

MAGAZINE FOR SAFETY AND SECURITY

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**SECURITY**

**EMEA**

79 824



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**Fire Protection**

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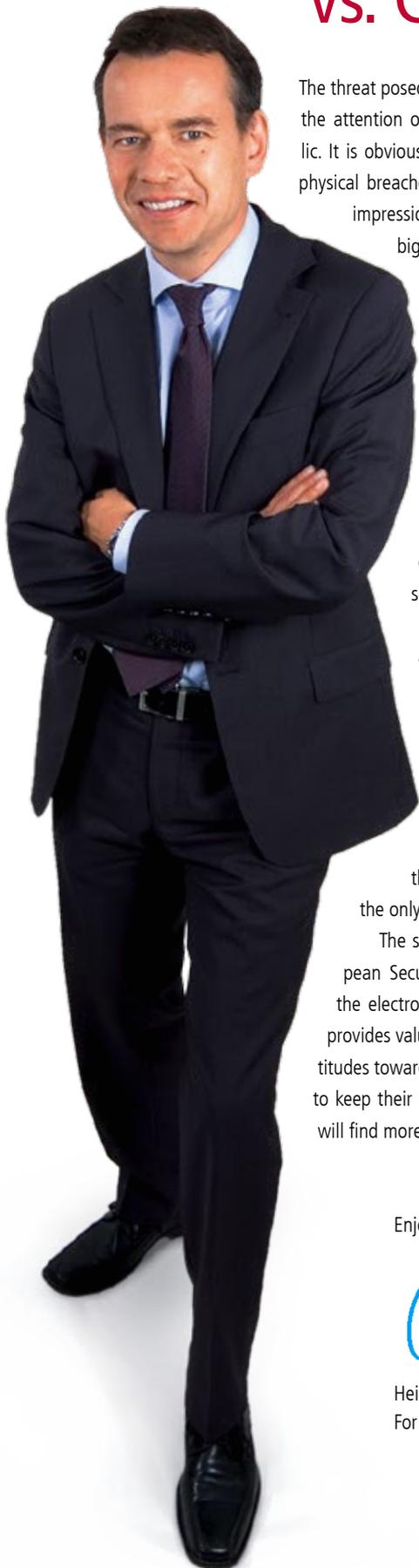
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Exhibitor partial list



# Physical Security Breaches vs. Cyber Attacks



The threat posed by cyberattacks has grabbed headlines and the attention of politicians, security experts, and the public. It is obvious that cyberattacks get more attention than physical breaches in security and one could easily get the impression, that the threat through cyberattacks is bigger than all other dangers for businesses.

An interesting research done by Vanderbilt amongst more than 7,500 consumers and businesses in Great Britain, France, Germany, Spain and Sweden, revealed that British businesses report nearly three times as many physical breaches in security at their workplace than virtual or cyberattacks. Also in Germany and Spain small and medium-sized businesses reported higher numbers of physical breaches in security than cyberattacks.

These results demonstrate that we are all on the right path when we concentrate our efforts on physical security and take the threats in this field seriously. The results can also be a valuable instrument when security officers discuss their needs for investment with their management. Cyberattacks are without doubt a serious threat for businesses but they are by far not the only one.

The survey forms part of Vanderbilt's 2015 European Security Barometer, which tests the climate of the electronic security market in Europe. The research provides valuable insight into consumer and business attitudes towards security, and reveals the efforts they make to keep their homes and businesses safe from harm. You will find more information on page 10.

Enjoy reading this issue!

Heiko Baumgartner  
For GIT's Safety and Security team

# NO PATCH- WORK IN SECURITY SOLUTIONS

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**26 COVER STORY**  
**The Key to Effectiveness**  
 Protecting Our Dependency on Utilities



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**Open, for Business**  
 Wavestore Introduces Updated Version of Its Award Winning VMS



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DIGITAL ACCESS MANAGEMENT  
IN BUILDING SYSTEMS

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the perfect solution  
for integrated  
access control.



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[www.smartintego.com](http://www.smartintego.com)

**Simons Voss**  
technologies

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## Salto Strengthens Product Management Team with Michael Unger



Michael Unger has been appointed to the position of Vice President Product Management at Salto Systems, reporting directly to Marc Handels, Chief Marketing and Sales Officer. Based at company HQ in Oiartzun, Spain, Unger will work as the interface between the Marketing and Research and Development departments. In his new role he will be responsible for the further development of the company's product portfolio as well as creating specifications and prioritizing development projects. Prior to joining the firm, Unger spent 24 years in different roles with Evva, the Austrian locking systems manufacturer.

