HOT NEW PRODUCTS, *see p. 4*

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March 2012

VIDEO SURVEILLANCE Trends & Technologies

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TURNKEY VS SOFTWARE ONLY

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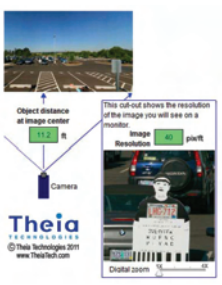
New Products

Stay Cool—Axis Communications' Q60-C PTZ Dome Network Cameras feature integrated active cooling for reliable surveillance in extremely hot conditions up to 165°F. The high-speed pan/tilt/zoom IP cameras feature powerful resolutions up to 1080p HDTV, and come in easy-to-install, outdoor-ready housings ideal for use at construction sites, mining, oil and gas facilities and atop buildings for city surveillance. **Visit http://sdi.hotims.com701**

NVR Expansion Kit—Panasonic System Networks Co.'s i-PRO SmartHD WJ-NV200 network disk recorder provides age and gender estimation; time of visit; and total count of visitors to a facility where face matching has been configured. The unit connects and records up to 16 network cameras and provides a real-time face matching function displayed on a live camera feed.
Visit http://sdi.hotims.com702

IP Video Solution—ACTi's KCM-3911 four-megapixel hemispheric camera provides 2D+3D digital noise reduction, and 360-degree ceiling mount and 180-degree wall mount views. Available in panoramic, ePTZ and six-region view modes, it comes equipped with a built-in f1.05 millimeter/F2.8 megapixel fisheye lens. **Visit http://sdi.hotims.com703**

Remote Video Access—AlarmSoft's Video Management Services provide users with off-site video recording and its OEM video hosting solution, compatible with 1,000 camera models across 60 manufacturers. With "hot spot" technology, cameras can be pre-programmed to detect motion during pre-scheduled times and deliver real-time video clips via e-mail or smartphone access.
Visit http://sdi.hotims.com704



Online Calculator Tool—Theia Technologies' Image Resolution Calculator is now available on the American Dynamics Website. It calculates image resolution and returns an image at the corresponding resolution to help users identify the level of detail that can be seen using the combinations of three variables — camera distance, resolution or field of view needed.
Visit http://sdi.hotims.com705

View It on Your Tablet—Avigilon's ACC Mobile supports images and detail of 29 megapixels over low-bandwidth connections. Users can use their Android smart phones and tablet devices to connect to the Avigilon Control Center Network Video Management Software (NVMS) platform over any IP wireless network to remotely access surveillance video. **Visit http://sdi.hotims.com706.**

Outdoor/Indoor Pairing—Basler AG's BIP2-D1920c-dn (Outdoor, AF) and BIP2-D1920c-dn (Indoor, AF) HD IP dome cameras provide auto-focus functionality and 1080p resolution at 30fps real-time. A built-in microSDHC card slot maintains local storage of 32GB of data. **Visit http://sdi.hotims.com707**

Advantage Line Addition—Bosch Security Systems' VEZ-400 mini PTZ camera provides a 26x optical zoom, 360-degree rotation, 600 TVL high-resolution imaging and a wide dynamic range. Equipped with a built-in heater, it measures 4.4 inches in diameter, has an IP-66 environmental rating and is available in charcoal or white.
Visit http://sdi.hotims.com708

PTZ Ultimate Zoom—Canon's VB-C60 IP security PTZ camera, compatible with third-party management products, features a lens which provides a 40x optical-zoom and a horizontal field of view up to 56 degrees. A Panorama Image Creation feature stitches together the entire viewing range into one image. **Visit http://sdi.hotims.com709**

Store Video Online—NAPCO Security's ISEE-IVR-1T Internet video recorder stores footage from up to six cameras at 20fps with VGA resolution. Dealers can now offer their customers 90 days of 24/7 video storage from their local iSeeVideo cameras.
Visit http://sdi.hotims.com710

