

2010 Technology BREAKTHROUGHS

SSI's technology experts once again handpick some of the most noteworthy devices introduced this past year. The 2010 Top 30 Technology Innovations is a balanced list of ingenious hardware design, cutting-edge software development and labor-saving installation aids.



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T By Bob Dolph, Steve Payne and Scott Goldfine

he security industry offers a staggering array of technology today. Obvious examples include high definition video, analytics, biometrics and wireless devices. However, digging deeper reveals fascinating wrinkles within those areas as well as a host of fresh and inventive approaches addressing other security needs and challenges. SSI's 2010 Top 30 Technology Innovations gives some of the year's head-turning creations (a 10-megapixel camera!) due recognition but at the same time also drills down to uncover hidden gems (pool alarm anyone?) that might otherwise have slipped under the radar.

Whether you are looking to increase profitability, become more efficient, make installations and troubleshooting easier, expand your business' portfolio of offerings, satisfy random curiosity or sate your inner techno geek, you're assured of dis-

covering something in this year's Top 30 picks that tickles your fancy. In fact, although the judging criterion limits each manufacturer to a single entry, this year's list includes access control, fire/life-safety, intrusion detection and video surveillance applications, and spans at least 21 different types of technologies.

As you might expect, the choices by SSI columnists Bob Dolph ("Tech Talk") and Steve Payne ("Convergence Channel") are by and large indicative of their respective fortes. What all the selections share in common is offering owners/managers, salespeople and technicians of installing security providers a wealth of opportunities and benefits. With 'oos and aahs' all around, SSI is delighted to present — in alphabetical order by writer — 2010's Top 30 Technology Innovations.

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DOLPH'S PICKS ...

Bosch Communications Receivers



Although the devices themselves have been around for a while, I have selected Fairport, N.Y.-based Bosch Security Systems' Conetrix family of receivers/gateways (Models D6600 and D6100i) for some of their recent solutions breakthroughs. Everyone has seen increasing challenges with the accelerated conversion for POTS to VoIP for alarm signal transmission. This year, Bosch released a patented technology update to help with the reliable handling of alarm signals over VoIP. The industry is grateful for real solutions like this.

www.boschsecurity.us

Dedicated Micros 'Edge' Recording



Everyone has seen the explosion of 'edge' technology. Dedicated Micros of Chantilly, Va., an old-time favorite in the industry, has come up with the Integrated Camera Recording (ICR) system. This system offers the capability of combining recording with a full enterprise video server within a single camera. The ICR reduces the 24/7 dependency on high bandwidth network infrastructure and provides a tiered storage architecture to protect against any network downtime. An integrated expansion port provides local recording to SD memory cards while the use of ATA over Ethernet (AoE) protocol provides separate, remote storage for backup and long-term archiving.

www.dedicatedmicrosus.com

DMP Supervised Wireless System



I always celebrate when the marriage of two great product lines forms a better product. This is the case with the Smart Devices 1100 Series from Springfield, Mo.-based Digital Monitoring Products (DMP). The system features wireless UL-Listed devices including smoke detection; two-way supervised communications; and a built-in survey LED for confirmed communications. The wireless connectivity is provided by Inovonics, which has always had a high quality reputation for its highly reliable 900MHz frequency-hopping spread-spectrum communications.

www.dmp.com

superior resolution



Arecont Vision just released the next generation in panoramic megapixel cameras that now include Day/Night functionality. Arecont Vision has already successfully deployed its 8-megapixel 180° and 360° cameras worldwide for several years at very important sites. New panoramic cameras are available with Day/Night functionality providing an ability to deliver improved forensic detail over vast areas. One Arecont Vision panoramic camera does the work of up to 24 standard definition IP and analog cameras - lowering project costs and improving return-on-investment (ROI). Calculate the total savings and you'll clearly see how Arecont Vision panoramic Day/Night megapixel cameras should surround you.