[www.saltosystems.de](http://www.saltosystems.de)

## New Structure for Siemens Postal, Parcel and Airport Logistics

The Postal, Parcel and Airport Logistics division of Siemens (SPPAL) has a new global setup. The business with mail and parcel as well as baggage and cargo handling systems is backed by a global network of regional companies and branch offices. The company now has its own European regional companies in the United Kingdom, France, Italy, Portugal, Spain and Switzerland and in the Asian market in Singapore, India, China and Hong Kong. The Americas are covered by regional companies in the USA and Canada and there are local branch offices in Turkey, Taiwan, Malaysia and South Korea. In the UAE the company operates under the name SD in a successful long-standing joint venture with Al Moosa Group Investment.

[www.siemens.com](http://www.siemens.com)

## Idis Hires Technical Specialist

Idis has appointed Charles Penning to the position of Technical Specialist to support its growing number of customers and partners, particularly supporting the company's DirectIP end-to-end and plug-and-play full-HD surveillance range. Based at the company's European headquarters in London, Penning will provide technical support and training across the UK and Ireland and underpin the training program hosted at the demo and training center in Brentford. This dedicated and purpose built training facility hosts a weekly agenda of courses that encompass single site installations through to multi-site enterprise-level implementations. [www.idisglobal.com](http://www.idisglobal.com)



## Vicon Announces New APAC Sales VP

Vicon Industries, designer and producer of video security systems and high-performance IP cameras, has announced the hiring of Lawrence de Guzman in Singapore to better manage the growing local business in southeast Asia. Mr. de Guzman has been hired as VP APAC reporting to Bret McGowan, Sr. VP Sales and Marketing. He has an extensive background in international sales and marketing, as well as Senior Management. Prior to joining Vicon, he held roles at Milestone Systems, most recently as Director of Global Key Accounts, Verticals and OEM Sales and Sales Operations. Prior to Milestone, he was Global Marketing Director and Managing Director Asia Pacific for Axis Communications.

[www.vicon-security.com](http://www.vicon-security.com)

## Data Center Certification for Giesecke & Devrient

Giesecke & Devrient's data center in Canada has been certified 'Visa Ready' by Visa for Host Card Emulation cloud-based payment services. With this status, Visa ensures that technology and service providers develop and deploy products and services that are compatible with their requirements. This covers all core services for cloud based payments – digital credential provisioning, key management for digital credential provisioning and token lifecycle management. G&D deploys its Convego Cloudpay solution for the provision of cloud payment services to its banking customers worldwide to provide a single service deployment for the issuers to offer mobile payments across the product portfolio to their customers.

[www.gi-de.com](http://www.gi-de.com)

## ACT Secure Welsh School

Dyfed Alarms is installing access control equipment from ACT at a mixed comprehensive school in Wales. Ysgol Dyffryn Aman has 1,600 pupils studying across a large campus. Hardware includes model 4000 door controllers and the manufacturer's door stations on interior and perimeter doors. It uses low bandwidth and auto-discovery combined with timed anti-passback and counting areas.



The 13.56MHz Mifare fobs and ACTpro Mifare 1030PM readers being used can read data from any of the 16 sectors on a card. The access control system at the school has been extended to secure a link with an adjacent public leisure complex featuring two swimming pools, an athletics track, Astroturf pitches and a gymnasium.

[www.act.eu](http://www.act.eu)

## Transport Operators to Expand Use of Surveillance and Video Analytics

An international survey among public transport organizations reveals that operators worldwide are continuing to invest in leading edge security technology, with the majority interested in adopting more widespread use of real-time surveillance and advanced video analytics to better protect their passengers, equipment and installations. 97% of survey respondents have already installed security cameras. The survey was conducted by the International Association of Public Transport and Axis Communications, the network video provider. „The survey results show that the real-time possibilities offered by modern IP video systems are increasingly being used to efficiently manage incidents,” said Patrik Anderson, Director Business Development Transportation, Axis Communications.

[www.axis.com](http://www.axis.com)

## Asahi Net and Milestone Systems Announce Service Provider Partnership for Cloud Solution



**Asahi Net President Jiro Hijikata and Milestone Systems VP for Asia Pacific Japan Benjamin Low signed the partnership contract.**

Milestone Systems, the open platform company in IP video management software (VMS), held a Signing Ceremony with Asahi Net at the Danish Embassy in Tokyo on June 23. The gathering of media, security associations, distributors and market research analysts witnessed the signing of the agreement for Asahi Net to become an official Milestone Service Provider Partner. They will build and supply a cloud solution based on Milestone Xprotect Corporate VMS in collaboration with Milestone IT Infrastructure Partner Promise Technology, a manufacturer of data storage servers designed for flexible, reliable cloud services. [www.milestone.dk](http://www.milestone.dk)

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[www.aplusa.de/experience](http://www.aplusa.de/experience)