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New Products

Enhanced Zoom Options—Hikvision's DS-2CZ2152P and DS-2CZ2132P analog zoom cameras provide 3D digital noise reduction; up to 23x optical zoom and 16x digital zoom; and feature a day/night auto switch. Additional capabilities include backlight compensation, an OSD menu and low illumination.
Visit http://sdi.hotims.com711

Camera Series Debut—IQinVision's IQeye 3 Series H.264 camera, available in SD480p, HD720p and HD1080p models, support streaming audio, Lightgrabber II low-light capabilities, low-power consumption and up to 60fps. PSIA- and ONVIF-compliant, it measures 49.4 millimeters in height and provides Main Profile compression. **Visit http://sdi.hotims.com712**

Camera Enclosures—Patent-pending L-series camera enclosures from Industrial Video and Control (IVC) are made from carbon fiber compounds and operate in Class I Division 1-rated hazardous areas. The Class 1 Division 1 portable PTZ camera — the first in the L-series camera line — features built-in illuminators and weighs 25 pounds.
Visit http://sdi.hotims.com713

Surveillance & Access Control Interoperability—The March Networks Command video management platform (pictured), integrated with the Software House C-CURE 9000 security and event management system, enables alarms and events to be accessed and viewed bi-directionally. Access control events and alarms, such as a badge being used after hours, can trigger live video pop-ups to support real-time visual verification.
Visit http://sdi.hotims.com714

Does your building look like this?

Fisheye or typical wide angle lenses warp your image, compress data and reduce resolution. You lose important information that no de-warping software can bring back!

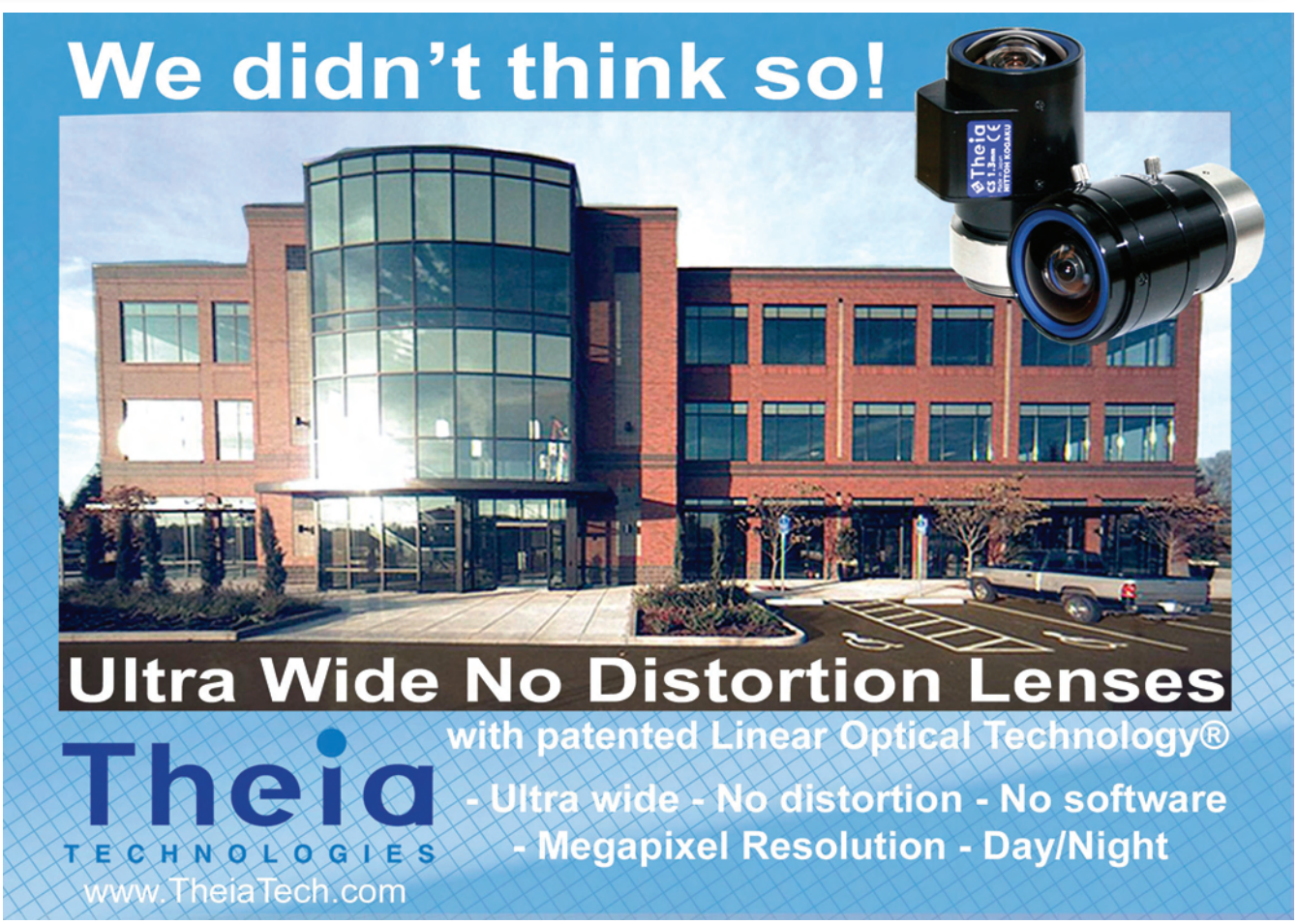
Added Encryption—The MobileCamViewer from mobiDEOS offers video streaming over HTTPS, which combines traditional HTTP Web connectivity with SSL (Secure Sockets Layer) 128-bit encryption. Users can share video securely without providing VPN access or physical media. **Visit http://sdi.hotims.com715**

