

Security Solutions Today

November / December 2013

RESIDENTIAL, EDUCATIONAL & INSTITUTIONAL SECURITY

Cover Focus

*Schools Improve Security And Save Money With
Open Platform IP Video Surveillance*

Security Feature

*Extra Sensory Perception,
Thermal Imaging Cameras & more...*

Show Preview & Review


Intersec Dubai 2014

Hotelex 2013

Secutech Thailand 2014

Secutech Vietnam 2013



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1.3/2-Mp Water-Proof & Vandal-Proof
IR Network Dome Camera



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Small IR Dome Camera



1.3Mp HD Network
IR PTZ Dome Camera

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Celebrating 10 Years of Leading the Way in Megapixel Video

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**Make sure the bad doesn't happen
so the good can. Anywhere. Anytime.**



When you're responsible for the safety, security and everyday function of a big city, you have your hands full making sure the bad doesn't happen so the good can. At Axis, our deep experience in city surveillance gives us invaluable insight into the complexity of what you're facing every minute of every day.

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BOSCH
Invented for life

Bosch Partners with Mirasys for Integrated Video Solutions

“Leading video management vendor is latest addition to the Integration Partner Program of Bosch.”

Bosch has entered into an agreement with Mirasys, a leading supplier of open platform Video Management Systems (VMS), which will allow users and integrators to implement comprehensive and centrally managed end-to-end video solutions. Mirasys has joined the Integration Partner Program (IPP) of Bosch, which is designed to improve interoperability between Bosch’s products, software and storage solutions. With tight integration of the entire range of Bosch’s IP based video cameras into Mirasys’ Carbon VMS, customers using this management system can now benefit from all the advanced features of Bosch’s IP video technology, including in-camera analytics to support the Mirasys Open Analytics Platform.

End users and integrators alike will be able to benefit from open and highly scalable video architectures with advanced analytics capabilities. As Mirasys supports hybrid environments with legacy and IP cameras, the cooperation between the two companies also opens an easy migration path from analog to IP for existing Mirasys customers. They can now benefit from the advanced features of IP cameras while at the same time protecting their investments in legacy systems.



We need compatible video products to create the best solutions for our customers.

Integration Partner Program

At Bosch, we integrate with even more video management software and storage providers.

Milestone Systems and Bosch Intensify Partnership



“Dedicated driver enables deeper integration.”

Milestone Systems and Bosch Security Systems have entered into a strategic global partnership aiming at complete integration of Bosch IP video devices with Milestone XProtect IP Video Management Software.

The two companies have already worked with each other for years, but the new strategic partnership is meant to bring integration of their products to a new level. Mutual customers will be able to access more unique features with a new dedicated driver for Bosch IP devices that is now available from Milestone. The driver supports edge storage and Bosch’s embedded Intelligent Video Analysis offering for advanced notification of potential security risks, as well as other unique features available in Bosch’s broad range of IP video products. In the past, Milestone Systems has already supported tamper and motion detection and H.264 compression from Bosch’s IP video devices.

Calendar Of Events



Intersec 2014

Date: 19 – 21 January 2014
Venue: Dubai International Convention and Exhibition Centre, Dubai
Contact: Andreas Rex
Organiser: EPOC Messe Frankfurt GmbH
Tel: +971 4 389 4500
Email: andreas.rex@uae.messefrankfurt.com
Website: www.intersecexpo.com

Secutech Taiwan 2014

Date: 19 – 21 March 2014
Venue: Nangang Exhibition Centre, Taipei Taiwan
Contact: Echo Lin
Organiser: Messe Frankfurt New Era Business Media Ltd.
Tel: +886 2 2659 9080 ext. 761
Email: Echo.lin@newera.messefrankfurt.com
Website: <http://www.secutech.com>

Safety & Security Asia 2014

Date: 28 – 30 April 2014
Venue: Marina Bay Sands, Singapore
Contact: Chloe Tan
Organiser: Conference & Exhibition Management Services Pte Ltd (CEMS)
Tel: +65 6278 8666
Email: chloe@cems.com.sg
Website: <http://www.safetysecurityasia.com.sg>

Secutech Thailand 2014

Date: 3 - 5 July 2014
Venue: Bangkok International Trade and Exhibition Centre
Contact: Tina Chang
Organiser: Messe Frankfurt New Era Business Media Ltd.
Tel: +886 2 2659 9080 Ext. 665
Email: sth@newera.messefrankfurt.com
Website: <http://www.secutechthailand.com>

Secutech Vietnam 2014

Date: 20 - 22 August 2014
Venue: Bangkok International Trade and Exhibition Centre
Contact: Sandra Chen
Organiser: Messe Frankfurt New Era Business Media Ltd.
Tel: +886 2 2659 9080 ext. 761
Email: Sandra.chen@newera.messefrankfurt.com
Website: <http://www.secutechvietnam.com>

IFSEC Southeast Asia 2014

Date: 11 - 13 September 2014
Venue: Kuala Lumpur Convention Centre
Contact: TJ Tan
Organiser: UBM plc
Tel: +6-03-2176 8788
Email: tj.tan@ubm.com
Website: <http://www.ifsecsea.com>

Security China 2014

Date: 28 - 31 October 2014
Venue: China International Exhibition Centre (New Centre)
Contact: Tony Lee
Organiser: China Security and Protection Industry Association
Tel: +86-10-51920615
Email: bizcspia@yahoo.com.cn
Website: <http://www.securitychina.com.cn>



BOSCH

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A winning partnership

– Bosch connects fire alarm and voice evacuation communication via IP

In the event of a fire, evacuation of the area or building concerned is always the top priority.

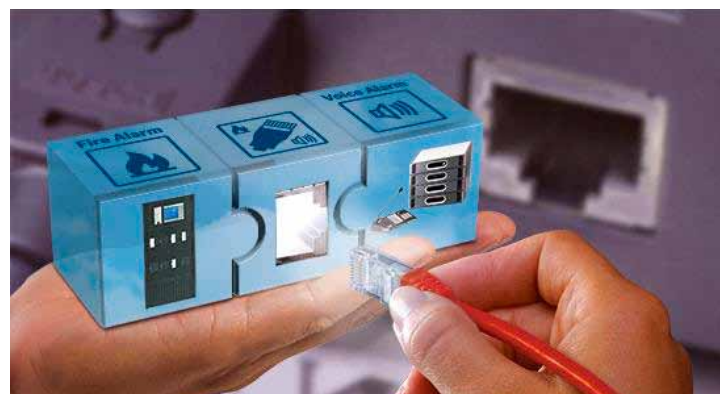
Therefore, there is a strong need to link fire alarm and public address systems with a reliable and bi-directional connection. The latest version of the Modular Fire Panel 5000 Series from Bosch fulfills this requirement in a customer-friendly way. The fire alarm panel is now equipped with an IP-communication interface to the public address and voice evacuation system, Praesideo, ensuring a flexible and future-proof connection between both systems.

The alarm panel and evacuation system are connected via Ethernet, resulting in several major benefits. Firstly, apart from the usual system-IP-components, it removes the need to install additional hardware modules and complex cabling, which leads to time and cost savings during installation and wiring. At the same time, the risk of incorrect cabling is eliminated, as only one Ethernet connection is required as opposed to multiple-cable connections in the past. Secondly, thanks to extensive diagnostic functions, there is a continuous and fast analysis of the connection state, resulting in clear feedback. Finally, should the system be extended in the future, no complex and fault-prone re-cabling of the hardware connections is necessary.



“The new Fire Panel offers higher flexibility in terms of project design,” explains Philip Duerringer, team leader at Bosch Security Systems. “It allows for customer-specific and complex evacuation rules to be programmed, and is future-proof due to the ease with which the system can be expanded without having to install new hardware.”

The interface conforms to EN 54 standards and, since September 2012, has been enhanced by way of IP networking, making it ideal for large-scale installations requiring numerous outlets, or for such complex systems as airports and railway stations. Last but not least, the system can be connected to an existing third-party building management system via OPC or by way of a soft-ware development kit.



For more information, email us at: apr.securitysystems@bosch.com or visit <http://asia.boschsecurity.com/>



Editor's Note



Dear Readers,

Welcome to the final issue of Security Solutions Today for 2013! This issue of SST is looks at 'Residential, Educational & Institutional Security'.

2013 has whizzed by so quickly and I hope that it has been a good and eventful year for you. On the flipside, this year has seen a number of tragedies and security breaches that have taken place all around the globe. As we head into a brand new year, it's imperative that we take away some valuable lessons from 2013 to allow us to be better prepared for any potential troubles that may arise in the coming year.

This issue showcases highly informative case studies that look at ways of ensuring residential, educational & institutional security (pg. 38). Our Cover Story is penned by Eric Fullerton who discusses the marvels of IP Video Surveillance and how it will greatly improve security in schools (pg. 22). Eric is the Corporate Chief Sales & Marketing Officer from Milestone Systems.

Do be sure not to miss our Security Feature section, which features three articles that delve into new breakthroughs in the Security industry. That's not all...! We have a special product spotlight section featuring Bosch Security Systems' exciting new range of IP 5000 cameras. (pg. 89). This issue also includes a preview of the upcoming Intersec Dubai 2014 exhibition (pg. 102). We also include exclusive event reviews of the Hotelex Shanghai 2013, Secutech Thailand 2013 and Secutech Vietnam 2013 shows. (pg. 105).

This issue's Pundit Perspective features valuable opinions from security experts from organisations which include Arecont Vision, Genetec, Milestone Systems, Gallagher and IQinVision (pg. 30).

Have a great read! Merry Christmas & Happy New Year in advance!

*Sharon Kaur
Editor*

Panasonic

Clearer Visibility Even in Rain



Superior performance against rain and dirt with rain-wash coating

Rain-wash-coated PTZ Dome Camera Lineup (weather-resistant type)

Network Cameras

Analog Camera



- WV-SW598 NEW**
- 1080p HD images up to 30 fps
 - 360 degree endless Panning
 - Advanced Auto Tracking
 - Ambient Operating Temperature -50 °C ~ +55 °C



- WV-SW396A NEW**
- 720p HD images up to 30 fps
 - 360 degree endless Panning
 - Advanced Auto Tracking
 - Ambient Operating Temperature -50 °C ~ +55 °C



- WV-SW395A NEW**
- 720p HD images up to 30 fps
 - Panning with auto flip function
 - Auto tracking
 - Ambient Operating Temperature -40 °C ~ +50 °C



- WV-CW590A/WV-CW594A NEW**
- High resolution: 650 TV lines
 - High sensitivity with Day/Night function
 - Auto tracking
 - Ambient Operating Temperature -50 °C ~ +55 °C

i-PRO SmartHD

MEGA SuperDynamic



IP66 standard

ONVIF

SD6 SuperDynamic



IP66 standard

Effects of rain-wash coating

Fewer rain droplets Rain droplets



Less dirtying Dirtying



Droplet formation prevention

Visibility can be ensured even in rain due to droplet prevention effect.

Reducing dirtying

Dirt is easily washed off dome cover by rain water due to self-cleaning effect.

Advanced coating technology

Long-term effect is maintained due to advanced coating technology.

<http://security.panasonic.com>

<http://www.facebook.com/PanasonicNetworkCamera>

Panasonic Systems Asia Pacific

2 Jalan Kilang Barat, Panasonic Building Level 7, Singapore 159346 Tel: +65 6270 0110 Fax: +65 6276 0330 E-mail: biz.prod@sg.panasonic.com

HID Global Extends Its iCLASS SE Platform With Credential Encoding Solution

HID Global®, a worldwide leader in secure identity solutions, recently announced the launch of its new iCLASS SE® Encoder, a desktop solution and developer toolkit (DTK) that enables organizations to encode and instantly issue cards using a single device. The multi-technology encoder makes it easier for customers to migrate from current technologies to the higher security, adaptability and portability of the company's iCLASS SE access control platform. The solution gives organizations the convenience of encoding a broad range of current and future technologies, with the option for customers to create and manage keys and configure readers locally or through HID Global's iCLASS® and SE Elite program.