### ID Document Electronics Consortium

Contactless, multifunctional, fast and secure features are important requirements for the new generation of travel documents. In the past three years, issues surrounding the security of electronic identity documents have been addressed by the Newp@ss research project. Research conducted by security chip providers Infineon Technologies and NXP Semiconductors Germany as well as Giesecke & Devrient, part of a consortium of 15 European institutions within the Eureka Catrene program, was funded by the German Federal Ministry of Education and Research. The consortium has developed the data structures and security chip architectures being integrated into the latest globally applicable travel document standards. In addition to the ID holder's biometric data, they can record visa data and arrival and departure stamps. [www.gi-de.com](http://www.gi-de.com)

### Geutebrueck Supports Koblenz Police Puppet Theater

„Security is our job!“ With these words Katharina Geutebrück and Christoph Hoffmann, Managing Directors of Geutebrueck, welcomed Michael Meyer from the puppet theater of the Koblenz Police Department to Windhagen. The family-owned company is supporting the police „Classroom on wheels 2.0“ project with a donation of 10,000 Euro. The Police puppet theater has been in existence since 1982 and has been performing prevention work at kindergartens and schools since 2002. The children are introduced to appropriate, anticipatory behavior in a playful, amusing way. „We are very pleased to be able to provide support to the excellent work of the police. We can never invest too much in risk prevention for our children,“ says Katharina Geutebrück. [www.geutebrueck.com](http://www.geutebrueck.com)



27<sup>th</sup> – 30<sup>th</sup> October 2015  
Düsseldorf, Germany



Safety, Security and Health at Work

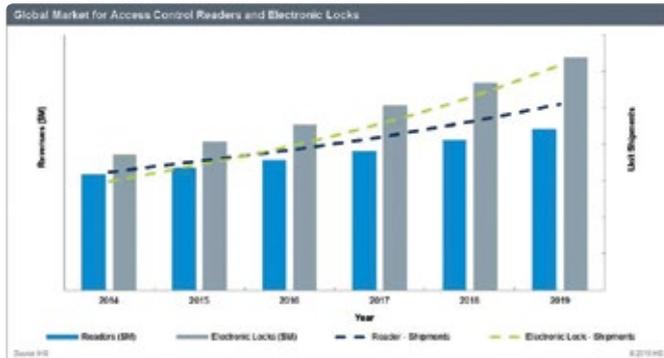
International Trade Fair with Congress

[www.AplusA-online.com](http://www.AplusA-online.com)

## SL Signs Five-Year General Agreement with Gunnebo

Stockholm's public transport company, Storstockholms Lokaltrafik (SL), has signed a five-year general agreement with Gunnebo Security Group. The agreement encompasses design, project planning, construction and installation of ticket gates at new and existing metro stations. While the agreement does not guarantee any orders, SL is planning several new constructions and refurbishments over the next few years as it currently has more than 1,200 installed ticket gates, most of which are more than 10 years old and may need to be replaced. [www.gunnebo.com](http://www.gunnebo.com)

## IHS Study Shows Electronic Locks Dominate the Access Control Industry



In 2015, IHS forecasts the global market for electronic locks will exceed \$1 billion. IHS segments electronic locks into three categories: mechatronic, electromechanical and digital cylinder. Electronic locks have evolved significantly since the 1970s when they were used mostly in hospitality and now, three decades later, they are one of the fastest growing segments of the access control industry. Of the three product categories, IHS expects that electromechanical locks will see the most uptake over the next 5-8 years, representing nearly 77% of the total electronic lock market globally in 2015. For electromechanical locks, IHS expects that the residential market in North America will be a driving factor over the next 3-5 years as more multi-system operators (MSOs) and traditional monitoring providers look to offer electronic locks not only as an ad hoc option but as part of its existing packages. Similar to other trends occurring in the access control industry such as TCP/IP (IT integration), logical access control and open standards, suppliers and channel partners that embrace wireless lock integration with traditional wall readers will gain the most over the next 5 years. [technology.ihs.com](http://technology.ihs.com)

## Inter Airport Europe 2015 will Focus on Upgrading and New Construction

The international exhibition for airport equipment, technology, design and services, Inter Airport Europe, takes place from 6-9 October 2015 at the Munich Trade Fair Center in Germany. Three months before the event, some 610 exhibitors from 42 countries have booked their stand space. A range of equipment, technologies and services, solutions for aircraft, passenger and cargo handling, security, airport IT, architectural components as well as ground support equipment will be on show. „With rising passenger numbers at airports around the world and a rapid development of new technologies it becomes ever more important for airport operators to upgrade existing airports“, says Nicola Hamann, Managing Director of the organizers, Mack Brooks Exhibitions. „Airports of all sizes and in every country are affected since they were developed and built, partly decades ago, for a considerably lower number of passengers and with a different state of the art“. [www.interairport.com](http://www.interairport.com)