Mobile Support—Plustek's added support for iPad, iPhone and Android mobile applications uses 3G/3.5G or Wi-Fi to provide live streaming of video anywhere, anytime. Users can select specific channels from different Plustek network video recorders and switch to PTZ cameras for maximum resolution streaming images. **Visit http://sdi.hotims.com716**

HD Surveillance—Toshiba Surveillance & IP Video's IK-WD14A dome camera provides HD 1080p resolution, built-in IR LEDs to assist image capture in near complete darkness and wide dynamic range. It also provides simultaneous H.264/MPEG4/JPEG streaming, motion detection, day/night imaging and anti-camera tampering capabilities. **Visit http://sdi.hotims.com717**

Run Multiple Appliances—S2 Security's S2 NetBox line — version 4.1 build 458 — delivers compliance to NERC standards and a high availability capability feature which sets up in minutes and allows users to simultaneously run multiple networked appliances. **Visit http://sdi.hotims.com718**

View and Record—Homes and small businesses can add Grandstream Networks' GXV36xx series IP cameras and GXV35xx IP video encoders to Bluecherry DVR solutions, which support IP and analog network cameras. **Visit http://sdi.hotims.com719**



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New Products

Light Up the Night—Videotec's GEKO LED illuminators consume 6-12W to operate, last 50 times longer than normal bulbs and can operate in temperatures as low as -50°C up to 60°C. The light produced brightens a scene evenly, eliminating hotspots and underexposure, for visible night-time images using standard definition and megapixel cameras.
Visit http://sdi.hotims.com720

Touch and Go—Digimerge Technologies' DH230 and DH250 "Touch Series" DVRs are now compatible with Windows 7 Touch Screen-enabled monitors, meaning the DVRs may now be controlled and operated by simply tapping and swiping a screen. Available through a firmware update on the supplier's website. **Visit http://sdi.hotims.com721**

Camera/Server Integration—Vivotek's PTZ-series and 8000-series network cameras are now integrated with CamTrace's appliance servers. The cameras provide real-time H.264, MPEG-4 and MJPEG compression; while some models come with two-megapixel sensors for wide-angle coverage, provide multi-streaming at 30fps and have Supreme Night Visibility.
Visit http://sdi.hotims.com722