The iCLASS SE Encoder provides an entirely open solution and that allows organizations to encode multiple credential technologies, including both Genuine HID® and third-party credentials, in order to upgrade existing card populations for use with iCLASS SE platform readers. For maximum interoperability, the solution supports Seos®, iCLASS SE, standard iCLASS, MIFARE® Classic and MIFARE DESFire® EV1. The encoder also supports 125 MHz HID Prox® for encoding Prox credentials as well as migrating from HID Prox to high frequency technologies. Users can seamlessly and easily migrate

from one technology to another by simply extracting access control data from an existing card and writing it to the new credential, without having to manually input data or understand encoding details. For even higher security, users can "wrap" their access control data within a Secure Identity Object™ (SIO) and then write it back to the same card. Based on open architecture, the encoder enables SIOs to be added to the full range of supported cards, including MIFARE and DESFire credentials.

HID Global is also introducing a flexible credential encoding applet structure that is based on an easy-to-manage credit system. Users install only the applets they require for the technology credentials they currently need, and can add applets to support other existing or future technology credentials over time. In addition, the iCLASS SE Encoder is field-programmable and upgradeable for added versatility.

The encoder is part of HID Global's award-winning iCLASS SE platform, which empowers users to implement a combination of credential technology, traditional smart cards and smartphones that meet the specific needs of their access control system. HID Global also plans to offer credential encoding capabilities via its FARGO® printer line and its HID Secure Identity Services™ portal. **SST**

Mobotix AG Unveils New Lowlight Exposure Optimisation - MxLEO

Mobotix AG recently announced that they would be launching the new Lowlight Exposure Optimisation (MxLEO) software and new hardware for its building automation/home automation offering. The MxLEO is part of the latest Mobotix firmware 4.1.9 that also includes support for hemispheric five-Megapixel technology sensor modules

"MxLEO is the latest in Mobotix image enhancing technology," said Dr. Ralf Hinkel, founder and ceo of Mobotix AG. "The main benefits for all Mobotix users are that our camera solutions now offer a dramatically enhanced sharpness of images, considerably less noise in these images, extremely user-friendly light settings in the camera(s), optimised recording and alarm results using the added Mxactivitysensor intelligence. All these benefits in low-light conditions are made possible through the new Mobotix five-Megapixel technology."

Mobotix is adamant that one of the most important criteria for a security camera is to offer high-quality

images no matter what. "Our users do not have the luxury to choose when and how they want to use Mobotix camera solutions whether it is day, night, good or bad weather. Our technology is put to test everyday and in the worst conditions imaginable for a camera. The sun is shining directly at it - no problem the camera handles it through the built-in automatic exposure settings, unwanted movement in the images triggering alarms - no longer a problem as the Mxactivitysensor in the camera reduces these alarms and now in extreme low light conditions - the MxLEO enhances the images to a completely new level," continued Dr. Hinkel.

The Lowlight Exposure Optimisation software is included in the firmware release 4.1.9 and is as all Mobotix software and firmware, free of charge. It can be downloaded on all five-Megapixel Mobotix cameras and is included as standard. Apart from the MxLEO the 4.1.9 also includes support for Mobotix new hemispheric sensor modules for the newly released S15 and M15 camera platforms. **SST**

Axis Introduces A Fully Featured, Bullet-Style Outdoor-Ready Network Camera

Axis Communications, a world leader in network video, has recently introduced a strong addition to its line of fixed cameras for outdoor surveillance. The AXIS Q1765-LE has a powerful 18x motorized optical zoom for covering long distances and autofocus that provides images in perfect focus. In addition, Axis' unique Corridor Format allows for effective monitoring of vertical scenes such as long streets or long perimeters.

"AXIS Q1765-LE is a slim and solid bullet-style camera designed for outdoor surveillance even in challenging conditions. Its outstanding robustness and reliability makes it especially suitable for critical installations like traffic junctions," said Ken Lee, Axis' sales manager for Malaysia. The AXIS Q1765-LE has built-in high-efficient automatically adaptive infrared LEDs. The IR LEDs allow the camera to cover at least 15 metres (50 ft.) in the widest field of view and up to 40 metres (130 ft.) in full tele view. The built-in IR illumination is especially beneficial for installations with the need for around-the-clock

surveillance without artificial lighting.

The compact AXIS Q1765-LE is lightweight yet tough. The camera is IP66/NEMA4X rated, making it resistant to water and dust. The Arctic Temperature Control capability allows reliable start-up in any temperatures from -40 Degrees Celsius to 50 Degrees Celsius (-40 Degrees Fahrenheit to 122 Degrees Fahrenheit), making AXIS Q1765-LE perfect for installations in places with challenging weather. The camera is very convenient to install thanks to its lightweight, one-cable installation, support for Power over Ethernet and AC/DC power. The AXIS Q1765-LE Network Camera is planned to be available in Q4 2013 through Axis distribution channels at the suggested retail price of US \$1399. **SST**



Service2Media And iWelcome Introduce The iWelcome Authenticator App For Secure Sign-on Using Your Mobile Device

Netherlands based companies, iWelcome and Service2Media have recently teamed up to develop the iWelcome Authenticator, a mobile app that makes two-step verification easy. The iWelcome Authenticator provides an additional verification factor for logging into an enterprise's ICT environment. The code generated by the Authenticator is required during the login process as a second or third authentication element. With the Authenticator, strong authentication to iWelcome's Identity and Access Management Platform can be realised using a mobile phone app. The app calculates security

codes in a user friendly and safe manner and does no longer require additional security devices to be carried along by the user (like a bank calculator or a other security token).

The iWelcome app features a configurable security context, enabling enterprise administrators to balance ease of use and security requirements. The app includes a QR code reader, can be protected by a PIN code itself to prevent unauthorised use and can be disabled remotely by the system administrator when a device is stolen or lost. Furthermore the app can be customised to the look & feel of each enterprise customer. The app is an integral part of the iWelcome services and therefore offers seamless integration into the existing product portfolio.



"Everyone knows the situation. You're using multiple applications on a daily basis to perform your job. And these applications can be anywhere: On the company's network, hosted by one of the companies you work with, or on the Internet. iWelcome provides you with secure and easy access to all of your applications, regardless of where the application is deployed", said Danny de Vreeze, ceo of iWelcome. **SST**

OnSSI Collaborates With HTS To Deliver Integrated Solution For Improved Situational Awareness

OnSSI recently announced the compatibility of their Ocularis video management platform with HTS license plate recognition (LPR) and vehicle identification recognition systems (VRS), including automatic vehicle make and model identification. Expanding on the functionality of its market leading open-architecture and intelligent IP video surveillance software, the integration of OnSSI's video management software with HTS' intelligent analytics provides security professionals with a unified solution for improving situational awareness across a wide range of applications including security, transportation and public safety.

When Ocularis is integrated with the HTS systems, users can utilise Ocularis investigative tools to monitor and interrogate data recorded by the LPR and VRS solutions. Event management enables operators to call up live images from associated video surveillance cameras, with

the ability to program automated rules-based alerts such as video push or email alerts to subscribers of interest.

"The integration of intelligent analytics and technologies plays a key role in OnSSI's open architecture initiatives in the security and surveillance market," said Gadi Piran, president and cto, OnSSI. "Our technology partnership with HTS accelerates these efforts by providing an optimized system that meets demanding needs and delivers comprehensive intelligence across applications."

"The unique capabilities of our VRS solutions generate valuable real time information that can add a critical dimension to security systems, enabling more informed decisions," added John Whiteman, ceo, HTS Americas. "We are pleased to partner with OnSSI to offer customers a unified and rapid solution for improved situational awareness." **SST**

Siemens Building Technologies Division Announces Launch Of Sinorix Compact

Siemens recently announced the launch of the Sinorix Compact. With the Sinorix Compact, the Siemens Building Technologies division is launching a complete fire safety system for enclosures with a volume of up to 120 m³, such as small data centres, server or electrical switching rooms. As a space-saving, cost-efficient solution, Sinorix Compact combines all fire safety disciplines, from detection, alarming, and control to extinguishing, in a single cabinet. It is easy to install, commission and maintain.

Sinorix Compact's main components include an aspirating smoke detector, the Sinorix Silent Nozzle and the Novec 1230 fluid, a chemical extinguishing agent from 3M. The integrated FDA221 aspirating smoke detector continuously draws air samples from the room and tests them for smoke particles. As a result, even hidden smouldering fires can be reliably detected early on. In case of fire, the Sinorix Silent Nozzle distributes the extinguishing agent evenly and especially quiet into the protected area, thereby ensuring disturbance free operation of hard disk drives. The Novec 1230 chemical extinguishing agent is non-conductive and non-corrosive, which makes it ideal for extinguishing fires in rooms filled with sensitive electrical and electronic equipment. At the same time, Novec 1230 is safe for both the environment and people. These components are controlled and monitored by the integrated XC10 fire detection and extinguishing control panel, which initiates extinguishing quickly and reliably when a fire alarm is triggered. Sinorix Compact also has a flashing alarm light and an alarm device for warning people in the room.

All components are delivered pre-installed and prewired in a cabinet that resembles a server rack and are ready for use without a great deal of installation work. If necessary, additional conventional fire detectors and an extinguishing nozzle for raised floors can be added to Sinorix Compact. The solution can also be integrated into larger fire detection or even danger management systems. **SST**



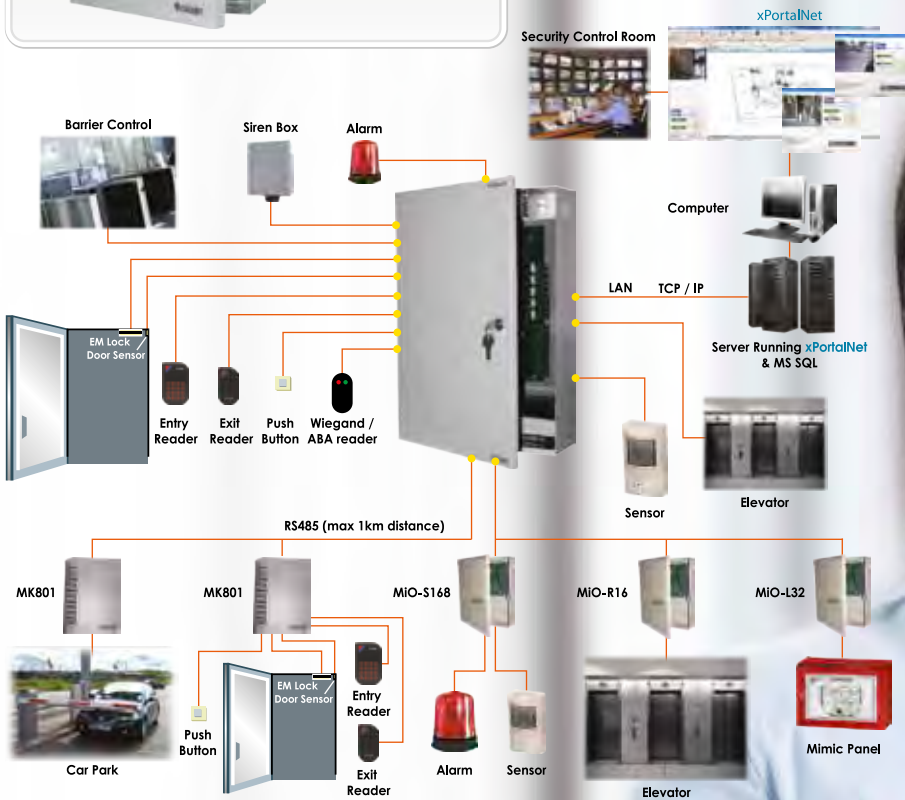
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Integrated Security Systems

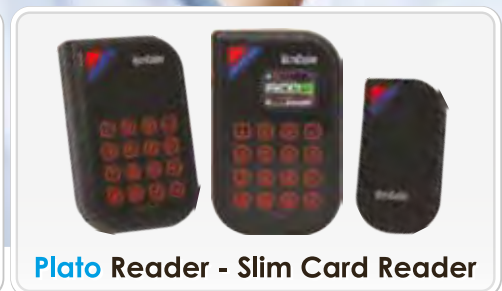
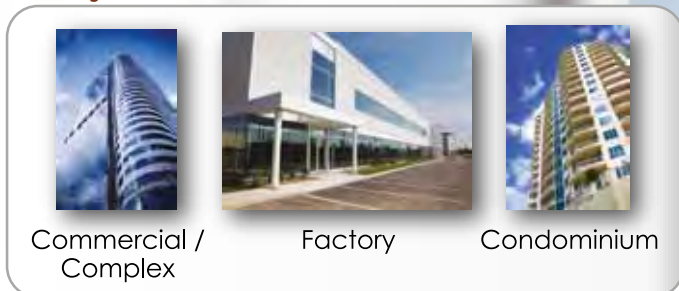
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- High Level Interfacing with Selected International Brand



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Former UK Consul-General And Chatham House Scholar To Hold Keynote At ASIS Asia-Pacific 2013

A SIS International (ASIS), the world's premier association for security professionals, has announced that Dr. Tim Summers, senior consulting fellow, Asia Programme at Chatham House (Hong Kong), will give a keynote presentation on policy direction and political risk in China under the new leadership at ASIS Asia-Pacific 2013. The ASIS 7th Asia-Pacific Security Forum & Exhibition will take place in Macau, China on third to fifth December 2013.