## Architecture and Design Award for Digital Locking Cylinder

The German Design Council has selected the digital locking cylinder from the Smartintego system as the winner in its Product/Building Technologies category. This locking cylinder impressed the jury consisting of representatives from the worlds of design, architecture, interior design and brand communication in this first, impartial, international competition which examines the fusion between architecture and design. The digital locking cylinder can integrate into an existing access control solution in comprehensive building management systems. Easily fitted without any wiring within minutes, it not only offers opening and locking, but also a wide variety of intelligent functions such as access control with logging, time zone control, event management and door monitoring. Standard button cells ensure power is reliably supplied for up to 80,000 locking transactions while Smart Cards or PIN code keypads replace mechanical keys. Peter Trautwein at Munich-based agency Ergon3 was responsible for designing this multi-functional device. [www.simons-voss.com](http://www.simons-voss.com)



## New MD for Apollo

Independent fire detection manufacturer, Apollo Fire Detectors, has appointed Steve Brown as its new Managing Director with regional responsibility for Europe, the Middle East and Africa (EMEA). Steve read Engineering at the University of Cambridge and gained an MSc in Aeronautics from Cranfield. His career history includes positions as Senior Engineer in research at British Aerospace and Project Manager for a UK-based consultancy, before joining ITW in France. There, Steve led a number of companies across many countries, overseeing over 1000 employees. Commenting on his appointment, Steve said: „I'm looking forward to building on Apollo's founding values and traditions, gaining a deeper understanding of our customers and increasing our worldwide presence to position Apollo as a truly global company.“ [www.apollo-fire.co.uk](http://www.apollo-fire.co.uk)



## Hotel Fire Panel

C-TEC's touch-screen controlled ZFP fire panel is now in residence at Manchester's magnificent Gotham Hotel. Two 4-loop ZFP addressable fire panels protect the luxury hotel which has 60 bedrooms and four £300-a-night suites. One panel is located in the basement and one is in the permanently manned Manager's office to ensure staff are notified of any incidents. A compact controller in reception displays the status of the fire alarm system at a glance. Phil Farrell of Solid State, the specialist electrical installation company that completed the project, said: „Working at Gotham Hotel involved installing new equipment throughout and transforming an old disused building into a glamorous hotel within a short period.“ A CCTV security system, access control system and one of C-TEC's SigTEL disabled refuge systems have also been installed at the hotel. [www.c-tec.co.uk](http://www.c-tec.co.uk)



## Milestone Helps Icelandic Harbors Free Up 1,000 Man-Hours per Year



Milestone Systems open platform IP video management software (VMS) is being used by Faxaports, the associated Icelandic ports, to optimize security, cargo handling and to secure ships against immigrant stowaways. With the growing traffic volume of thousands of containers annually there is a heightened need to monitor the harbors to avoid loading/unloading accidents, and to deal with the growing problem of illegal immigrants using Iceland as a gateway to the United States. Milestone Partner Security Center installed and implemented a solution with the Xprotect Enterprise VMS that manages a mix of 105 Sony, Vivotek and Hikvision cameras installed at the harbors.

[www.milestonesys.com](http://www.milestonesys.com)

## Giesecke & Devrient Provides Secure SIM Card

Giesecke & Devrient is the first SIM card provider to receive product certification from both NXP Semiconductors for Mifare Classic and from the Mifare4Mobile Industry Group for Mifare4Mobile Version 2. With this first certified SIM platform called SkySIM CX Hercules, G&D provides a SIM card for secure remote provisioning and management of Mifare-based services for mobile network operators, trusted services managers and service providers. The product has a powerful processor and can run several transactions simultaneously at high speed. Contactless technologies such as Mifare (Classic, DESFire, EV1) and Calypso benefit users with a highly secure SIM when used as an electronic ticket or for access control identification.

[www.gi-de.com](http://www.gi-de.com)

## American Science and Engineering Appoints New Chief Scientist

Dr. Aaron Couture recently joined the Company as Chief Scientist. In this role, he will lead the company's R&D strategy and help identify strategic opportunities for the Company's growing portfolio of detection imaging solutions. Chuck Dougherty, President and CEO of AS&E said, „Aaron will accelerate our strategic portfolio expansion efforts as well as explore green-field opportunities that create new, viable business opportunities for the Company.“ Dr. Couture has more than 14 years of experience developing detection imaging platforms and modalities and holds a dozen patents, with several more pending.

[www.as-e.com](http://www.as-e.com)

## Oncam Appoints New Product Management VP

Oncam, the security division of Oncam Technologies and provider of 360-degree camera technology, has announced the appointment of Justin Wheatley as Vice President of Product Management. In this role, Wheatley will ensure the company's products are clearly defined, understood and represented in the marketplace, as well as developed to meet the evolving needs of a wide variety of customers. Wheatley holds a Bachelor's Degree in Electronic Engineering from the University of Reading and brings more than 23 years of engineering, management, product development and testing experience in the technology and IT fields to his new role.

