow to adopt IP-based surveillance systems because of the upfront costs associated with the transition and local budget constraints. In addition, there is an existing segment of integrators who are unfamiliar with IP technology and shy away from recommending those systems, in favor of antiquated analog devices.

It is no secret that many analog integrators lack familiarity with IP-based systems and technology. The bigger picture is that these integrators need to jump on the IP bandwagon or they are going to be left behind as the video surveillance market evolves. Analog only integrators that try to maintain the “status quo” will fall behind, it is only a matter of when this will happen. I believe that these integrators see the advantage of IP, but lack the time and money to get the proper knowledge and training necessary to fully recommend IP-based solutions. You have not yet seen the full impact of IP-based projects as the video surveillance industry is a laggard industry and slow to adopt new technologies.
Having said that, it is widely known that deployments of 25-30 cameras plus are nearly all IP-based. The next stop for IP is in the 1-16 camera count deployment, the final bastion of analog. The message is clear, the benefits of IP-based surveillance systems provide a great advantage for integrators and end users and this is the future of video surveillance. Get on board now before it is too late.

**Experience Better Business Result with IP Technology**

End users may not be asking for an IP-based surveillance system, but they certainly are asking for the features and benefits that only an IP-based surveillance system can offer. These types of enhancements allow businesses to actively monitor and manage their surveillance system for better usability and productivity. The benefits provided in IP technology are endless, but notable features to dig deeper into consist of enhanced image quality and video sharing capabilities, integration and expansion with existing surveillance systems, and video analytics.

Having the best image resolution is essential in the video surveillance market. Capturing all your video footage is worthless unless you are able to do something with those feeds. IP cameras have enhanced image quality by using enhanced resolutions. This is a huge advantage over analog capabilities, as IP cameras use digital pixels to ensure a clear image, regardless of the amount of light or movement involved in the footage. When examining footage of events that happened at a scene, IP technology and enhanced high definition image resolution is one of the most necessary components leading to high conviction rates. Shifting from a closed analog network into an IP-based network allows end users the capability of not only utilizing clearer images but the ability to share these video feeds. Video sharing provides a lot of benefits, with the most obvious; being able to share live video feeds to first responders. Emergency response personnel can get immediate updates on what is happening before even arriving to a scene. This is advantageous in decreasing response time and having emergency response personnel prepared prior to arrival. Video sharing can be utilized in many ways including sharing video feeds across networks to manage multiple locations.

Most business models utilize multiple surveillance systems including video surveillance recording, video storage, access control doors and gates, dispatch systems, HVAC alerts, POS, and many more. Analog systems have an extremely difficult, non-effective way of maintaining these types of technologies as they are all required to be managed individually. IP-based systems have a higher capability to manage and integrated multiple systems and platforms into a common system. This is a huge advantage as end users are able to use one system to manage the entire infrastructure of their surveillance system. Using a single system as the hub to access multiple points of data not only save end users time, but also allows them to effectively manage and be aware of what is going on with all parts of their surveillance solution and respond accordingly.

Today’s video surveillance systems are becoming much more than video surveillance and turning into a platform to gain a better overall situational awareness of their complete security overlay. This allows end users to integrate better solutions and processes to improve and enhance their surveillance efforts with the use of video analytics. Video analytics is available only using IP-based technology and helps detect, recognize, and analyze objects and events from their video feeds. Visual event monitoring increases the ability to classify events that can trigger real-time monitoring and create instant alerts. This increases the usability and effectiveness of a surveillance system, as well as, creating a platform used for deeper business intelligence.
The Myth about Total Cost of Ownership (TCO)

The biggest obstacle with IP technology is the assumption that IP-based systems are significantly more expensive. When considering this line of thought, it is essential to not only look at the upfront cost, but the total cost of ownership for each system. Today, as mentioned earlier in this article, any greenfield installation of 25-30 cameras or more, always go to IP because of the scalability and flexibility that IP offers. It is apparent that IP cameras and the software platform are more expensive than the legacy analog cameras and recorder. However, when analyzing the cost of surveillance systems you must look at the total cost of ownership. Analog systems are going to have a higher cost over time when taking into consideration regular maintenance, component replacement, and software upgrades. Analog systems are traditionally harder to maintain because of their propriety system design. Over 40% of an analog system is the cost of recording. As camera channels are added, the cost of your analog system is going to skyrocket. This type of solution is not ideal for systems that will need to expand in the future.

IP-based systems are designed around an open platform system which is very favorable for future expansion. The open platform design for IP-based systems allows end users to benefit from downward price trends because the IT hardware component market is very competitive and largely utilizes off the shelf components. These cost reductions benefit greatly to the total cost of ownership of an IP system. The main cost of an IP system is the cost of IP cameras opposed to the storage itself. In an IP system the total cost of ownership is significantly decreased compared to analog when you get a project of 32 cameras or more.

IP-based systems are ideal for larger projects or projects that are looking to expand in the future. In addition to the total cost of ownership, IP systems are able to utilize new generation features such as analytics and facial recognition software. This is because IP systems have the ability to support new technology without upgrading and purchasing new hardware.

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IP Solutions Now More Simple Than Ever

The new trend within the video surveillance market is that hardware manufacturers are partnering with video management software (VMS) companies to design bundled solutions. A bundled solution combines the Network Video Recorder (NVR), pre-loaded and optimized with the VMS software platform. This is beneficial for integrators that are still new to IP technology because it is comparable to a plug-n-play type of video surveillance solution. IP solutions are becoming easier and easier to deploy and utilize with the newest technology.

IP is not going anywhere and is the growing future of video surveillance. Integrators who embrace the advantages of this technology sooner than later and push to develop the expertise to implement the technology stand to win more projects at greater margins and become a more trusted advisor to their end user customers.

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