A year after a transition to new leadership at the top of the Communist Party of China, Dr. Summers will assess the policy priorities of China's new leaders. What will be the approach to the apparent slowing of economic growth, and how will efforts to change the structure of China's economy fare? How will the Party deal with growing popular expectations in areas such as health and education? Is China's new President, Xi Jinping, likely to oversee the introduction of political reforms? What

risks are brought through China's growing role in global issues? Dr. Summers will outline the policy direction of the new leadership, and identify the political and security risks brought on by the rapid pace of change in China.

Around 250 senior security professionals, corporate executives, consultants and government officials are expected to attend 24 high-level, end-users focused, educational sessions divided over two parallel tracks that will cover a wide range of security issues.

The conference will also feature:

- Three keynote presentations
- A summit for Chief Security Officers (CSOs) organised by the CSO Roundtable of ASIS International
- An exhibition featuring the latest in security technology and services
- Unrivalled networking opportunities at the President's Reception, lunches and networking breaks **SST**

Mining Company In South Africa Deploys Radwin Wireless Systems For Critical Video Surveillance Transmission

RADWIN, the global provider of sub-six GHz broadband wireless solutions, recently announced that it has been chosen to establish a video surveillance network for a large manganese mine in Kuruman, South Africa. Miro Distribution, RADWIN's partner and one of South Africa's leading distributors, provided technical expertise, and the installation was carried out by specialist company I3S Security Solutions.

Mines are challenging environments where working conditions are perilous. To ensure worker safety and secure critical assets, the mining company installed IP security cameras throughout the site. The mining company sought a solution that would transmit video from all areas of the mine back to a central control centre.

According to Jaco Malan, Miro Distribution's managing director: "Currently over 150 cameras are installed in the manganese mine area, with more being added on a regular basis. The video cameras cover all areas of the mine - from the construction village, to the shaft, to the entry turnstiles, and everything in between. RADWIN's systems deliver the highest resolution video from the various sites back to the control centre in real-time, which

is invaluable for monitoring the mine and securing the safety of its personnel."

ohn Gerber, Shareholder, I3S Security: "We chose the RADWIN 2000 point-to-point and RADWIN 5000 point-to-multipoint solutions for video surveillance transmission because the quality of RADWIN's wireless products met the mining company's exacting requirements. The manganese mine is situated in a relatively flat terrain so there exists severe multipath which affects radio signal propagation. RADWIN's products were the best solution to handle this situation and we installed 47 radios in the 5.8 GHz range with varying channels. This provided us with a wireless network that covers 12 square kilometres, allowing us to effectively utilize the camera network as well as provide infrastructure for the access control system."

RADWIN 5000 point-to-multipoint and RADWIN 2000 point-to-point solutions deliver over 250 and 200 Mbps respectively for long ranges and incorporate advanced technologies such as OFDM, MIMO and a unique air interface to mitigate interference and enable NLOS deployments. Extremely simple to install, RADWIN's systems are up and running within hours. **SST**



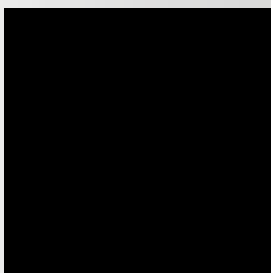
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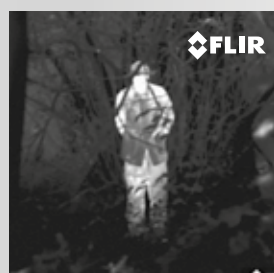
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The images displayed may not be representative of the actual resolution of the camera shown. Images for illustrative purposes only.

Morse Watchmans's Key Control Systems Upgrades Casino Arizona's Security Management System

Casino managers, like managers in any other market, leave nothing to chance when it comes to the operation of the business. To protect the bottom line and guard against fraud, they rely on established practices and procedures and industry favoured technology such as Morse Watchmans key control and management systems. At sister properties Casino Arizona and Talking Stick Resort in Scottsdale, Arizona, the Morse Watchmans KeyWatcher® key control system is used to store, control and track keys that are used for access to all the most sensitive and highly secured areas of the casinos where money and chips are held, including the slot department and cages. A KeyWatcher key system is also used by the casinos' security departments to store and track keys needed throughout the facilities. Designed for optimum key security, KeyWatcher key control cabinets will not open until the system verifies that the user has permission for the specific key requested and the system automatically records all activity.

"We like that we have key accountability and tracking of all keys on-site with the KeyWatcher system," said Roxanne Manwell, Access Control supervisor, Casino Arizona and Talking Stick Resort. "It alerts us when keys are not turned in correctly and/or are overdue and we can send out the report to the departments for notification purposes."

The KeyWatcher system and accompanying KeyProTM software enable Casino Arizona and Talking Stick Resort to meet the various Arizona Indian Gaming Statutes regarding key control and management. Custom software enables the casinos to set up all these and many other types of reports, which can be emailed to management on a regular basis. Manwell adds, "Tracking and reporting is critical in our industry and the KeyWatcher eliminates the need for manual logs and paper trails because it records everything and prints a report with a couple of clicks. The reports are easy to run and manage when going through our yearly audits." **SST**

Pivot3 Introduces VSTAC Watch Edge R2 Appliance Designed For Distributed Sites

Pivot3 Inc., a leading supplier of video surveillance and virtual desktop infrastructure (VDI) Server-less Storage Appliances, announces the release of its vSTAC Watch Edge R2 appliances, designed for distributed sites requiring, high-performance shared storage with virtual servers to save cost, power, cooling and rack space. The new appliance line is certified to operate with Genetec Security Centre v.5.2 SR3, allowing customers to capitalize on proven integration for additional storage and video management choices to ensure the most efficient configuration of surveillance installations.

The vSTAC Edge R2 individually handles up to four to eight Terabytes of RAID storage supporting Genetec Security Centre software, a unified security platform that combines various IP security systems into a single solution. Genetec qualified the vSTAC Edge to support 100 cameras. Up to four vSTAC Edge R2s can be configured together delivering up to 32 TB of a highly available iSCSI SAN and four virtual servers. Ideal for distributed environments typically found in retail, financial, educational and corporate markets, the new appliance drives opportunity for both companies and customers who manage surveillance and storage locally.

"Together with Pivot3, we have embarked on extensive testing with the vSTAC Edge and Genetec Security Centre to ensure the highest level of compatibility, usability and support," said George Marrousis, Technology Alliance Manager at Genetec. "The Pivot3 vSTAC Edge is a strong performer, and meets Genetec's stringent validation criteria, ensuring customers are provided a trusted and proven integrated surveillance solution."

The self-healing storage platforms deliver high availability iSCSI SAN with RAID 5e to protect lost data on one disc or stored video surveillance footage across a multi-appliance array. The combined server-storage appliances include integrated application failover for backup servers without the need for complex cabling, dedicated hardware or specialized software. Like the entire Pivot3 suite of vSTAC solutions, the Edge R2 eliminates physical server acquisition and delivers up to 40 percent savings in power, cooling and rack space. Storage is dynamically expandable, allowing users to increase physical capacity as surveillance retention requirements expand. Pivot3 vSTAC Watch appliances run on purpose-built standard x86 hardware that eliminates many of the complexities, constraints and high costs associated with legacy storage alternatives. **SST**



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The new generation of a clever fire safety system.

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Protecting people and assets. Securing business processes and continuity. This is what fire protection is all about. Cerberus™ PRO from Siemens is a smart fire safety system for fast, proven fire detection, alarm signaling and control. Its broad portfolio comprises powerful control panels from stand-alone to networkable units, reliable detectors with patented technology and a comprehensive range of loop-

powered peripheral devices. All system components have special safety features installed that increase safety even further – such as degrade mode in control panels or built-in isolators in each detector and peripheral device. Thanks to its straightforward system design, Cerberus PRO can be installed easily and quickly.

Answers for infrastructure.

Dahua Technology Completes Vandal-Proof Infrared Network Dome Camera Lines

Dahua Technology recently released new models of vandal-proof infrared network dome series — the HDB (W) 33/32/31-DI series. This series features a new in-ceiling design which makes the installation easier and the aesthetical design allows it to go with modern décor for hotel lobbies, airports, banks, hospitals, casinos and other institutions where low profile but elegant designs are desired.

Dahua's new vandal-proof infrared network dome camera features Megapixel progressive-scan CMOS and H.264 & MJPEG dual-stream encoding, offering three-Megapixel WDR, two-Megapixel with motorized lens and 1.3-Megapixel WDR for your needs. The series is equipped with vari-focal wide-angle lens, built-in 1/1 alarm in/out, 1/1 audio in/out Micro SD for on-site storage, and its effective infrared range is up to 20 meters. What's more, this series provides three alternatives for power supply, DC12V/AC24 as well as PoE to suit your conditions. Meanwhile, with multiple network monitoring software, such as Web browser and Dahua's in-house CMS (DSS/PSS) and DMSS, it can provide security professionals with full security either in the monitoring room or on-the-go. In addition, the new series has passed the IP65 ingress protection and IK10 vandal-proof tests to better ensure product performance. **SST**



Model Selection:

- Three-Megapixel WDR series: IPC-HDB3301-DI / IPC-HDBW3301-DI (with IR)
- Two-Megapixel series: IPC-HDB3200-DI / IPC-HDBW3200-DI (with IR)
- Two-Megapixel with motorized lens series: IPC-HDB3202-DI / IPC-HDBW3202-DI (with IR)
- 1.3Mega WDR series: IPC-HDB3101-DI / IPC-HDBW3101-DI (with IR)

Stratech's iFerret™ Clinches Landmark Deployment In Military Airfield

Singapore Exchange Mainboard listed Stratech Systems Limited ("Stratech") recently announced that its iFerret™ intelligent Airfield/Runway Surveillance and Foreign Object and Debris (FOD) Detection System has been selected for deployment by one of the world's top Air Forces. This marks the first time that iFerret™ will be installed in an airbase. Approved by the US FAA (Federal Aviation Administration), iFerret™ is the world's first intelligent Vision-based FOD detection system, providing real-time, automated FOD detection, location, classification and recording. It can be deployed in civil airports as well as military airbases, to help prevent potential aircraft damage and fatalities caused by FOD. In this deployment, iFerret™ will also offer additional features, which will be useful for the airbase operators.

Stratech executive chairman, Dr. David K.M. Chew, commented, "Airfield safety and security in an Air Force context is arguably even more critical than in civil aviation. Military aircraft typically costs millions of dollars to build and due to the way they operate, they are very susceptible to FOD damage. When we also consider the fact that many of these aircrafts might be carrying large amounts of explosives during take-off, the consequences of FOD incidents in a military airfield

can be catastrophic."