[www.oncamgrandeye.com](http://www.oncamgrandeye.com)

## Hikvision Claims Top Position in World CCTV and Video Surveillance Market

According to the latest report from business information provider IHS, Hikvision has strengthened its position as the world's leading CCTV and Video Surveillance equipment supplier, the fourth year in a row that the company has topped the list. The company's dominant 16.3% total market share in terms of revenue is up by more than 50% compared to the previous year and more than double its 8% market share of just two years ago. Hikvision has also attained 18.9% of the global network security camera market, an increase of 5.9 percent in revenue market share over last year's second position (13%) in this fast-growing camera sector.

[www.hikvision.com](http://www.hikvision.com)

## Estonia Selects Morpho to Implement API-PNR System

Morpho (Safran) has been awarded a major contract from the Estonian government to supply an Advanced Passenger Information/Passenger Name Record (API-PNR) system to bolster resources deployed by the Estonian government to ensure safety for citizens. Passenger name record (PNR) data collates information collected by airlines from passengers during the ticket reservation and booking process. The system includes the personalization, deployment support and maintenance of the company's Traveler Analytics Suite. It will help government agencies report targeted alerts to the appropriate authorities. The development and implementation is co-financed by the European union.

[www.morpho.com](http://www.morpho.com)

## International Display Roadshow



The eyevis roadshow recently presented its product innovations at eight locations in Europe. Several hundred integrators, planners and end-users from different markets such as control rooms, presentation, digital signage, broadcast and virtual reality & simulation got comprehensive hands-on experience of the company's visual solutions. The roadshow started in Belgrade, went to Sarajevo and then Zagreb. The next stops were Rome and Milan in Italy, then Madrid and Lisbon, where various contacts directly connected to ongoing projects were made. The final location in Paris was the „Haut Comité Français pour la Défense Civile“. The high resolution LED modules and the new slim rear-projection cubes grabbed the most attention amongst the visitors along with the possibility to create unique video walls with the omniSHAPES flexible rear-projection modules. Video wall controllers were also shown that, in combination with solutions from Teracue eyevis, allow recording and playout of several IP streams.

[www.eyevis.de](http://www.eyevis.de)

## MARKET RESEARCH

# More than a Third of Businesses Suffer from Security Breaches

## More Physical Breaches in Security at Their Workplace Than Cyber Attacks

A comprehensive study conducted across four European countries by YouGov for Vanderbilt reveals that 38% of small and medium sized European businesses have suffered loss, disruption or inconvenience as a direct result of physical or cyber security breaches.

Yet while cyber security arguably gets the lion's share of media and business attention, British businesses report nearly three times as many physical breaches in security at their workplace (23%) than virtual, or cyber, attacks (8%). Also in Germany and Spain small and medium-sized businesses reported higher numbers of physical breaches in security than cyber attacks. The survey forms part of Vanderbilt's 2015 European Security Barometer, which tests the climate of the electronic security market in Europe. The research provides valuable insight into consumer and business attitudes towards security, and reveals the efforts they make to keep their homes and businesses safe from harm.

As part of the survey, senior decision makers at small to medium sized businesses with up to 249 employees in Great Britain, France, Germany and Spain were asked about the loss, disruption or inconvenience caused to their businesses by breaches in security.

### Serious Concerns

"The fact that many businesses we surveyed do not have electronic security products like access control, CCTV or remote monitoring is a cause for serious concern," noted Joe Grillo, Managing Director of Vanderbilt International.

"This is especially true given the number of security breaches that businesses report – and the loss, inconvenience and disruption that these cause."

### Quality More Important Than Brand Loyalty

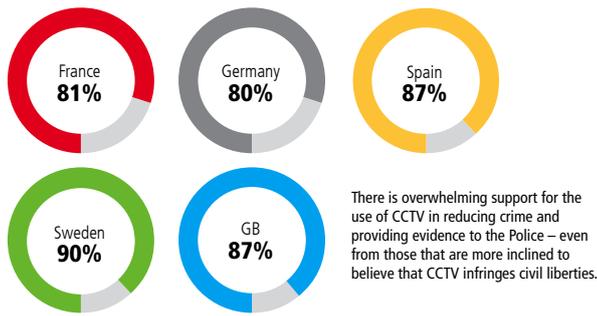
The survey found that, where businesses do install electronic security equipment, it is to meet practical concerns. Equipment is installed to prevent theft, vandalism and unauthorised access, yet considerations such as duty of care to employees, regulatory compliance, lowering insurance premiums and maintaining business continuity do not seem to factor anywhere near as highly.

Businesses in all countries that were part of the survey confirm that, when it comes to specifying and purchasing electronic security products, brand loyalty is a minor concern. The survey reveals they value quality, price and features above customer service, integration and the brand.

