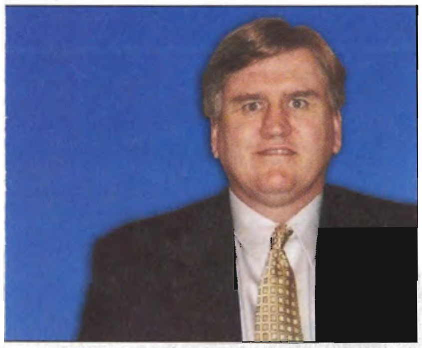
Analog Versus IP: The True TCO



By David Elliott

One of the main questions in video surveillance is which to use – analog or IP?

As a security professional, you are likely inundated with an unending stream of information and comments that IP is the only choice or that analog is dying. The truth of the matter is that analog is not dead and that IP will likely be the technology 10 to 15 years from now.

Possibly the most difficult decision for a security manager today is making this choice. One of the most valuable tools that can help is a comparison of the Total Cost of Ownership (TCO) between nearly identical systems. Video equipment manufacturers, integrators and dealers have used TCO comparisons for years. Over the years, with the growth of IP based video surveillance, countless white papers and case studies have been toting the cost benefits of both analog and IP. The common theme within these reports is the cost benefit of one technology over the other, usually biased towards the author or sponsor of the report. Yet, these white papers and reports have not presented a realistic TCO, because they routinely leave out or gloss over important aspects of a TCO.

The best place to start is with a definition of TCO. The most common definition is "a financial estimate of direct and indirect costs of a product or system," which includes the Total Cost of Acquisition (TCA) and the Total Operating Costs (TOC) for the useful life of the product or system. In a video surveillance system direct costs would be items like the cameras, the VMS, the DVR or NVR, cabling/switches and installation labor. Indirect costs would be items like yearly service maintenance and electricity and cooling costs.

> "The truth of the matter is that analog is not dead."

Axis Communications recently published a white paper titled *Total cost comparison study of analog and IP-based video surveillance*, and it is perhaps one of the most complete vendor sponsored generic TCO studies to date. To maintain as open a comparison as possible, Axis developed a set of video system requirements for a proposed new retail project that created as close to an apples-to-apples comparison as possible. To continue the openness of the study, Axis provided the system requirements to multiple integrators/dealers mandating the use of specific Axis IP-based video equipment and leaving the integrators open to choose the analog video equipment. The Lund University School of Economics & Management provided administrative oversight. In the study, the company specifies that they are only evaluating the "hard" or "up-front" direct costs such as. TCA, and not the indirect or TOC costs. The importance of this statement is to notify the reader that potentially vital information has not been included in the TCO comparison.

While many studies such as these are useful, they may exclude the other direct and indirect costs that truly make the TCO a valuable tool. These reports tend to compare the upfront acquisition costs of the video surveillance system, ignoring any additional direct costs needed to support the surveillance system, such as upgraded HVAC systems (cooling), new AC circuits (labor and materials), yearly hardware/software maintenance and possible upgrades/enhancements to the corporate network infrastructure. Without these upfront direct costs, which are typically unique to each organization, these TCO comparisons often can only present a baseline starting point. Indirect costs that need to be considered are increases or decreases in electricity consumption, for both the surveillance system and HVAC, operational training and preventive maintenance.

Total Cost of Ownership means just that, the sum of all costs to own and operate the system for its anticipated useful life. The majority of these white papers and studies only provide a comparison of the acquisition costs (TCA) and thus do not take into account the other unique direct and indirect costs of each organization. Without these other costs there can be no true comparison of an analog to IP-based surveillance system.

The reality of the video surveillance market and even the physical security market in general, is that IP will be replacing the existing technologies sometime over the next 10 to 15 years. Does this mean that an analog based surveillance system is not a viable solution for any security manager? The answer is no. Based on the current growth of IP surveillance and 10 to 15 years for full adoption, any video surveillance system with a life cycle of less has the potential of being analog based. The decision should be one of functional needs and dollars, the acquisition and useful operational costs. The best rule of thumb: be an educated consumer, do the research and compare the true TCO numbers. SECURITY

About the Columnist:

David Elliott has more than 25 years experience in Information Technology and for the past five years in IP surveillance. He is a Certified Information Systems Security Professional (CISSP). Mr. Elliott is currently the program manager for a Service-disabled Veteran owned Small Disadvantaged Business, developing a Data Loss Prevention practice in the government sector. He has worked with Local, State and Federal Government organizations as well as Fortune 500 companies.

maintenance and electricity and cooling costs.