The RADAS (Rapid Airfield Damage Assessment System) capability is one of the key additional features of this particular application of iFerret™. With this additional feature, iFerret™ will be able to rapidly detect, locate, categorise and measure the severity of damages and hazards on the runways and taxiways. It can even chart the damages resulting from an enemy attack, in the event one takes place, and provide a detailed report of the damages very swiftly, which will be useful in the context of Air Force operations. The iFerret™ hardware installed in this deployment will also be designed to withstand the relatively harsher working conditions in an airbase.

Being an intelligent Vision-based system, iFerret operates with passive sensor technology, making it much more suitable for airbase deployment than other systems. iFerret™ does not require assisted illumination or produce emissions, unlike other conventional radar-based systems used for FOD detection. This is important because the system will not interfere with the other sophisticated equipment used in Air Force operations, and it also eliminates the risk of the system exposing the airbase's location to the enemy. **SST**



POS



Medical



Server



Gaming



Tablet PC

Industrial SSD

S O L U T I O N S

SFD

SATA Flash Drive

SATA 6Gb/s Interface
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SDM

SATA Disk Module

Extended Temp. Support
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7Pin Series

1U Server Series

CFast

CFast Card



Compliant with CFast 1.0 Specification
Capacity: Up to 128GB

Industrial CF

Industrial Compact Flash



HW write-protect switch
Extended Temp. Support
Capacity: Up to 128GB

Industrial SD

Industrial SD Card



Compliant with SD 2.0 Specification
Capacity: Up to 32GB

Industrial microSD

Industrial microSD Card



Compliant with SD 2.0 Specification
Capacity: Up to 32GB

Industrial DRAM

S O L U T I O N S



ECC DIMM (with Very Low Profile Option)

Data rate	Model	Capacity	Voltage	Standard Op. temp	Industrial Op. temp	CL	Layer
DDR3-1600	PC3-12800	2GB~8GB	1.5V±0.075V	0°C~+85°C	-40°C~+95°C	CL11	240pin
DDR3-1333	PC3-10600	2GB~8GB	1.5V±0.075V	0°C~+85°C	-40°C~+95°C	CL9	240pin
DDR3-1066	PC3-8500	1GB~8GB	1.5V±0.075V	0°C~+85°C	-40°C~+95°C	CL7	240pin

- Fixed B.O.M. commitment
- Conformal Coating: dump & mould proof & corrosion prevention
- Wide Temperature range [-40°C~+95°C]
- Built-in Thermal Sensor
- Golden Finger 30u"



SO ECC DIMM

Data rate	Model	Capacity	Voltage	Standard Op. temp	Industrial Op. temp	CL	Layer
DDR3-1600	PC3-12800	2GB~8GB	1.5V±0.075V	0°C~+85°C	-40°C~+95°C	CL11	240pin
DDR3-1333	PC3-10600	2GB~8GB	1.5V±0.075V	0°C~+85°C	-40°C~+95°C	CL9	240pin
DDR3-1066	PC3-8500	1GB~8GB	1.5V±0.075V	0°C~+85°C	-40°C~+95°C	CL7	240pin

ST Electronics Launches The DigiSAFE Cyber Security Centre

ST Electronics recently announced the launch of its DigiSAFE Cyber Security Centre. Set up by its wholly owned subsidiary, ST Electronics (Info-Security) Pte Ltd, the Centre will house a training facility that offers advanced cyber defender training courses with a state-of-the-art training system that will emulate real-world attacks on enterprise networks in a controlled environment. It is located in Jurong East at the Devan Nair Institute for Employment and Employability and is expected to begin operations in November 2013.

According to ST Electronics, increasing incidents of cyber security and related fraud, as well as espionage and attacks from organised groups are making the news on a daily basis, therefore there is a growing need for cyber professionals. To help address the critical shortfall of experts in this industry, the new DigiSAFE Cyber Security Centre will offer cyber security training tailored for both new entrants and seasoned professionals to develop and hone their skills in this area.

The Centre allows organisations to simulate their own Security Operation Centre (SOC) environments and train in a realistic operational situation, which includes red/blue teaming scenario plays. Trainees will be equipped with the latest operational cyber security skill sets through the courseware offered. **SST**

Bosch Security Systems First Ever Intelligent Imaging Academy Held On Fifth September 2013

Bosch Security Systems recently held their first ever Intelligent Imaging Academy on the fifth of September 2013 at the Mandarin Orchard, Singapore. More than 70 attendees were present. The event showcased the latest in Video Surveillance trends and technologies from Bosch. Guests were greeted in the morning by Lim Yong Gang, vice president, Product Marketing (Asia Pacific Region) who shared the Bosch Video Surveillance vision of going beyond technology, creating simple solutions that solve real-life problems.

Markus Wierny, head of Product Management then highlighted that the video surveillance trend will be moving towards clearer vision, becoming less dependent on the environment, and towards more accurate video data interpretation. He asserted that at the end of the day, surveillance footage should be as clear and natural as 20/20 human vision, and Bosch intends to be one of the driving forces in making this possible.

For the next part of the day, the attendees were engaged in breakout sessions and live demonstrations conducted by product marketing managers, Eric Ho, Jeffrey Law and Adrian Tan. Attendees were introduced to the technologies behind Intelligent Imaging - Content Based Imaging Technology (CBIT), the key to the Starlight range of cameras that are designed for high performance in

extreme low light; Dynamic Transcoding Technology that extends the possibilities for low-bandwidth remote monitoring and Intelligent Video Analysis (IVA) that enables forensic search capabilities.

The seminar ended with product marketing manager Adrian Tan sharing how Bosch Security Systems together with their partners, Milestone and Netapp is moving to a whole new level of interoperability with the launch of the Integration Partner Program (IPP). With IPP, the result is greater flexibility for end users to utilize Bosch IP video devices with software and storage platforms that best address their security surveillance needs.

Attendees then had an opportunity to network and visit the various solution clinics that were set up. These clinics featured the range of Bosch surveillance cameras in action, video management systems and the latest solutions from Bosch's partners, Milestone and Netapp. Milestone was present to showcase the Milestone Interconnect system concept alongside their latest Device Pack 6.8 that features support for the complete range of Bosch IP Video devices. Netapp demonstrated the E-Series family of industry leading ultra-high density storage solutions that have been tuned to achieve best-in-class performance when paired with the Bosch Video Recording Manager (VRM) system. **SST**



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SCHOOLS IMPROVE SECURITY AND SAVE MONEY WITH OPEN PLATFORM IP VIDEO SURVEILLANCE

By Eric Fullerton

Eric Fullerton, Corporate Chief Sales & Marketing Officer, Milestone Systems



Introduction

Schools should be safe havens for education. New developments in video surveillance technology based on IP technology are helping primary and secondary schools, colleges and universities improve security, as well as enhance operations and minimize losses in commercial areas. Compared with traditional analog solutions (also known as CCTV), IP-based solutions are much more versatile and cost effective. In fact, the advantages can be even more dramatic when an IP video surveillance system is based on an open platform capable of incorporating both IP network (digital) cameras and a school's existing analog cameras. While analog video surveillance solutions are generally proprietary, open platform systems use video management software

specifically designed to allow a variety of hardware and software applications from different manufacturers to interface with it. This enables the platform to function in new and different ways beyond what was originally intended. For this reason, open platforms provide a base on which to continue to build and expand the capabilities of a system for years to come.

Some of the advantages of open platform IP video surveillance system include: seamless integration with other security systems and a single point of control for integrated security systems, the ability to add situational awareness to improve response times in emergency situations, superior information sharing with first responders, such as police and fire departments, lower total cost of ownership (TCO) and substantial cost savings through the use of

commercial off-the-shelf (COTS) components and third-party applications, protection against future obsolescence and extensive “forklift upgrades” as well as the ability to add new innovations as they become available

Easy and cost-effective expansion as needs grow

For many educational institutions, this shift from traditional analog technology to open platform IP video surveillance comes at a perfect time. Most schools and university systems need to make the most of their budgets now and in the future. They’ve already seen significant cost-saving and productivity benefits from IP-based IT and networked solutions in everything from administration and student records to accounting and communications. They have the necessary IP network infrastructure in place. Now it’s time to make the move to IP video surveillance – particularly with a solution that enables them to leverage the significant investment they have already made in analog cameras. There is one more consideration that should be paramount in such a decision: selecting a solution well supported by a strong ecosystem of certified solution providers and system integrators. Certification ensures greater expertise and superior implementations. And a strong ecosystem provides greater choice in cameras and other components, proven interoperability, stronger service, and a more reliable future.

The need for video surveillance in schools

In schools and college campuses around the world, non-violent and violent crime is a daily concern. In the United States, a substantial number of students and teachers experience some type of violence and related incidents in their educational career. One U.S. study found that approximately 17 per cent of students reported experiencing violence or harassment in the previous year. Colleges are constantly besieged by student requests to do something about everyday crimes like theft and vandalism. Institutions that do not have adequate campus-wide surveillance face seeing attendance and tuition fall as parents and college-rating services use campus security as an important criterion in their decisions.

Violent and non-violent crime is also commonplace in primary and secondary schools. The 2010 rash of stabbings in primary schools in China brought international attention to the need for security in schools everywhere. In the United States, data from the U.S. Department of Education shows that in 2007, there were 31 thefts and 26 violent crimes per 1,000 students at school. Clearly, school systems and colleges cannot afford security forces large enough to watch thousands of students and monitor buildings 24 hours a day, seven days a week. Consequently schools and colleges look increasingly



to video surveillance for assistance. According to the National Centre on Education Statistics (U.S.), already nearly one third of elementary schools, 42 per cent of middle schools, and 60 per cent of high schools in 2003 to 2004 were using surveillance cameras. A special report from College Planning and Management magazine found that 84 per cent of the colleges interviewed used external video surveillance for residence halls and nearly 61 per cent used internal video surveillance. After the 2008 Virginia Tech shooting, many colleges announced new video surveillance and other security projects.

Why IP technology is more cost effective for video surveillance

Video surveillance has been around for decades, but the way the video is captured and stored has undergone a major revolution in recent years. Most security operators are familiar with traditional analog (CCTV) systems. They require expensive coaxial cabling and dedicated power outlets for each camera. Today, there is a much easier, less expensive solution already within most walls – the category five (Cat five) cable for computer networking. It’s the same cabling used for connecting IP network cameras for video surveillance. IP network cameras plug into cost-efficient standard Ethernet cable or wireless technologies (such as IEEE 802.11b/g/n) just like a computer. Changing camera placement is equally simple – just remove and plug the camera into another network jack somewhere else. Wired IP network cameras have an additional advantage when powered by IEEE 802.3af Power over Ethernet (PoE). This technology enables a camera to be connected and powered by the



same cable used for network connection. This drastically simplifies installation and reduces costs by eliminating the need for power outlets at camera locations. The State University of New York at Buffalo estimates it saved approximately US \$500 per camera location because the IT staff used inexpensive Ethernet cabling rather than wiring new power outlets around their medical complex. Treviglas Community College in Cornwall, England, took advantage of PoE's potential to add more resilience into the surveillance system by connecting an uninterruptible power supply (UPS) to each network switch. This enables the surveillance system to continue running alongside the college's computer network should the electricity go out.

Better use of staff and equipment resources

The seamless integration of an IP video surveillance solution with the rest of a school's IP network enables more reliance on internal resources – everything from IT staff to sharing network resources like servers, storage systems, computers, wiring, and security software. This saves money because rather than running two networks – an analog one for security cameras that feeds into tape-based video recorders or DVRs, and an IP one for everything else – everything runs on one network.

Superior scalability for changing needs and budgets

A strong advantage of IP network-based video surveillance systems over analog video systems is scalability. IP-based systems scale easily from one to thousands of cameras in increments of a single camera. There are none of the mandatory 16-channel jumps dictated by pre-configured analog systems using digital video recorders (DVRs). This makes IP-based solutions ideal for growing a system as budget allows. Installation can be done in stages and video encoders can be used to incorporate existing analog cameras, creating a hybrid system that preserves the existing security system investment. It's nearly always less expensive to set up a hybrid IP video surveillance system and gradually replace existing analog equipment with the superior functionality of IP network cameras and other components rather than do a 'forklift' replacement of an existing analog system to the latest analog technology.