Reduced Install Time—VideoIQ's line of iCVR-HD full 1080p high-definition cameras now include motorized lenses and increased storage capacity. The optional motorized lens feature delivers remote focus capability, reducing installation time. Increased storage capacity options include 320GB and 750GB hard drives.
Visit http://sdi.hotims.com723

Dome & Box Camera Line—The D-Link DCS-6113/6112 dome cameras feature full HD 2-megapixel resolution and flexible mounting options, making them ideal for indoor retail locations. The supplier's DCS-3710/3112 box cameras (3710 pictured) feature Sony Exmor image sensors, which offer megapixel resolution while maintaining low noise performance in low-light.
Visit http://sdi.hotims.com724

Extend the Distance—The CLFE4US1TPC Ethernet switch from Comnet combines four 10/100TX Ethernet signals and transports them over one coaxial cable or RJ-45 cable. Designed for applications where existing copper media, such as coaxial cable or twisted pair (UTP), is currently installed and an upgrade to an IP-based system is required.
Visit http://sdi.hotims.com725

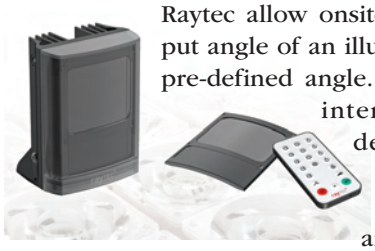
Mini-Box for Wide Angles—The CFHW1634UB mini-box style camera from Advanced Technology Video is designed for special purpose wide-angle and small-format applications. The 550TVL camera includes a wide-angle 1.6-3.4mm vari-focal auto-iris lens, 3D-DNR, 32x zoom, high shutter BLC, privacy and motion detection zones — all packed in a 1.3" by 1.3" package. **Visit http://sdi.hotims.com726**

Outdoor-Ready—The EN-7540 high performance pan/tilt/zoom day and night camera from AMAG Technology, a G4S Technology company, includes a vandal-proof casing, making it a perfect solution for high-risk outdoor areas. Features include a x36 optical zoom for long-range applications and H.264 encoding. **Visit http://sdi.hotims.com727**

Day/Night Operation—Compro Technology's CS400 Series outdoor bullet network cameras feature an IP66-grade aluminum housing to protect against adverse weather conditions. 30 high-performance IR lEDs, a mechanical IR-cut filter, and a double-glass construction ensure nighttime image quality.
Visit http://sdi.hotims.com728

Camera/NVR Integration— LG's IP cameras have been integrated with the Linux-based VioStor NVR (Network Video Recorder) series from QNAP Security (pictured). The NVRs range from 2-drive entry-level to 8-drive professional models, along with 4- to 48-channel recording in H.264, MPEG-4, MJPEG and MxPEG formats.
Visit http://sdi.hotims.com729

Let There Be Light—VARIO illuminators from Raytec allow onsite adjustment of the output angle of an illuminator to a precise and pre-defined angle. A standard kit includes interchangeable lenses to deliver angles of 10, 30 and 60 degrees out of the box. Other angles are available on request.



Visit http://sdi.hotims.com730

Remote Camera Management—View remote cameras over restricted bandwidth connections such as satellite links with the Camera Proxy facility in IndigoVision's SMS4 video management software. The feature allows simultaneous client views of a camera from a low-bandwidth, remote location with automatic PTZ control.