### Consumers are Worried

Consumers were also questioned as part of the survey. A key discovery was the fact that 59% of all adults believe that their countries are more at risk from terrorist threats, crime and violence than a year ago. The survey also reveals overwhelming support for the use of CCTV in combating crime, with 85% of

**CCTV has widespread public support – even amongst those that worry about civil liberties:**

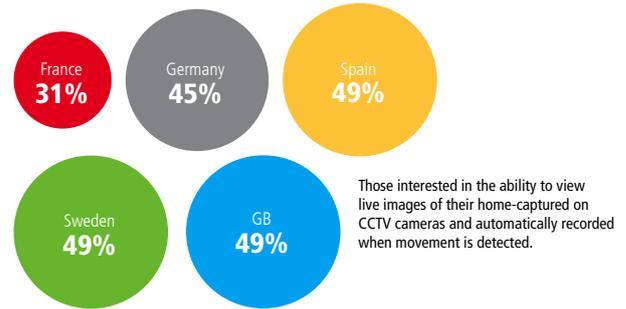


There is overwhelming support for the use of CCTV in reducing crime and providing evidence to the Police – even from those that are more inclined to believe that CCTV infringes civil liberties.

Average across all 5 countries: 85%

© Vanderbilt 2015

**There is a real appetite for advanced electronic security solutions in the home:**

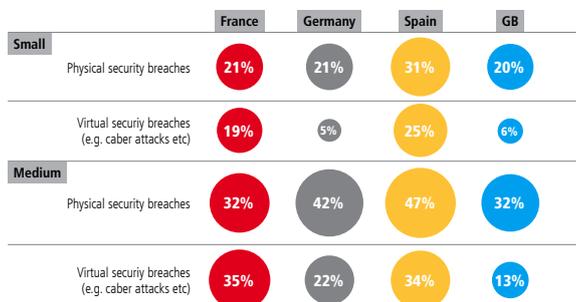


Those interested in the ability to view live images of their home-captured on CCTV cameras and automatically recorded when movement is detected.

Households are interested in installing security systems in their homes in the future

© Vanderbilt 2015

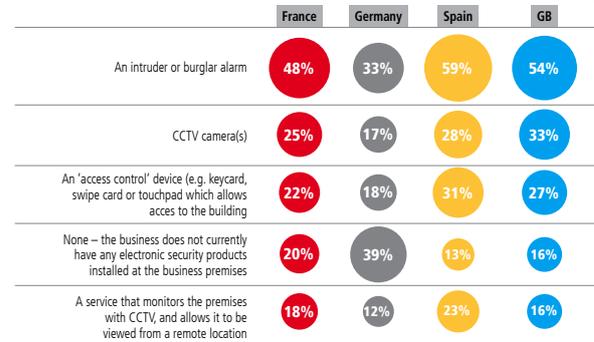
**More than 1 in 3 businesses across France, Germany, Spain and Great Britain have suffered security breaches:**



With the exception of medium sized French businesses, all report more physical breaches in security at their premises than cyber attacks – in some cases by a factor or more than three to one.

© Vanderbilt 2015

**Business premises are not adequately protected from breaches in security: Business premises are not adequately protected from breaches in security:**



While the use of electronic security products differs by market, a large majority of businesses do not have access control, CCTV or remote monitoring.

© Vanderbilt 2015

adults supporting its role in preventing crime and providing evidence to the Police. In addition, 58% of adults across Europe do not believe CCTV represents an infringement of civil liberties, or that it invades their privacy.

The belief that Europe is more at risk than a year ago may be influenced by memories of recent terrorist events across Europe, and the fact that terrorist attacks (even if most are thwarted) are now sadly a regular feature in the news. "The concern voiced in the survey is interesting when placed in the context of a downward trend in the number of recorded crimes", noted Joe Grillo. The Crime Survey for the European Union shows that violent crime declined across the EU by 6% between 2007 and 2010.

**Homes Not Well Protected**

Across all five countries surveyed, only a minority of households have an intruder or burglar alarm (18%), an access control system with keypad or swipe-card (9%), or CCTV (9%). British households have more intruder or burglar alarms installed than their counterparts in France, Germany, Spain or Sweden, however.

The survey revealed considerable interest amongst householders for advanced security technologies. A third were interested in an integrated security system that combined CCTV, intruder alarms and access control; while 35% were interested in security products that can be linked with, and made to work alongside, other appliances in the 'connected home' of the future.

Crucially, this interest is not restricted to those that own their own homes: In Great Britain 36% of those that rent their home from a private landlord are interested in an integrated security system, compared to only 28% of those who owned their home outright.

**CONTACT**

**Vanderbilt International**

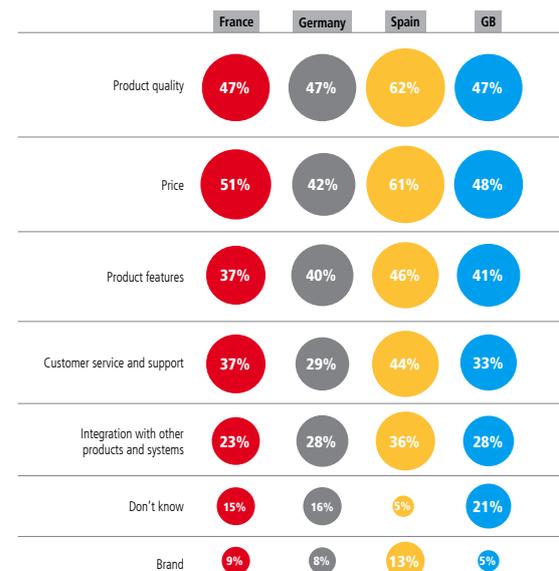
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**Above anything, businesses look for quality, price and features when they purchase electronic security products:**



Brand loyalty is a minor concern for businesses specifying and purchasing electronic security products. They value quality, price and features above customer service, integration and brand.