Centralised operations for greater efficiency and effectiveness

A good open platform IP video management solution enables centralisation of operations. For a school system or university with multiple campuses, this means all video surveillance operations can be housed in one facility. This enables staff to effectively use resources and space as well as provide security officers a better overview of what's happening in security throughout the institution from a single command point. One software solution, Milestone XProtect™ Smart Wall, makes monitoring easy for command centre staff by giving them dynamic control of screen layout and camera feeds. Operators can populate layouts by dragging and dropping cameras into the monitor views. They can also set up rules to handle events, such as bringing up a camera view where motion has been detected. Any combination of monitors can be incorporated in one Smart Wall and there can be any number of Smart Walls in a video surveillance system.

Better storage options

With IP video surveillance solutions, video can be saved on in-camera buffers, standard DVRs/NVRs, or directly onto computer servers. Larger installations can use dedicated storage systems, such as a storage area network (SAN). If a crime incident occurs, digital storage enables archived video to be quickly and easily searched by date and location. It can also be immediately shared through the Internet with authorized first responders. IP storage components also make it easy to provide backup storage by increasing redundant infrastructure. In general, the use of standard server and network

equipment makes redundant systems and replacement considerably less expensive and time-consuming than proprietary solutions. The cost for storage can also be much less. Compare a modern analog system's "black box" proprietary DVR that can cost \$5,000 to a high capacity server disks used in IP data storage that cost as little as \$150. One reason the IT Department for New York's University at Buffalo's Faculty Student Association is switching to open platform IP video surveillance is to manage video storage operations on ordinary servers. For schools still using VHS tape, making the switch to IP video surveillance is a vast improvement. Searches of archived digital video are nearly instantaneous compared to the hours it can take to pull a video tape out of storage and fast forward through it looking for a particular time or event.

More efficient information sharing

With IP video surveillance, live and recorded video from the system can be set up for remote viewing via authorized desktop computers, laptops, PDAs, and smart phones from companies such as Apple and Blackberry. The Canby School District (5,000 students) in Oregon, for instance, set up their 50-camera system so law enforcement agencies could also monitor school cameras remotely from their squad cars. The officers log onto the school district's IP-based Wi-Fi network. Such remote viewing capabilities enable first responders to view an incident in progress and respond more intelligently. Some video management solutions even allow security operators to quickly review captured video from a number of cameras

while cameras continue to record and stream real-time footage of an incident. This can be vitally important when investigating something such as a shooting incident in progress.

Superior image quality and situational awareness

In response to the growing popularity of IP video surveillance systems, many surveillance camera manufacturers now devote most of their research and development to IP network (digital) cameras. The result is an enormous variety of IP network cameras at outstanding values. This includes everything from 360-degree megapixel cameras providing ultra-sharp images to tiny wireless cameras for covert operations (like investigating vending machine vandalism and theft). Schools can even purchase high-performance multi-sensor cameras that can reduce cost per unit area under surveillance by covering more area with fewer cameras. Also available from some camera manufacturers are automatic PTZ (pan/tilt/zoom) tracking cameras that keep a moving target in sight and focus to provide numerous identification and information-gathering opportunities.

Moving beyond simple motion detection with all its limitations and false alarms, advanced software using video analytics analyses digitized video from cameras to detect, recognize and analyse objects and events. Also referred to as video intelligence and video content analysis, video analytics can identify a variety of different types of behaviours, actions and objects such as people





loitering in a particular area for example outside a dorm, an object left behind in a campus courtyard, student union, administration lobby, illegal parking in a restricted area, for example, a truck loading zone, the number of people entering and leaving buildings (people counting), license plates of cars (a great way for monitoring parking lots and automating entry), unauthorized movement in a restricted area or time period and etc.

Video analytics addresses a major limitation of older video surveillance solutions – they were only as good as the people watching the monitors. Research shows that although nothing is more accurate than a trained human eye, a human observer's effectiveness degrades quickly after short periods of time and as the number of cameras increase. In fact, attention can degenerate to well below acceptable levels often in just 20 minutes of watching monitors. Software, on the other hand, never tires. Software is always watching, always analysing, always ready to sound an alarm or send an alert. Some solutions integrate multiple video analytics systems (both server- and camera-based) under a single, easy-to-use interface to correlate alerts from different systems to reduce false alerts and give security the best intelligence of a potential incident.

Better image quality

Along with more innovation in IP network cameras, there's improved quality in the imaging. IP network cameras can provide up to 16 times the resolution of traditional

analog cameras. A great deal of this higher quality results from how the images are created. Analog images are composed of lines, and each image is formed from two interlaced fields. Unfortunately, this means that images become blurry when there's a lot of movement. Many IP network cameras, on the other hand, use digital pixel image sampling to ensure an entire image is captured moment to moment. They provide crystal clear images even when there's a high degree of motion. This increases the utility of the video as evidence (resulting in higher conviction rates) and for situational awareness. As IP network cameras continue to improve, the gap in image quality will continue to widen. Already IP network cameras are capable of providing rich enough detail to allow reading the numbers on a license plate or a person's badge.

Superior zooming

PTZ IP network cameras offer great user control and the superior digital zooming to see details more clearly. Staff can remotely control individual cameras and zoom in on an activity. Zoom capabilities on some cameras enable reading the label of a cigarette pack in someone's pocket from as far away as 1,000 feet.

Real-time video intelligence

Video analytics technology has significantly advanced over the past few years, improving its ability to provide real-time intelligence. Today's video analytics software



can provide alerts of suspicious actions, such as a person abandoning a bag or backpack – a possible bomb threat. Video analytics software can count people or detect if they are grouping too tightly together, an action that might indicate a fight or gang activity. More advanced programs actually learn normal human patterns in a location such as a classroom or hall and can highlight and log behaviours of individuals who act or move in unusual ways. Mike McCormack, campus service manager at the University of East Anglia in the U.K., noted that “instead of my guards sitting and viewing screens all day, looking for suspicious behaviour, the new system does this for them... This means that more of my security staff can be out on patrol and targeting the areas where these incidents occur.”

Conserving bandwidth

Video analytics, particularly when installed at or near the camera (the edge of the network) can often provide both greater accuracy and bandwidth savings. The greater accuracy comes from edge-based analytics devices receiving and analysing pre-compressed, high quality images. The bandwidth savings come from not having to send video across the network until truly suspicious or noteworthy behaviours are detected. The transmission of high frame rates and high resolution streams can be set up to only occur during incidents. This is one-way bandwidth and disk space can be conserved during the long periods of time when nothing interesting happens.

Advantages of an open platform IP video management solution

1. Hardware and software independence. Open platform IP video surveillance solutions provide the freedom of choice to use best-of-breed components from a wide range of manufacturers, not just one. This creates real value, enabling an IT department or system integrator to build a solution that truly meets an institution’s needs at an affordable cost.

2. Future proofing. True open platforms, particularly those backed by a large partner ecosystem and strong on-going support for external hardware and software solutions, enable an institution to continuously take advantage of new advances as they become available. This “future proofs” a solution. For video surveillance, that means being able to add new cameras with advanced capabilities the industry can’t even anticipate today. It means being able to adopt new storage solutions, video analytics software, client options, and other innovations, as they become available. It also means that instead of being dependent on one company’s product roadmap, a school can take advantage of an entire industry’s innovation.

3. Easier integration with other security devices.

An open platform IP video surveillance management solution like Milestone XProtect can do much more than video management. It’s really an operating system for security solutions. Its functionality can be extended through third-party solutions just as one might add software applications and additional hardware for a computer’s operating system to run. Open platforms make it much easier to integrate with other security elements like access card systems, lighting, gates and doors. Since many IP network cameras have digital outputs (I/O), XProtect can be used to program cameras to activate switches upon alarms to close or open doors, turn lights on or off, set off alarms, or other actions.

4. Video enabling. Today, a momentous shift is occurring in the video surveillance market. IP network cameras are being combined with other applications and systems not just for security purposes, but also to “video enable” a variety of other functions and operations. For instance, surveillance cameras in labs at Georgia Tech’s Woodruff School of Mechanical Engineering (U.S.) allow students to access cameras online to determine if labs are too crowded at the moment for them to work on a project. Faculty can log on to determine whether safety procedures are being followed and students are taking proper care of equipment.

5. Scaling and interoperability. While IP networking makes it easy to connect IP network cameras and other IP video surveillance components, it does not mean “interoperability” or “open platform.” “IP camera” simply means the product uses the Internet Protocol (IP) to exchange data. It does not guarantee that two products that are IP-based will “plug and play” and instantly work together. Many manufacturers of video surveillance hardware encode equipment to only work with their own system or software. They lock you in to their solutions. Such proprietary solutions can make it difficult to scale a video surveillance system to include offerings like access control, intrusion detection, and video analytics

from other vendors. Choosing a true open platform IP video surveillance solution ensures the greatest amount of choice in selecting cameras and other components, and the least amount of trouble in scaling your solution as you add them.

Integrating IP and Analog video surveillance systems

IP video surveillance is not the wave of the future. It is the state-of-the-art now. That's why no matter how well entrenched a school's operations are with its current analog video surveillance system, there's no time like the present to begin the transition to latest technology by implementing an open platform IP video surveillance solution, particularly since a school can leverage an existing investment by incorporating existing analog equipment into a new IP video surveillance system. The key to building this hybrid system is to start with a "future-proof" open solution IP video surveillance solution that allows a school to incorporate existing hardware elements, centralize surveillance operations, integrate other security systems such as intruder alarms, access control, and building management systems, add new video surveillance technologies and other innovations as they become available, continually grow security operations without restriction, mix and match best-of-breed COTS hardware and software components, add situational awareness (allowing the system to take over the watching) as well as take advantage of the superior imaging of IP network camera technology.

Improving school security through open platform IP video surveillance

Schools, colleges and universities all over the world are realizing the improved cost, freedom of choice, and surveillance advantages of implementing open platform IP video systems. Montgomery County Public Schools in Maryland with 200 sites and facilities, 138,000 students, and over 21,000 employees, is a good example. They switched to an open platform IP video surveillance system after tiring of how fast the equipment for their analog video surveillance system using VCRs broke down. They were able to integrate their alarm monitoring systems for perimeters, boilers, water flow, window breakage, and more, with both access control and video surveillance for all schools on the county's network in one command centre. The chief of police at Southwest Tennessee Community College in Memphis has said of their open platform IP video surveillance system: "I couldn't put a price tag on this system – it's just invaluable to us in our work to serve and protect our campus." The system was installed on the seven-campus school to help with problems including destruction of property through vandalism and gang graffiti, false fire alarms, disorderly conduct, theft from the buildings and

auto theft, stolen books and computers, and vagrants. The school has seen a sharp decrease in vandalism, theft from the offices, auto burglary, and computer thefts.

The Centre for Education and Business (1600 students) in Kolding, Denmark had a theft problem and installed an open platform IP video surveillance system. It quickly paid off. In one month, the school was the object of seven robberies at a total value of 250,000 Danish crowns (approximately US \$41,500). Simple searching on the digital video recordings showed that the thieves were known locally. The images were immediately sent to the police, who used them to make their arrests. After installing an open platform IP video surveillance system that covers four schools, Mike Vincelli, director of Information Technology at Shasta Union School District in California (6,000 students and over 540 staff), said, "We have experienced a 98 per cent reduction in school vandalism and theft – combined with an efficient way to accurately identify responsible parties associated with student conflicts."

