

July 16, 2012

## **IP Surveillance and VoIP: Is History Repeating Itself?**

*In the Switch to IP-Based Surveillance, Parallels to VoIP Adoption Abound*

By David Wedel

As IP-based surveillance systems continue to gain ground, we can't help but be reminded of the challenges IP telephony – or VoIP – faced 10 years ago. The adoption parallels are certainly intriguing. VoIP systems offered vastly better features and functionality than PBX systems, but once the frenzy among early adopters wore off, retailers adopted VoIP at much slower rates than expected.

A decade later, the same dynamic is occurring with IP-based surveillance technologies. Retailers recognize the benefits of IP vs. analog, but many have been hesitant to switch. In fact, the questions many retailers have when converting to IP surveillance are nearly identical to the ones they had when switching to VoIP:

*I already have an analog surveillance system. When is the right time to switch to IP?*

In retail and other markets, analog surveillance technologies are still prevalent. This is because many retailers have analog systems that have not yet reached the end of their projected life expectancies. As one retail executive recently told me, his stores will not install an IP surveillance system until the value of the existing analog system is fully depreciated in three or four more years. This was a common scenario in the switch to IP telephony – companies wanted to get their “money’s worth” out of legacy systems before investing in new equipment.

As with VoIP, analog systems are often replaced with IP surveillance systems once they reach the end of their useful lives. Ultimately, determining the “right time” to switch to IP surveillance is complex and depends on many factors. For this reason, some manufacturers continue to offer both analog and IP-based surveillance systems, as well as technologies to bridge the gap between them.

*How will this technology impact my network?*

I have yet to hear a retailer complain about having too much bandwidth. Nearly every retail system today is networked, so retailers are naturally cautious when deploying anything that might over-subscribe the network and cause mission-critical systems to fail.

The same was true with VoIP. Moving any system onto the network creates challenges – such as the need for additional bandwidth, security or storage – and can have an impact on network performance. For example, saving voicemail on the network instantly requires many more gigabytes of storage than storing email alone. The same is true of video storage. As the number of IP cameras increases, so does the need for bandwidth and storage.

Today, IP surveillance systems are getting smarter about how to handle these challenges. For example, cameras might stream video only when motion is detected, or when a point-of-sale

system detects an exceptional transaction. Today's video compression algorithms are also making it more efficient to transmit and store surveillance data. All of these factors will help to hasten adoption rates.

*How can I determine which system to buy?*

Ten years ago, VoIP standards were still emerging, so it was difficult to compare and decide between competing systems. The cost of two VoIP systems might have appeared the same on paper, but one might have offered far superior features which actually lowered the total cost of ownership. Once VoIP standards emerged, it was easier to compare systems and make informed decisions. The same is true with IP video surveillance today. Standards for performance, features and interoperability are emerging, the adoption of which will ultimately help retailers make apples-to-apples comparisons between competing solutions.

As Mark Twain once said, "History doesn't repeat itself, but it does rhyme." If IP surveillance adoption continues to follow the VoIP adoption path, we can expect to see a sure and steady increase in its market share.

*David Wedel is a strategic business development manager for Sony Electronics' Security Systems Division, leading its initiatives within the retail market. He has more than 25 years of experience in physical security, communication technology and retail asset protection with companies such as Cisco Systems, GE and Dayton Hudson Corporation.*