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More data from the 2015 Vanderbilt Security Barometer can be found on [www.git-security.com/whitepaper/management](http://www.git-security.com/whitepaper/management)



## INTERVIEW

# Open, for Business

Wavestore Introduces Updated Version of Its Award Winning VMS



**James Smith**, Marketing Director  
at Wavestore

Wavestore has launched V6, the latest version of their open platform VMS at IFSEC in London. The Linux based video recording and management system is able to simultaneously record images captured by combinations of analogue, IP, megapixel, HD, HD-SDI and 360 degree cameras. At IFSEC we had the opportunity to talk to James Smith, Marketing Director for Wavestore, about the company and its approach to the market.

**GIT SECURITY:** James, you have spent years in marketing in the security industry working for camera vendors. What is it that excites you about your new position in particular?

**James Smith:** I am very excited about having the opportunity to work with my colleagues and our partners to ensure that the advantages and benefits of what Wavestore has to offer are brought to the attention of a wider audience. Known for being truly independent and open platform, Wavestore has unique integration capabilities. The system is built to satisfy virtually any video management application up to Enterprise level through its software and NVR hardware solutions. Combine these with our excellent reputation for ease of use and support, and we truly have an opportunity to stand out from the crowd in what is a fragmented VMS marketplace.

**You have mentioned the competitive VMS market. What features does the Wavestore system have to stand out of the competition?**

**James Smith:** Wavestore is committed to an open platform philosophy and we are completely independent from camera and access control vendors. This enables us to integrate and work closely with camera manufacturers and other third party technology partners to offer a comprehensive security solution which can include access control, command & control, PSIM and a lot of video analytics functions. The ability to integrate other functions than video is a great advantage and explains why we are very strong when it comes to complex integration work. On the video side we bring together audio, data and video, including images from the latest ultra-high definition and 360° fish eye cameras and we integrate a large set of video

analytics functions like motion detection, license plate recognition, abandoned object and intruder detection, people counting, perimeter security detection and traffic monitoring systems. Our system has a lot of state-of-the-art functions but when asked for the biggest advantage, a lot of our customers tell us that it is the ease-of-use and user-friendliness that sets us apart.

**Ease-of-use and user-friendliness are hard to describe in words. Can you try it nevertheless?**

**James Smith:** We provide a platform that makes integration between disparate third-party technologies simple. It can also augment 'dumb' systems with video and ease of control to create a much more powerful and effective total security solution. Many of the new and differentiating features have in fact been introduced as a direct result of

listening and responding to customer requirements. They deliver against our 'one screen, total control' and 'any video, any format' ethos, allowing what can be very complex operations to be undertaken with ease in the most user-friendly way, even when, for example, integrating best-in-breed video analytics or access control. Examples of how the Wavestore VMS has become even more user friendly are the improved management of network interfaces and camera display layouts. In the current version, Wavestore's unique client side de-warping and interrogation functionality of 360° cameras comes as standard, as does the powerful review suite which allows users to easily search and instantaneously retrieve recorded images of incidents. The WaveView review suite works well even over very large amounts of footage and they video can be displayed alongside live images. Plus, for evidence purposes, a fully stitched-together sequence of events from any number of cameras can easily be exported in a wide range of video formats with just three simple clicks of a mouse.

**You have mentioned the various video analytics functions. Are they the result of the integration work you do?**

**James Smith:** Yes, we have already achieved deep integration between our VMS and a long

list of best-in-breed technology and systems providers. We are proud that project-specific and specialist integrations can be easily, quickly and cost-effectively implemented thanks to WaveStar, our protocol translation script that enables our developers to provide bespoke integration with almost any device, with the functionality you need. Through the deep integrations our VMS is able to facilitate the delivery of business intelligence and improve operational efficiency, as well as provide a very powerful tool to combat criminal activity. The integration with PSIM systems is another area we focus on. Just recently our VMS has been successfully integrated with SureView Systems' Immix Command Center software platform to protect enterprise businesses and central stations to protect critical assets. As a result of the integration, alarms reported via the Immix Command Center are automatically linked to the live video stream of any associated cameras connected to the VMS, allowing operators to verify that an incident is taking place and respond accordingly.