Conclusion

Crime and other threats to student and faculty safety may be the reality in today's world, but open platform IP video technology is dramatically increasing the capabilities and value of video surveillance to help make schools, colleges and universities safer. The time is now to look beyond traditional analog systems and explore the many advantages of open platform IP video technology. The benefits include everything from the ability to contain costs through freedom of choice in hardware and software components to the avoidance of equipment obsolescence through the future proofing that comes from an open platform with a well-established ecosystem of partners. Schools of all types and sizes stand to see lower total cost of ownership, greater effectiveness, and more opportunities for integrations by choosing a genuine open platform IP based video surveillance solution. In this article, I have provided an overview of what's possible with open platform IP video surveillance. The years ahead are sure to bring even more dramatic cost advantages, performance improvements and new capabilities to be gained, such as new IP camera features and improved video analytics software. One of the biggest advantages from the administrative point of view will come from continuing to centralize the management and control of security systems. Educational facilities will increasingly have comprehensive video surveillance integrated with access control and other building management systems, all centrally managed and controlled through an open platform solution. Such systems will enable faster, more informed decisions and better coordinated responses that can save the lives of students, faculty and emergency response personnel. **SST**

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Experts' Commentaries On The importance of implementing security measures to monitor staff and student movement within campus compounds

Educational campuses are by nature "open" to the flow of pedestrian and vehicular traffic to accommodate the myriad of activities that are taking place virtually around the clock every day. This presents a security challenge for administrations looking to maintain the free spirit conducive to higher learning, while protecting both students, the faculty and service providers from potential threats.

Fortunately, there are new and better means of deploying advanced video surveillance and security measures that deter criminal behaviour without intimidation through the use of excessive cameras and security personnel. This is a delicate balance that many educational campuses have achieved by turning to megapixel video solutions. Because of their superior resolution, megapixel cameras provide wide area surveillance with exceptional detail, which also enables the use of intelligent video analytics.

Advanced detection capabilities like license plate and face recognition have the ability to instantly identify known perpetrators, while functions like detecting objects left behind can help automatically identify potential threats.

Additionally, megapixel cameras have been proven to help reduce equipment and manpower expenses while increasing ROI and reducing TCO. The combined security and financial benefits provided by megapixel video surveillance systems resolve many of the issues plaguing today's campuses to help schools and universities concentrate on their primary goal of educating students.



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Security, safety and cost efficiency are key reasons for monitoring staff and student movement within campus compounds.

Protection of students and university property whether it is in the event of a natural disaster, terrorist attack or other security breaches remains the single biggest challenge facing education providers and this increasingly requires broader technology requirements to ensure health and safety requirements are met.

There is a paramount need to have visibility of people's whereabouts in the event of a natural disaster, such as a flood or earthquake, when a mass evacuation of the site may be needed. Schools also have to protect against malign human intervention, ranging from terrorist attacks – where international schools or those who educate the children of high net worth individuals may be a particular target - to lower level crime, such as theft and vandalism.

As well as the safety and security requirements facing educational organisations, the demand to be more cost efficient has driven the need for security systems to be fully integrated not only with student databases and HR systems but with wider organisation systems such as timetabling, room scheduling, lighting and heating.

The significant advancement in the field of perimeter protection with electric fencing systems offering both deterrence and detection capabilities provides additional protection for those educational organisations with requirements to secure boundaries. Access to a property can begin from the perimeter with all areas of the perimeter fence controlled and monitored centrally to detect any attempted breach. The systems can also be integrated with other security aids, such as access control, to provide comprehensive protection for staff and students.

Experts' Commentaries On The importance of implementing security measures to monitor staff and student movement within campus compounds

Recent security incidents around campus compounds have got schools scrambling for solutions that can help ensure better monitoring and faster response. Video surveillance has become an important tool for the security people to know what is happening and to share real-time critical information for timely actions or to deliver clear evidence after the fact. It is even more beneficial to use video surveillance that is open and able to integrate with access control systems. This gives a visual check or alert when gates or doors are opened and is even able to check video images against staff ID systems to monitor as well as verify and deter someone's access to the school facilities, if necessary.

An open platform video surveillance solution gives customers the freedom to choose such interoperability through use of Software Development Kit (SDK) tools that can enable, for example, remote Input/Output (I/O) connection to open or close doors after visual verification – straight from the video management software. Full integrations of video surveillance software with access control systems are numerous, too.

A big new trend is mobile access to video surveillance, which allows security people or other authorities to see video from surveillance cameras in any location, to know what is going on immediately and be able to respond correctly. Milestone Mobile is one of three XProtect user interface clients that has Video Push: this lets first responders share images from their smartphone cameras with administration, a central monitoring station or local police.



Sunny Kong
Milestone Systems
Sales Director, Asia



Jimmy Palatsoukas
Senior Manager of
Product Marketing,
Genetec, Inc.

Protecting our children and ensuring they will learn in a safe and secure environment is on the top of the minds of parents, teachers, and school administrators. While schools are one of the safest places for our children, we must nonetheless be vigilant and mindful of potential threats.

Monitoring is a key activity in assuring everyone is in compliance with school safety and security rules; intrusion, bullying, property vandalism and theft should also be watched over with the aim of deterring, or quickly responding or intervening should they arise.

Video surveillance and access control systems that leverage modern internet protocol (IP) technology are some of the most effective tools to not only secure a school, but to also identify and investigate after an incident has occurred. In most cases, close cooperation with school controllers and local law enforcement, emergency response teams and city municipalities is a critical requirement. By leveraging a modern, integrated and unified security video surveillance system, with customizable and automated access control and license plate recognition (LPR) — school administrators and law enforcement can act much faster to intervene and stop random acts that keep our young people from pursuing an education in the safest environment possible.

We would like to invite Security Professionals to share your opinions and perspectives for the Pundit Perspective section in the January/February Issue of SST! This issue is centred around the Residential, Educational & Institutional vertical market. The topic we would like you to comment on is this:

What do you think are some of the security challenges that organisations face today? What security measures should they put in place to overcome these challenges and become more resilient?

Your submission must include

- (A) Commentary on your perspective (not exceeding 200 words) with your Name, Current Job Title and Company name
- (B) A high resolution image yourself

For Security Professionals who are keen on being featured in this section, please drop me an email with the above-mentioned details to the following email address: sst@tradelinkmedia.com.sg

Extra Sensory Perception: See The Threat More Clearly With TeraHertz

ThruVision is the world's most advanced passive people screening technology for concealed object detection. It incorporates a TeraHertz scanning mechanism that operates at 0.25THz (250GHz) for optimal standoff detection performance and flexibility in real-world conditions. This paper sets out the major technological and operational differences between ThruVision and other people screening systems.

Concealed object detection

Despite continued investments in people scanners and changes to screening regulations in areas such as airline passenger security, conventional measures have failed to provide an effective and practical response to an ever increasing and more diverse series of security threats.

A prevalence of aircraft hijackings led the United States to introduce metal detection based systems to screen airline passengers in 1972. Although effective at detecting knives and most types of firearms, metal detectors have been unable to keep pace with emerging non-metallic threats. These include composite firearms and plastic explosives, as well as concealed narcotics and contraband items.

More recently, a number of international airports have introduced so-called 'full body scanners' that are capable of detecting concealed objects beneath several layers of clothing. However, public opinion remains divided with a number of influential opponents having raised concerns about the potential health effects and privacy violations.

In the United States, this led the Transportation Security Administration (TSA) to withdraw all such scanners made by one vendor in January 2013, as a result of their failure to comply with a deadline for replacing invasive full body images. The alternative being a graphic representation of a body with automatic highlighting of potential threats.

In addition, conventional screening measures are typically highly visible devices at overt checkpoints (e.g. pre-flight

security screening), offering adversaries the potential to exercise against and attempt to evade such measures. As a result of the operational and practical issues associated with predictability, safety and privacy, a more flexible, less invasive and more trusted approach is required to people screening. ThruVision from Digital Barriers offers the next generation in people screening technology, with a passive scanner that does not compromise privacy or safety – and also allows for more agile and responsive security.

How people screening systems work

Several technologies for concealed object detection are available and can be broadly divided into two groups:

- Active: these scanners direct active radiation towards a person and interpret the energy that is reflected back
- Passive: these scanners interpret the energy emitted naturally by the human body, objects and environment

Technology	Active Radiation	Distance to Target	Typical Weight	Covert Use	Speed of Screening
Backscatter X-Ray	Yes	0.5m	600 to 1000kg	No	Low
Active Millimetre	Yes	0.5m	400 to 800kg	No	Low
Passive Millimetre	No	3-5m	35 to 45kg	Yes	High
Passive TeraHertz	No	3-15m	20 to 25kg	Yes	High

Comparison of people screening measures

Active screening solutions

The most prevalent technologies used in people screening are backscatter X-ray scanners and active millimetre wave scanners. While these undoubtedly offer a proven level of object detection capability, they also have key issues.

- Backscatter X-ray scanners: traditional X-ray machines produce an image based on variation in transmission

of X-rays through a target. In contrast, backscatter X-ray scanners detect the radiation that is reflected by a target. When a target is radiated, backscatter X-rays interact according to the physical characteristics of the material being scanned. Scanners then interpret these interactions and imaging software produces a detailed, high contrast two-dimensional image of the target, with brighter areas denoting materials of higher reflectivity.

- Active millimetre wave (mmW) scanners: similar to backscatter X-ray scanners, active millimetre wave scanners radiate a target and highlight any concealed objects based on reflected radiation. However, instead of X-rays, these scanners use millimetre (30-100GHz) frequencies, which some consider safer than X-rays.

Shortcomings associated with active technologies

The most obvious issues associated with active systems are public safety and privacy concerns, which continue to attract headlines. However, the physical characteristics and cost of these systems also raise practical issues.

Public concern over health and privacy

Backscatter X-rays represent a form of ionizing radiation that may pose significant health risks if not adequately controlled. Millimetre wave scanners use non-ionizing radiation and are typically considered as safe. However, concerns have been raised that no long-term studies have been conducted – and public opposition to the use of active radiation in any unfamiliar technology is inevitable, until questions of safety been independently addressed.

Often referred to as a ‘virtual strip-search’ active systems are capable of producing a highly detailed image of the skin surface under clothing, including intimate anatomical details and exposing confidential medical characteristics. There are concerns that this poses a risk to civil rights and that images produced have the potential to be misused.

Considerations of physical equipment

Active systems currently in use vary in weight between 500 to 1000 Kilograms and impose a substantial footprint. They are therefore unlikely to integrate easily into existing security infrastructure or locations where space is limited, without significant installation effort. Due to their size and weight, these systems cannot be considered portable and cannot be deployed quickly to new locations at short notice.

Depending on system, throughput is limited to around three to five persons per minute, making screening of large numbers in busy environments virtually impossible. Some screening procedures even require a series of poses to produce an adequate image of a person – decreasing

throughput still further. Particularly during busy periods, this may reduce the frequency of use and result in security vulnerabilities.

Due to the scale and limited detection range of these scanners, they cannot be used in a covert manner or for screening multiple people whilst on the move. Further, many of these systems attract problematic legal questions and additional permissions may be required for their use.

Lifetime cost implications

Active technologies can be costly to acquire, maintain and operate. These systems may also incur significant energy costs and require multiple operators if privacy concerns dictate an operator of the same gender. The lifetime cost of these products is therefore anticipated to be very high. In some cases, the associated operating costs may even exceed the initial cost of purchasing the product.

Passive screening solutions

Concerns surrounding active systems have contributed to the introduction of passive millimetre wave scanners. In contrast to active systems, these scanners simply receive the energy that is emitted naturally by humans, objects and their surrounding environment. This helps mitigate many of the criticisms levelled at the perceived safety of active scanners, although misconceptions do remain.

While passive systems can be considered an improvement on active technologies, they have several shortcomings that require further consideration...many flaws are the result of operating at too low a frequency for practical use

Most passive systems typically operate at frequencies up to approximately 100 GigaHertz (GHz) (wavelength of approx. three mm) and are capable of identifying metallic and non-metallic objects concealed under clothing. While passive systems could be considered an improvement on previous active technologies by some end-users and the public, they have several shortcomings that require further consideration. Many flaws are the result of operating at a frequency that is too low for practical use in real-world applications.