Illuminar Infrared Illuminator



Infrared (IR) illuminators have been around for some time, but what impressed me in this case was the design of the IR148-PoE Series from Sugar Land, Texas-based Illuminar. This specialist manufacturer has come up with a pretty slick IR illuminator that, for starters, is PoE-enabled using SMT LED technology. The devices cover a distance of 115 feet with an angle range of 10° to 120°. The weatherproof units include a five-year warranty, built-in On/Off photocell and telemetry input for remote switching.

www.iluminarinc.com

IpDataTel Broadband Transmitter



Here is an example of where a bat may be good in a house. In this instance, BAT is an acronym for broadband alarm transmitter and it is a simple-to-install IP device from IpDataTel of Sugar Land, Texas. The BAT connects to the keypad bus in any Honeywell Vista or DSC PowerSeries alarm control panel. BAT signals can then be sent in contact ID or SIA/FSK databurst formats to the central station. Other signals can be retransmitted directly to end users by automatic means such as voice call, text messaging and/or E-mail.

www.ipdatatel.com

Keyscan Tailgating Solution



Still trying to come up with a good system to catch tailgaters? The tailgating detection system (TDS) from Keyscan of Whitby, Ontario, Canada, is designed for high security applications where tailgating presents a serious threat. With the provided Keyscan reader, the TDS interfaces with the firm's access control panels and

other physical access control products. When more than one person passes through the curtain on a single card read, the TDS will trigger the built-in audible alarm as well as activate an alarm relay that can be interfaced with the access control system.

[www.keyscan.ca](http://www.keysscan.ca)

NuVo Whole-House Audio System

Today's home is an exciting market of digital connectivity. One company leading the pack is Hebron, Ky.-based NuVo Technologies and its award-winning Renovia system. This whole-house audio system rocks with such features and options as the NuVoDock for iPod. The system can accommodate up to six sound sources and eight listening zones. Renovia makes for an easy retrofit as it uses existing home power lines. Each system is comprised of a source hub and either an easy-to-install or freestanding zone amplifier. This is a really slick home audio system upgrade with a disruptive installation.



www.nuvotechnologies.com

Samsung Weatherproof Camera



Samsung Techwin of Carson, Calif., has a pretty impressive new camera. The SCO-2080 is equipped with a weatherproof housing and bracket for convenient and cost-effective installations, and a 3.6x vari-focal lens (2.8 ~ 10mm) for broader visual angles. Embedded with the W-V DSP chipset, this camera achieves 600 TV lines of high resolution, day and night. And its 2D/3D filtering noise reduction technology further increases image clarity. In addition, it is IP66-rated for both dust and waterproofing to maintain stable performance in any indoor or outdoor location.

www.samsungtechwin.com

S.R. Smith Pool Alarm



Coming up with a good pool activity detection system has always been a challenge. That's why you might want to check out Poolsonix from a company specializing in pool equipment, Canby, Ore.-based S.R. Smith. This solar-powered wireless detection product provides notification at the pool and inside the home in the event of an alarm. The interior siren/strobe delivers both an audible and visual indication of an alarm event. The device is designed to detect near-silent wave activity associated with accidental pool entry. Also available is a universal wireless bridge that can connect to home alarm and automation control systems.

www.srsmith.com



DOLPH'S PICKS ...

System Sensor Early Fire Detection



The goal of any fire detection system is to detect a threat as early as possible. System Sensor of St. Charles, Ill., meets that quest with the exciting Fire Alarm Aspiration Sensing Technology (FAAST) system. The FAAST smoke detector combines dual-source (blue LED and IR laser) optical smoke detection with advanced algorithms to sense a wide range of fires while maintaining enhanced immunity to nuisance particulates. This enables FAAST to accurately pick up incipient fire conditions as early as 30 to 60 minutes before a blaze actually starts.

www.systemsensor.com

Veracity IP Camera Tool



I am always excited when new service tools come out that truly help the technician do a better job. The PINPOINT IP camera setup and focusing adapter from Veracity of Glen Rock, N.J., is such a tool. This adapter allows IP video installers to easily set up and focus PoE-enabled cameras. No temporary local power source for the camera is required. PINPOINT enables the camera to draw its power from the installed PoE network cabling, while redirecting the actual Ethernet network connection to a local laptop, netbook or PDA.

www.veracityglobal.com

Videx Key Management Cabinets



I was impressed with the versatility of the CyberKey Vault control and access system from Videx of Corvallis, Ore. With built-in network connectivity, the cabinets or vaults are available in single- or 20-key versions. The CyberKeys can be individually assigned with daily programmed schedules. Key activity is reported to the CyberKeys during the day and the system expects return at night to an associated vault. Access to the vaults requires a combination of RFID and PIN. Power can be PoE with battery backup on the Vault 20. Daily audit trails can be E-mailed to management.

us.videx.com



PAYNE'S PICKS ...