Visit http://sdi.hotims.com731

All-in-One Megapixel—Razberi Technologies' integrated network video recorders are a complete pre-engineered solution for megapixel recording. Each unit combines a server, PoE switch, storage, and video management software in a plug-and-play solution. The new MP series adds 4-channel and 16-channel models. **Visit http://sdi.hotims.com732**

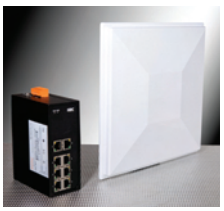
Discreet Surveillance—Samsung Techwin America's iPOLiS SNB-1001 IP compact box camera combines general purpose VGA resolution with features such as face detection analytics, third-generation noise reduction for superior low-light performance (0.7 lux at F1.2) and Samsung Super Dynamic Range. **Visit http://sdi.hotims.com733**

Lots of Pixels—Avigilon's 29 megapixel (MP) JPEG2000 HD Pro camera can replace up to 95 conventional cameras and provides high-resolution, high-definition images of very large areas. The camera series features units ranging from 8 MP up to the 29 MP model. **Visit http://sdi.hotims.com734**

Residential Video—Aiphone Corp.'s GT Series multi-tenant color video system complies with new amendments added to the Massachusetts Building Code requiring that a CCTV system be incorporated in any building with 10 or more apartments. Residents can use their TVs to observe who is seeking entrance to the building.

Visit http://sdi.hotims.com735

Wireless Video Transmission—KBC Networks' unmanaged Ethernet switches can be combined with wireless Ethernet units to allow up to seven cameras to be sent securely over a single wireless link. The ESUL8 switches feature eight RJ45 10/100 copper ports and have broad dual-redundant power inputs.



Visit http://sdi.hotims.com736

A Bridge to IP—The ER8500C and ER16500C switches from Nitek are multi-channel, single-rack-height transmission solutions which allow end-users to extend Ethernet and PoE over coaxial cable. Part of the supplier's Etherstretch line, they allow a true migration path from analog to IP camera technology. **Visit http://sdi.hotims.com737**

Convert to IP—Vicon Industries Inc. has introduced two H.264 network encoders, a 4-channel and 16-channel model, that convert analog camera inputs (both NTSC/EIA and PAL/CCIR) into streamed IP video data. Advanced features include museum search, dynamic load balancing and automatic detection when used as part of the supplier's VMS. **Visit http://sdi.hotims.com738**

Court-Ready Video—The DMX models of Dallmeier's Smatrix series VideoIP appliance with integrated storage system have received LGC Forensics certification, meaning the pictures recorded by the digital video surveillance system meet the requirements for an argumentation in court. The unit can be used with network or hybrid systems, and it supports the newest HDTV technologies.

Visit http://sdi.hotims.com739

By Deborah O'Mara, Editor in Chief, Security Dealer & Integrator

Turnkey vs. Software Only

Which side of the VMS battle are you on? A guide to choosing Video Management Systems from IP video expert Dr. Bob Banerjee

It's a simple enough question — should you go with a turnkey video management system (VMS), or go with a software-only solution? But not so fast! For end-users, system integrators and video management software providers, the underlying issues can actually be quite complex. Recently, I sat down with NICE's Systems' Dr. Bob Banerjee to unravel the complexities.

First of all, what's the difference?

Banerjee: In the good old days of the DVR (Digital Video Recorder), turnkey was the only option. End-users bought a black box — essentially the hardware with the software inside it. Everything was bundled together. But IP video opened up more options. You can get the software and hardware from one vendor, or buy the hardware separately from a COTS manufacturer.

When you go the turnkey route, you purchase the software pre-installed, pre-configured on the hardware. Buying the software from one company and purchasing the hardware separately from the COTS manufacturer is what's referred to as "software only" in the industry.

So which option is best?

Banerjee: You'd expect there would be a relatively simple answer. But it actually depends on who's asking the question: the end-user, the systems integrator (SI), or the VMS vendor.

Let's start with the end-user. The end-user doesn't want to spend any more money than necessary, so, broadly speaking, whatever is cheaper is better. If the end-user buys the servers and storage directly from a COTS manufacturer, it is going to be cheaper. But there's always a price to pay — the IT department now has to maintain those servers, and it is no longer the system integrator's or VMS provider's responsibility.

In my experience, I've found that most end-users tend to opt for turnkey VMS solutions because they are risk-averse. They want to minimize the risk of something going wrong, and if it does, they want "one throat to choke" so it gets fixed right away without finger pointing.