- Environmental attenuation: millimetre wave systems (to 100GHz) are vulnerable to environmental changes and are less effective if exposed to any illumination or sunlight. For some products, considerable precautions must be taken to shield a millimetre wave system from any outdoor illumination (e.g. panels across windows), complicating the deployment of these systems and rendering them incapable of operating outdoors.
- Object detection: at millimetre wave frequencies, some materials (and therefore concealed objects) may appear

transparent, making it difficult to detect them reliably. For example, plastic explosives may appear translucent at these frequencies, resulting in security vulnerabilities as these objects go undetected.

- False positives: the human body is highly reflective at millimetre wave frequencies. This means that the human form reflects any local environment (imagine a person covered in silver paint). This can lead to many false positive detections – that require invasive, time-consuming and personnel-intensive pat down searches that increase costs and reduce throughput of people.

How the ThruVision technology works

ThruVision scanners combine a high-quality passive 0.25 TeraHertz (THz) eight-channel mechanical scanning unit with a colour CCTV camera – to provide an operator with visual context when screening. Because it operates at such a high frequency, the technology can be incorporated into a compact and portable unit, without sacrificing detection performance. For example, the current generation of TS4 products are 65cm x 55cm x 20cm and weigh only 24 Kilograms.

For a constant resolution at a fixed distance, a 0.25THz passive detection system will be considerably smaller than a system using a lower frequency – and therefore a lower frequency system would have to be much larger in order to achieve the same resolution at the same distance. In comparison to other passive people screening systems, ThruVision scanners are less susceptible to the effects of environmental illumination. For example, 0.25THz energy does not pass through glass, removing the need for costly and complex structural modifications, such as covering

windows, which other passive scanners often require.

ThruVision compact scanning units

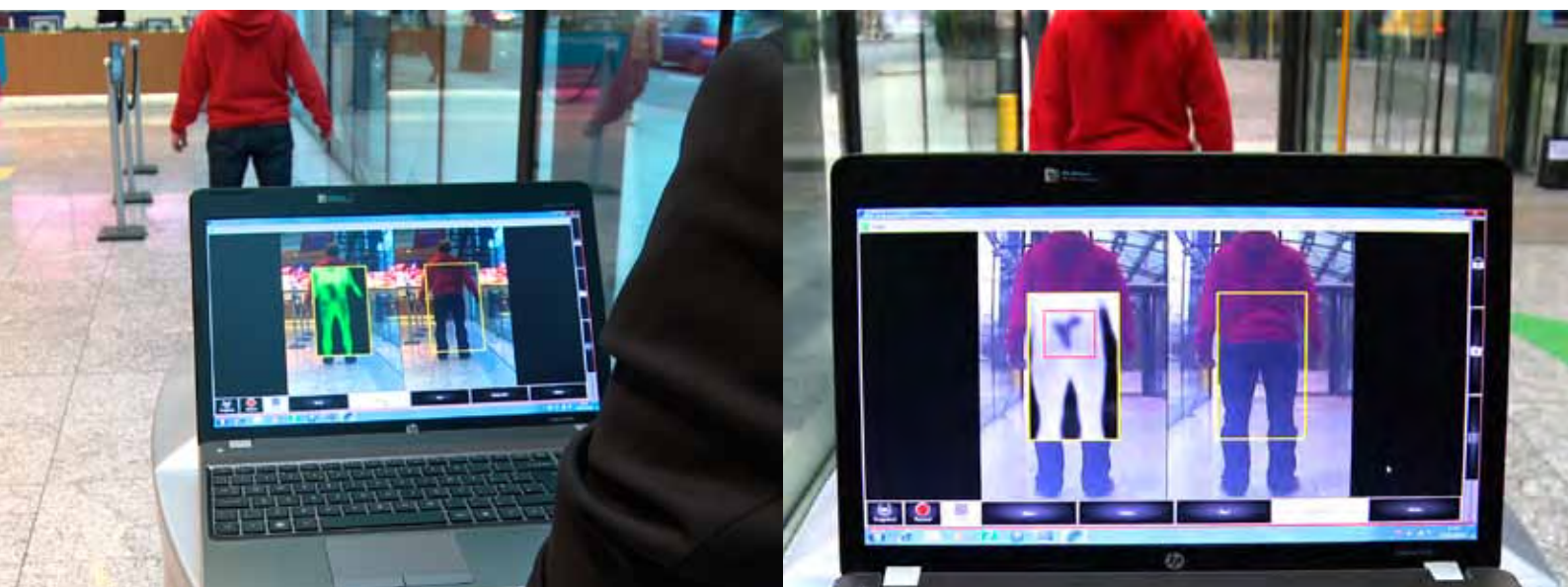
With its small and lightweight form factor, as well as its resilience to environmental conditions, ThruVision units can be deployed as a standalone screening solution – or incorporated into wider security architectures. ThruVision units are designed for versatile indoor operation, using a ceiling or floor mounting, which also allows for simple integration into existing settings where space is limited. In addition, all ThruVision products are designed to run on a standard mains power supply (or external 24V battery) and connect to viewing software using a standard IP connection. As a result, ThruVision products can be fully operational within 10 to 15 minutes of their deployment.

TeraHertz scanning method

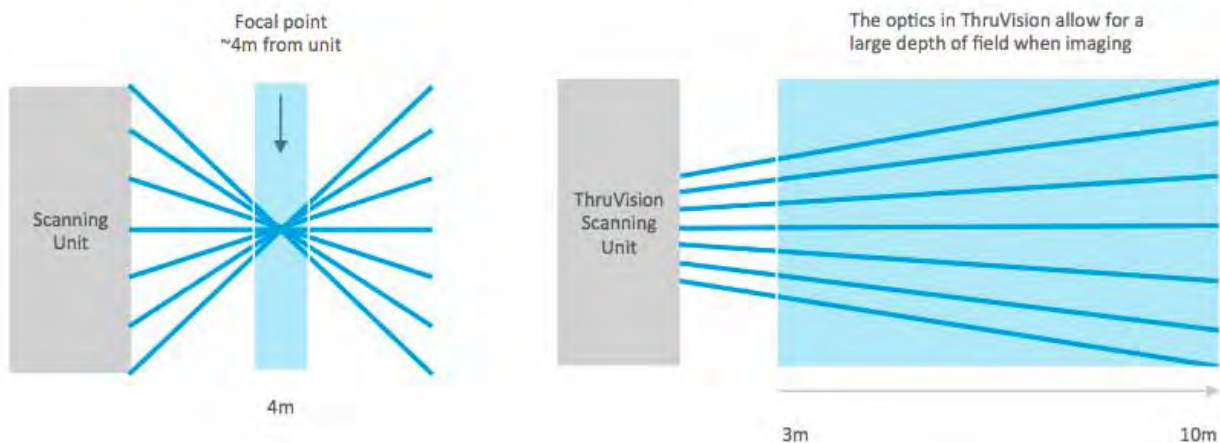
ThruVision products are easy to use and the TeraHertz scanner can achieve high detection rates for medium to large concealed objects – such as metals, plastics, gels, ceramics, liquids and powders. Units employ an entirely passive approach that ensures completely safe screening.

The scanner works by receiving and interpreting natural TeraHertz energy emitted by people, concealed objects and their surrounding environment. While all objects emit TeraHertz energy, some emit negligible amounts and will therefore appear in contrast to a person being screened.

The 0.25 TeraHertz energy emitted from people transmits with little attenuation through clothing, whilst maintaining resolution, hence providing the ability to detect objects that are concealed under clothing layers – but are at the



ThruVision features telescopic optics that allow for effective concealed object detection at distance



Focusing versus the telescopic optics of ThruVision units (light blue areas indicate depth of field)

same time blocking the TeraHertz energy from a person.

TeraHertz scanning optics

A number of screening solutions feature high-resolution optics that detect small concealed objects that are of a size that is unlikely to pose a significant threat. However, the increased resolution of these scanners is also likely to expose organisations to heightened privacy concerns.

ThruVision produces lower resolution images to detect medium to large concealed objects – even at standoff distances. The optics within ThruVision systems could be modified to resolve smaller objects; however, a greater level of surface anatomical detail would be visible. As with any scanner, this could be mitigated with automatic target detection and a graphical representation of the body.

Depth of field

ThruVision standoff people screening units do not have a ‘sweet spot’ where a subject must be located for them to be imaged. The telescopic optics in the scanner provide a large depth of field enabling continuous imaging between approximately three metres and ten metres. This allows for screening of an individual or multiple people whilst on the move and is therefore effective at maintaining levels of throughput. In addition, the ability to form images of people at various distances gives operators more time to examine a subject over a greater distance and elapsed time. A large depth of field also allows for covert deployment in environments where discretion, rather than deterrence, is the priority.

Viewing of imagery

ThruViewer is a Microsoft Windows based user interface that combines the real-time CCTV and TeraHertz sensor feeds from a ThruVision scanning unit. This combination offers a visual context for an operator to improve interpretation of

the TeraHertz imagery. The imagery is output from the unit as two IP streams, which allows for local or remote viewing of the imagery on the ThruViewer application. This enables greater flexibility in the organisation of security operations.

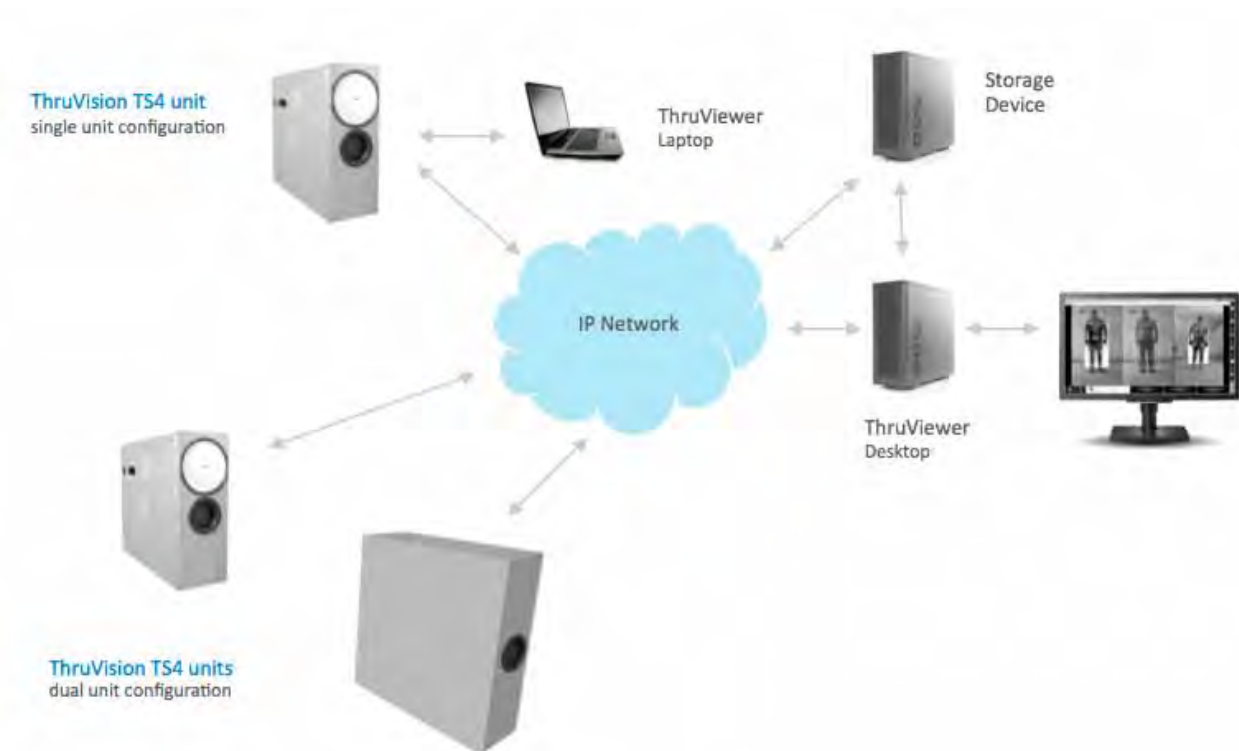
Image quality

The ThruViewer application features an automatic averaging algorithm that improves image quality when a subject is stationary. In effect, when the scene is broadly static, the software overlays frames to remove background noise. This provides greater clarity in compliant or semi-compliant screening situations. In addition, an “assisted detection” utility is available to identify any objects that are shown in contrast and are therefore concealed objects of potential interest. This reduces the burden on operators but does not remove the need for an operator to monitor and interpret the imagery. The TeraHertz imaging display also includes a user selectable display (b/w, colour) to suit preference

- Recording of imagery: the ThruViewer software allows operators to record and playback imagery to assist in real-time detection as well as follow-up investigations. ThruViewer also includes a snapshot feature for replay of recent imaging clips that might have been missed.
- Networking of ThruVision units: multiple ThruVision units can be viewed remotely using ThruViewer and multiple operators in remote locations can view the imagery from a unit simultaneously. The IP feeds from the scanning units allow imagery to be transmitted across almost any network. Wired connections are currently recommended due to the amount of data.