Aiphone Networked Intercom



With everything else merging onto the network, it only makes sense for intercom systems to follow right along. Bellevue, Wash.-based Aiphone's latest entry into the market is the full featured IS Series IP network intercom system. The IS can send audio and video intercom signals utilizing existing network infrastructure. With both a master station device and a software-based interface, the IS fits into most applications. On top of standard intercom functions, the IS Series also offers public address, emergency notification, call transfer and bell/announcement scheduling.

www.aiphone.com

Arecont 10-Megapixel Camera



Arecont Vision of Glendale, Calif., continues to raise the bar in megapixel camera technology. At 10 megapixels, the AV10005 has amazing image quality. With a full resolution of 3,648 X 2,752 at 6 images per second (ips), this camera provides an impressive amount of detail. If a higher image rate is needed, the camera can do full 30ips at 1,920 X 1,080. The AV10005 also comes with the ability to highlight regions of interest, so portions of an image can be isolated in a separate stream, allowing multiple views from a single camera while the image as a whole is constantly recorded. The camera is available in either a straight color or day/night version and has options for dome housings.

www.arecontvision.com

Axis 3-Megapixel Dome Camera



Chelmsford, Mass.-based Axis Communications has once again proven itself to be a leader in megapixel IP camera technology. The P3346 dome camera offers full image rates at 1,080 pixels or 3-megapixel resolution. It also has virtual pan/tilt/zoom-like control with remote focus and zoom. Different sections of the image can be zoomed in on and run as a separate stream. Multiple H.264 as well as MJPEG streams can run simultaneously. The new P-Iris technology makes precise adjustments to the iris improving color, contrast and depth of field to provide better image quality from megapixel and HD cameras. Add ONVIF compatibility and a tamper-resistant housing and you have a mighty capable camera.

www.axis.com



Code Blue Mass Notification



We see the need for mass notification systems (MNS) demonstrated on almost a weekly basis. Getting critical, accurate information to large numbers of people around a campus or building can be vital in times of emergency. The Blue Alert MNS from Code Blue of Holland, Mich., achieves that goal handsomely. As a turnkey system, Blue Alert includes input devices, speakers and control software. It can integrate with other IP

intercom and announcement systems with an API, and can also connect to all of Code Blue's analog products. Announcements can be done with text-to-speech, prerecorded or a live broadcast. There are also options for tone alerts and scheduling.

www.codeblue.com

Comnet Modular Ethernet Switch



The key to any successful IP installation is solid infrastructure. Danbury, Conn.-based Comnet is stepping up to meet that challenge with a modular switch, the ComWorx CWGE24MODMS. The big buzzword with this switch is flexibility. Modules can contain either copper or fiber ports or a combination of both. All modules can be up to 1,000Mbps. This is a standard Layer 2 switch that supports advanced and standard networking technologies such as IGMP v2 and 802.1q VLAN tagging. With a 48Gbps backplane, it can handle a large amount of data.

www.comnet.net

Dotworkz Camera Enclosures



Unusual environmental conditions seem to be a theme this year, and this entry fits right in. The S-type enclosure from San Diego-based Dotworkz is suitable for analog and IP cameras, and can handle extreme environments. For temperate cool/warm environments, the S-type comes with a standard heater/blower combination. For more tropical, humid locations, the S-type Tornado offers a 20cfm fan and blanket heaters. If extreme cold is your issue, the S-type Ring of Fire has thermostatically controlled heating suitable for use down to -40°. For extreme heat, the S-type Cooldome has active cooling and can be used in temperatures up to 145°.

www.dotworkz.com

FLIR Color Night Vision Cameras



Until now, extreme low-light conditions required cameras and imagers that only offered black-and-white or green images, nullifying the benefits of color imaging technology. Wilsonville, Ore.-based FLIR's new line of color night vision security cameras restores that full color viewing, even at night. Seeming to have broken (or at least tweaked) a few laws of optical physics, the new F- and PT-Series cameras utilize FLIR's latest technology electron multiplied (EM) CCD imagers, providing full color viewing 24 hours a day, from daylight to starlight. The color low-light series also boasts a 20x optical zoom, multiple video streams in H.264, MPEG-4 and MJPEG formats, and ONVIF compliance.

www.flir.com

GVI Security Integrated NVR



Need to simplify that installation? Need an all-in-one device? Then the razberi from GVI Security of Carrollton, Texas, is for you. Aside from the unusual name, this is a pretty powerful piece of equipment. The razberi combines an NVR, power over Ethernet (PoE) network switch, network router and video management system (VMS) software interface. When using compatible cameras, the device can also perform automatic camera discovery and configuration. The unit provides H.264 recording and storage of up to 2TB. Mounting options include wall, rack and desktop.