Is that dynamic changing?

Banerjee: Most end-users are selecting turnkey, but the trend is slowing moving in the

direction of software only, as the relationship between physical security and IT grows stronger.

What about systems integrators?

Banerjee: The main thing for systems integrators is margin. Margins on software are usually pretty good, while margins on servers and storage are notoriously bad. Buying the hardware directly from the COTS manufacturer enables the SI to increase the margin on the hardware component of the sale; or, they can use the savings to reduce the overall cost of the project for the end-user, which can make them more competitive on a deal.

What's the downside to the "software only" approach for SIs?

Banerjee: That's a great question. Back when there were only DVRs, everything was really very simple for the SI — the integrator would just buy as many DVRs as the customer needed. Now, with the industry moving to IP video, they might source the VMS software from one vendor and buy the servers and storage from another. In theory, there's no reason to think they won't work together. But in reality, things can and do go wrong.

The SI installs it at the end-user site; everything works great and then suddenly, three months later, something goes wrong. Then, the question is: How do you diagnose the problem? Any good tech will tell you that one-third of the time, problems are because of the software; another third of the time they are related to hardware; and another third involves the network.

The SI might purchase the software and hardware separately to make a better margin on the project; but, when problems crop up, they have to expend resources and time to diagnose and fix them. That's how IP video projects that start out with a healthy margin end up in the red.

The erosion to the SI's margin can actually be quite severe. I have seen small $10,000 to $20,000 projects where the SI would have to drive three hours to the customer site five or more times. At this point, they wish they'd never won the project.

I've also seen situations where the end-user will tell the SI, *"I just want the software, and I'll use*

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the servers I already have." That's not the same as buying a clean server off the shelf — if it was used previously, it could still have other software on it. Now, when something goes wrong, the SI needs to go in and figure out which of the hundreds of thousands of files weren't removed. It can be a very painful process.

That's why SIs mostly sell turnkey when they can. They are willing to accept a slightly higher CAPEX (cost on the project) initially to hang onto their margin in the end.

What's the perspective of the VMS provider?

Banerjee: At the end of the day, even if the VMS software is purchased separate from the hardware, if something goes wrong, the VMS provider is going to get a call. The end-user sitting in front of the VMS screen isn't going to say *"my network isn't working,"* or *"my server has a glitch."* They are going to say, *"the software is not working," "I can't log in,"* or *"I can't look at any cameras. It must be the software."*

"One advantage of turnkey is the software comes pre-installed, pre-configured and pre-tested on the hardware, so the service organization can expect fewer calls," Banerjee says.

The blame starts with the software, even though two-thirds of the time, the source of the problem lies elsewhere. And sometimes the problems are so subtle, they are not easily diagnosed.

This is one advantage of turnkey — because the software is pre-installed, pre-configured and pre-tested on the hardware, the service organization can expect fewer calls. They can also predict and troubleshoot problems faster without having to fly R&D personnel half-way across the world.

But turnkey can be a double-edged sword. Support costs go down, but inventory costs go up. The service organization must now warehouse an array of servers and storage devices ready to ship out at a moment's notice. Keeping too much inventory on hand can be costly; and too little can cause customer issues and project delays.

So what should we conclude from this?

Banerjee: I have been in a lot of meetings with SIs, consultants and end-users, and the subject of whether to go "software only or turnkey" always comes up. While there's no universal answer, we can say that turnkey continues to be the low-risk option; however, there is a gradual trend towards software only in an effort to reduce cost and increase margins.

The cautionary note is that when things go wrong — sometimes for incredibly subtle reasons — then everyone suffers. That's why it is critical to support such projects with a well-resourced customer IT department, or, if you are an SI, by making sure your techs have the right IT training and skills.

Dr. Bob Banerjee is Senior Director of Training and Development for NICE Systems Security Division. He has more than a decade of high-tech and security industry experience. He holds a Ph.D. in Artificial Intelligence from the Advanced Research Center at the University of Bristol, England.