Why operate at 0.25 TeraHertz?

The fact that TeraHertz waves are high frequency and short wavelength gives rise to some defining benefits in the detection of concealed objects. Materials that are



ThruViewer allows for local or remote viewing of scanning imagery

associated with typical concealed threats (plastic explosive in particular) appear much more clearly at TeraHertz frequencies than would be the case at the millimetre wave frequencies (30 to 100 GHz) that are typically used by other passive scanning systems.

At lower frequencies (and longer wavelengths) all materials, including concealed objects, appear more transparent. Conversely, at higher frequencies such as infra-red, objects appear more visible but clothing now appears more opaque. In the region in between these extremes is the optimal range for people screening of 0.25THz – where object visibility is high but clothing is sufficiently transparent. For this reason, ThruVision was developed specifically to operate in this range.

If a millimetre wave and TeraHertz scanner were to image simultaneously for the same concealed object (such as a piece of plastic explosive), the object would be more visible in the TeraHertz frequency region. It would therefore be much easier for an operator to detect this object on a subject at a distance.

Emission of TeraHertz energy by a person or object

The ability of any non-metallic objects (animal, plant, mineral) to emit mmw/THz energy is directly related to the temperature of the object. Therefore in a primarily emissive environment,

with no significant sources of THz energy to reflect, concealed objects can be detected if they are greater than one Degree Celsius warmer or cooler than body temperature.

Reflections of TeraHertz energy

At millimetre wave frequencies, the human body is highly reflective (at around 90 per cent), leading to many false positives. In contrast, at TeraHertz frequencies, the human body is more emissive and appears to glow. It therefore offers greater thermal contrast to detect concealed objects, which also glow but at a different brightness. At 0.25THz skin is roughly 25 per cent reflective, yet metals are broadly 100 per cent reflective and therefore show in contrast to the body.

Transmission of TeraHertz energy through the object

Objects of varying densities and thicknesses transmit the TeraHertz energy of a human body with varying levels of attenuation. TeraHertz energy from a person will transmit with little attenuation through clothing – however a concealed object would not allow transmission of the body's energy and can therefore be shown in contrast.

Practical operational benefits

ThruVision products have been designed specifically as a

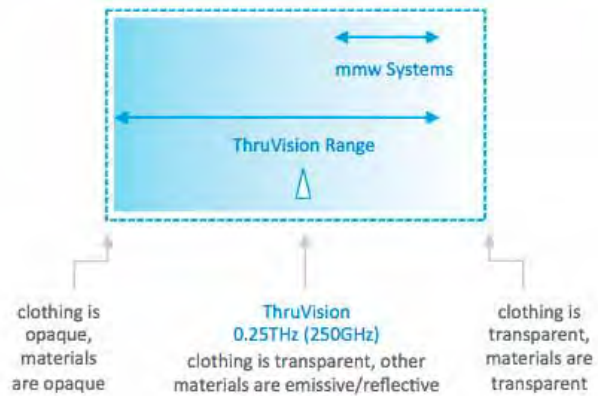


ThruVision operating frequency of 0.25 THz versus millimetre wave (~100GHz) scanners (as shown on the electromagnetic spectrum)

safe, high-throughput, portable, overt or covert solution for standoff detection of medium to large objects – such as metals, plastics, ceramics, liquids, gels and powders. Units can be quickly and easily incorporated into existing operational settings and environments where space is limited. They are also suitable in situations where people are compliant, semi-compliant or non-compliant.

The TS4 unit is available with a full range of accessories to facilitate installation or enable mobile operation. In many situations, a ThruVision scanner is positioned at a natural chokepoint (e.g. a transit walkway, doorway or turnstile) for the effective screening of semi-compliant subjects. Chokepoints can be designed to slow a person, allowing a few seconds for improved imagery. Because certain materials are transparent to TeraHertz energy, units can also be concealed covertly behind screens.

In certain deployment examples, operator discretion may be equally as important as object detection. The degree of suspicion assigned to a concealed object is likely to be a function of the size, shape and position of it on the body. For example, an object placed in a key concealment area (e.g. the groin or small of the back) could be considered to be higher risk than an object in a trouser or jacket pocket.



ThruVision has been deployed worldwide by organisations for customs enforcement, force protection public security and safety and loss prevention. Its compact form factor, simple installation and ease of use make it ideal for a range of fixed and rapidly deployable scenarios:

- Passenger screening (e.g. contraband detection)
- Checkpoint screening for concealed threats
- Visitor screening for high-profile sites and VIPs
- Employee screening for commercial loss prevention

Article courtesy of Digital Barriers
www.digitalbarriers.com **ESST**



ThruVision operational deployment examples

Tertiary Institution In New Zealand Leads The Way In Its Security And Access Management Practices



Background

Wintec (The Waikato Institute of Technology), established in 1924 is a major New Zealand Government-funded tertiary institution, which has three Hamilton campuses; a city site overlooking the central business district, Avalon campus on the northern outskirts of the city, and a horticultural campus at Hamilton Gardens. In addition, it has regional operations at Te Kuiti and Thames and also an office in Beijing.

The Avalon campus, a ten-minute drive from the city, is home to specialist trades training facilities, a state-of-the-art sport and exercise complex and custom designed facilities for the School of International Tourism, Hospitality and Events. The third Hamilton campus, the Horticultural Education Centre, is situated amidst the 58 hectares of Hamilton Gardens.

Wintec is one of the largest institutes of technology in New Zealand, and has more than 35,000 full-time and part-

time students, more than 500 full and part-time staff and eleven schools within its academic faculty. International enrolments exceed 1000 from 47 countries.

A range of student services provide its domestic and international students with a high level of support so they enjoy a positive, safe and secure study experience.

Wintec's programmes and qualifications are nationally and internationally recognised and its degrees have equal status to those from universities. The degree programmes include Media Arts, Midwifery, Nursing, Occupational Therapy, Early Childhood Education, Business Studies, Engineering, Technology, Information Technology, and Sport and Exercise Science and a wide range of full and part time courses for those already in the workforce.

Wintec is also a recognised leader nationally in the delivery of on-line distance education for those unable to attend regular classes for reasons of geographical access or other constraints.



The environment - controlled open door policy

Wintec strives for a balance of unobtrusive yet robust control of site activity, essential for maintaining an open campus environment. Shane Goodall, security manager at Wintec, described the approach to security as highly proactive and collaborative: "by focusing on preventing issues arising, we now have a minimal policing role and the crime resolution rate is high".

This environment is underpinned by Gallagher's security system, a core access control, intruder alarms and integration platform. Wintec first installed the Gallagher system (formerly Cardax FT) in 1999 and has since migrated this legacy system to Gallagher's latest security technology platform. Security for the entire organisation, including satellite sites, is managed and monitored centrally from Wintec's single Gallagher security system.

Since initial installation, Wintec's Gallagher access control system has grown from seven to 240 electronically controlled doors in 2009, with another 40 planned - testimony to the scalability and flexibility of the system. Wintec has integrated its imaging system to the Gallagher system delivering a visual record, which can be matched to the audit trail of events in Gallagher Command Centre software. The organisation first installed six cameras in 2004, which has increased to seven DVRs and 85 cameras (both analog and IP). Another compelling aspect of the system for Wintec is the scalability and TCP/IP network-friendly system communications.

As well as monitoring and controlling staff and student access, equipment including computers, TVs, printers, audio-visual resources at Wintec are also monitored through the Gallagher system.

The 'Gallagher Hub,' a new computer laboratory offering comprehensive IT resources is open 24 hours. The Hub contains 125 workstations, and there are plans to extend that number. Active monitoring of equipment through the Gallagher system has significantly reduced theft. Students and staff have scheduled access to shared IT resources, classrooms and lecture theatres. 'Cardholder Import,' an XML Interface, supports the importation of cardholder data including course enrolments from their student record system to Gallagher Command Centre.

Shane commented, "Student card issuing is an automated process which is enrolment-driven - a student's access privileges are assigned according to their enrolled courses. To implement this, we defined a rules-based allocation of access groups in the Gallagher system using the XML interface. The interface is 'live' so that changes in the student enrolments database are immediately reflected in the Gallagher system. The student's updated access privileges come into effect without delay." Staff that interact directly with students are now empowered to manage cardholder data enabling the security team to focus on security. Students and staff utilise the Mifare SmartCard functionality extensively, embracing them as an integral multi-application tool in their modern educational environment - SmartCards are used to issue resources from the library and as pre-stored value cards enabling prepaid printing and photocopying. In the near future they will also be used in Wintec's Pay and Display car park and potentially as passes onto city council buses.

Stewart Brougham, director of Internationalisation at Wintec, says students have given very positive feedback about their ID cards. In particular, the ability to verify the identity of staff members from their ID access cards provides peace of mind for students. The end result is a people-friendly campus.

Future enhancements of Wintec's security may include the utilisation of the CommCard solution from Gallagher to manage and monitor access to student accommodation. CommCard is a unique high-level integration between the Gallagher Command Centre software and Salto offline readers, delivering offline, non-monitored electronic access control for lower security doors.

The path forward - taking a lateral perspective on security



An overriding philosophy of collaboration has seen Wintec take a lateral approach to security, the value of which many organisations have yet to realise. At Wintec, security is not viewed as a discrete functional activity relegated to security staff only. The on-going management of security is a joint effort between the security services team and the information services team. The security services team manages the Gallagher system while the information services team looks after back-end functions such as installation on the network and backup. Wintec has leveraged the convergence of security (access control) and other operational business functions recognising the tremendous potential for reducing risk and increasing operational security, safety, performance and efficiency.

Looking beyond simply controlling and monitoring who goes where and when onsite, Wintec is harnessing the reporting capabilities of Gallagher Command Centre to meet regulatory requirements. The Gallagher system enables the institution to report on actual space utilization (not just space booking). Decisions are made for best use, and also to substantiate funding, based on these reports.

"The key to space utilization reporting are the frequency of reporting and the integrity and reliability of information,"

stated Brougham. It's a national issue for educational institutes in New Zealand. "For Wintec, reporting is about ensuring compliance with regulatory requirements and is also a staff time management issue – reducing the administration load on lecturers, who would otherwise have to track student attendance manually." Brian Fleming, director of Gallagher Channel Partner, Concord Technologies, cited this lateral application of a security system as the key to maximising the value of Gallagher to Wintec.

Security in partnership



This collaborative philosophy extends to proactive external partnerships with their Gallagher Channel Partner, Concord Technologies, for the installation and maintenance of the Gallagher system, and with system designer and manufacturer, Gallagher.

Having signed an agreement to continue in the capacity of a Gallagher field test site, Wintec has a strong relationship with Gallagher in the on-going development of its technologies. Wintec's success, in the last five years, as a test site reflects the competence of both its IT and security staff and the institute's commitment to leading edge student services. Minimal training has been required. There is open communication and information sharing between all internal and external parties involved, which means any issues that arise can be quickly addressed.

Wintec has committed to a site maintenance plan with their security partner, Concord Technologies. The plan incorporates both software and hardware maintenance to ensure the system is maintained on the latest operating platforms within a known cost structure. A Software Maintenance Agreement also ensures enhanced on-going system performance and reliability of the Gallagher system. **SST**