www.gviss.com

Messoa LPR-Capable Camera



License plate recognition (LPR) is fast becoming a very valuable and useful tool in the security industry and beyond. Being able to capture and retrieve plate numbers and compare them to a database has applications in schools, parking lots, hotels/resorts, intelligent traffic systems and much more. The SCR515PRO camera from Messoa of Chino, Calif., makes that job a lot easier. With advanced features like headlight suppression and 3D noise reduction, this camera offers outstanding performance in all kinds of conditions. It also has the ability to cut through fog and can switch between different modes for varying traffic applications.

www.messoa.com



NOTIFIER Fire Alarm Control Panel



The NFS2-3030 fire alarm system from Honeywell's NOTIFIER (Northford, Conn.) line is a strong contender in the fire/life-safety market. Supporting up to 3,180 devices, it can handle even the largest applications. For first responders, the NFS2-3030 offers a large 640-character LCD that can give information on devices, locations, evacuations status and other important items. Advanced features include the ability to utilize custom graphics for notification displays and Internet connectivity through the IPDACT-2 and IPDACT-2UD modules. Secondary telephone lines can be utilized for backup communications.

www.notifier.com

Optiview Weatherproof DVR



A rather unique entry comes from Optiview of Jacksonville, Fla. A four-channel H.264 DVR may not seem that unusual at first glance, but then you find out it is weatherproof! That changes things. Encased in a NEMA/IP-rated enclosure and including a thermostatically controlled fan, this DVR is designed to go outdoors in all kinds of conditions. On top of the DVR itself, the enclosure comes with a 9-channel, 10A power supply for cameras, microphones, etc., as well as 110VAC power outlets for other devices. Options include a built-in LCD monitor and wireless bridge. For remote applications, the WDVR4 is ideal.

www.optiviewusa.com

Paxton Power-Saving Access Reader



The Energy Saving Reader from Paxton Access of Bellevue, Wash., is a new take on common technology. Sure, it's a prox reader, but one with a twist. It actually retains the user's prox card while that user is in the room. Inside the reader is a contact. When a card is inserted and accepted, the contact inside the reader is activated and turns on any connected equipment such as lighting, HVAC, etc. When the user leaves, he/she takes their card and after a prescribed amount of time, the ancillary equipment shuts off. A great way to ensure lights don't get left on and electricity isn't wasted.

www.paxton-access.com

Pelco Megapixel p/t/z Camera



Spectra HD is a product that customers of Clovis, Calif.-based Pelco by Schneider Electric were anxiously waiting for from the day the company announced its first megapixel camera line. Many desired the high definition image quality but still wanted the flexibility of 360° pan/tilt/zoom. At 960 pixels maximum resolution (20 images per second), the image quality is sure to please even the most stringent HD fan. For those needing the highest image rate as well as superior images, 30ips is available at 720p, exceeding any standard resolution camera. With 18x optical zoom, built-in analytics and expansion ports, the venerable Spectra Series is now a completely capable and up-to-date member of Pelco's IP and megapixel family.

www.pelco.com

Pivot3 Ruggedized Storage Array



Pivot3 of Spring, Texas, has become a force to be reckoned with in the attached storage array market. Sometimes the environments these systems are asked to operate in are less than ideal. For locations that might have high vibration, high temperatures or other inhospitable conditions, Pivot3's Hardbank ruggedized storage array fits the bill. Offered in capacities up to 8TB, an array can scale up to 48TB, creating sufficient storage for most IP applications. To further simplify installations, the Hardbank comes with a virtual server that can be configured with the VMS software of your choice, eliminating the need for another piece of hardware.

www.pivot3.com

VideoIQ Megapixel 'Edge' Camera



IP megapixel cameras are fast becoming as common as analog, so why am I talking about another one? Because this one comes with a twist: recording at the 'edge.' Following trends in the IP networking industry, manufacturers are starting to consider pushing storage out to the edge of the network, instead of a centrally located data center. Bedford, Mass.-VideoIQ's full featured 1,080-pixel iCVR-HD megapixel camera includes built-in storage. Its onboard storage can be sized up to a half a terabyte. The camera can also take advantage of VideoIQ's IQTrack automatic object tracking utilizing a virtual pan/tilt/zoom technology.

www.videoiq.com