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By Jeffrey A. Stout

How to Prepare for IP Video

A guide to video education for integrators, technicians and installers

It is hard to walk the floor of a security trade show or pick up a security publication and not see an overwhelming number of products related to IP video. It is obvious that IP video and, in fact, networking in general, will dominate security products for the foreseeable future.

As a security dealer/integrator, the path to successfully navigating the network world can be as challenging as it can be rewarding. Training your installation, sales and service personnel is critical when venturing into the IP video space.

One of the primary concerns of IP video is the networking component. Integrators can find several local options to train installation and service personnel in this area. There are very good small business and home networking classes available at local community colleges and technical schools, which provide the necessary basics for almost any technician to understand the set-up and the communication of devices on an IP video network.

In addition, there are many online training classes that allow for self-paced study. Also, your distribution and manufacturer partners should offer training classes that can augment any local training and can help educate sales personnel on the benefits of an IP-based video system.

Here are the key educational concepts to look for in an IP video training class:

- Understanding transmission methods (copper, fiber, wireless, etc.);
- Bandwidth and transmission speeds;
- The IPv4 and IPv6 naming structure, including subnetting;
- Multicasting and VLANs;
- Port forwarding;
- The Open Systems Interconnect model (Layer 2 and Layer 3 switching); and
- Understanding storage methods.

Education is certainly not the only challenge facing integrators when it comes to IP video — how to select cameras and recording equipment is chief among them. There are so many different types of cameras with varying resolutions, formats, and codec usage that selecting the right camera often depends on the installation itself.

The resolution is contingent on what the camera is being used for: is it general observation (40 pixels/foot), is it for surveillance (40-60 pixels/foot), or for identification (60-plus pixels/foot)?

Not all cameras and recording solutions speak the same language — most manufacturers and distributors are great sources to ensure system interoperability. Other factors to be consider are the amount of storage required, the necessary bandwidth for the system, and whether or not remote viewing will be required (This is a bandwidth issue for the customer and their Internet Service Provider-ISP).

While the IP video market is growing exponentially, it is still relatively new. That means integrators need to consider the way they choose to work with certain manufacturers and vendors. Important considerations include: online tools for system design, interoperability (ONVIF and PSIA) among different manufacturers, and the vendor's road map for upcoming products.

Here are some other items, features and accessories to consider when choosing a vendor:

- Camera formats (HD and/or megapixel);
- Camera style (box, bullet, IR, dome, outdoor, vandal-resistant, etc.);
- Available resolution and frames per second; and
- Overall camera performance (WDR, low light, bit streams).

The selection process for a software or NVR manufacturer is just as important, and the choice involves many key criteria. While compatibility with a large number of camera manufacturers is important, here are some additional considerations:

- Supported storage methods (NAS, RAID, SANS arrays, etc.);
- Software (client- or browser-based);
- Mobile connectivity (iPhone, iPad, Droid, Blackberry, etc.); and
- Remote storage and/or backup.

As the IP video market continues to grow in the industrial, commercial and residential markets, preparing your team to adapt to IP video is essential to survival. Proper training and education will enable your team to effectively communicate with your customers' IT professionals. It will also give you the knowledge to aggressively select, compete and ultimately make a profit deploying network-based surveillance systems.

Jeffrey A. Stout is Director of Network Solutions for Tri-Ed / Northern Video Distribution.

ISC WEST 2012

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- Pairing technology to establish the best IP migration strategy
- Supporting current and future video surveillance applications

ANIXTER ipassured℠
Defining Network Video Migration

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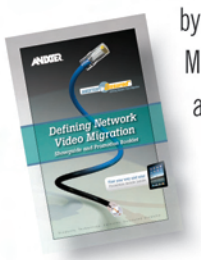

General Exhibit Hours

Wednesday, March 28	10:00 a.m. – 5:00 p.m.
Thursday, March 29	10:00 a.m. – 5:00 p.m.
Friday, March 30	10:00 a.m. – 3:00 p.m.

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