**Integration is the basis for your business.**

**What else do you do for your partners?**

**James Smith:** We have just introduced the new 'Better Together' Partner Programme in support of the fast growing worldwide network of install-

ers and systems integrators who are choosing to recommend our VMS solutions to end-user clients. The programme is designed to offer real-world advantages to companies involved in the design, installation and commissioning of video surveillance solutions. Among the benefits on offer are project registration, system design and tender submission support, as well as access to training, free demonstration licences and PR services. Our business philosophy is based on partnerships and that is why we have adopted the 'Better Together' theme for our Partner Programme. We believe we're much stronger together with close partnerships leading to better solutions, happier end-user clients and more winning situations. Being open platform and truly independent means that through the Partnership Programme we will be able to develop ever closer business relationships with installers and systems integrators and by doing so, deliver innovative and best-in-breed total security solutions across a wide variety of end-user markets.

## CONTACT

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The Fiera Milano is the venue for Sicurezza 2015 ▲

Security professionals come together to discuss problems and their solutions ►

## EVENT

# New Tricks of the Trade

New Initiatives and Vertical Solutions Feature at Sicurezza Event

The march towards Sicurezza 2015 continues with a return to the show by many important companies, a comeback by brands that have not been at the show for a few years and a focus on new themes that will all contribute to the immediate future of the market and open up interesting business opportunities.



With a few months still to go before the doors open, Sicurezza 2015 at Fiera Milano from 3 to 5 November is again set to be the key event for professionals in the security and fire prevention sector. The event will not merely be offering technologies and solutions from Italian and international manufacturers, but also vertical initiatives focusing on a world of applications in constant growth.

Once again, video surveillance companies will be attending in force, but there is also an ever greater presence of solutions and products for passive security, particularly from lock manufacturers and access control firms, two of the sectors with the greatest number of exhibitors.

### Theme Initiatives

The Security for Retail Show in Hall 22 is being staged for the first time jointly with the Italian magazine *essecome/securindex.com*. Aimed at trade professionals in the retail sector looking for tools to protect their business, the area will encourage dialog on these problems and propose customized solutions for the point of sale.

The increasingly digital nature of the sector is covered by Sicurezza and the Italian trade magazine *Digitalic* who are organizing Cyber Security Village in Hall 24. In a world where security tools are invariably digital devices linked to a network, new expertise and new solutions are needed to adequately protect surveillance tools and the data they record.

Another interesting vertical area in Hall 24 will be focusing on the IoT: the intelligence and the security of things. With the advent of the 'fourth industrial revolution' things have become smart and the subject of security becomes

a priority. The IoT area will be bringing together companies taking effective steps to solve the security problems that need to be tackled in the light of increasingly widespread intelligent devices and products.

### Security Takes to the Skies

Drone Expo organized by Mediarkè in Hall 22 is a new initiative devoted to the use of UAVs (Unmanned Aerial Vehicles or drones). Companies specialized in the production of UAVs will be taking part and also those offering courses leading to a drone pilot certificate. Two conferences will be organized on the use of UAVs for security and safety purposes and a special flight area will be set aside for demo flights. UAVs are finding ever more applications, from the surveillance of flows of migrants in the Mediterranean to observing critical infrastructures and major events, protecting monuments or art heritage, monitoring landslides and forest fires, controlling critical situations from the air and even transporting medicine to isolated areas.

### Business As Usual But Socializing Too

The Ecosystem Village exhibition, a forum and bar area in Hall 24, is manned by the partners of Milestone Systems. Applications and innovative solutions will be the focus at the Solutions Gallery in Hall 24, organized by Ethos Media Group in an „exhibition leading to an award“ which will give visibility to solutions designed to solve real problems experienced by customers in various vertical markets.

### CONTACT

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## EVENT

# The Countdown Has Begun

The Security Industry Will Meet in Shenzhen 29 October - 1 November 2015

Preparation work for the 15<sup>th</sup> China Public Security Expo in 2015 has now entered the countdown stage. With an area of 110,000 square meters, the 15th CPSE has already attracted 1,500 exhibitors from 40 countries to participate.

The CPSE (China Public Security Expo) was first held in the Shenzhen Special Economic Zone in 1989. During its 26 years of existence and 14 exhibitions, over 8,600 security companies have been involved and provided many thousands of business opportunities for the 524,000 professional buyers who have visited the event. Nowadays, the biennial China Public Security Expo has become one of the largest and influential security shows in Asia, and the only BPA-certified security exhibition in China.

So far, people from the security sectors of more than 150 countries and territories throughout the world have registered through the CPSE registration platform as professional visitors to visit this year's expo and the number of professional visitors is expected to exceed 130,000. The CPSE 2015 has 9 pavilions in total, among which the 1st and 6th pavilions are the International and Large Enterprise pavilions respectively.



Dignitaries at the previous biennial CPSE event in Shenzhen, China

## All In One Place

With 26 years' experience, the CPSE will once again show the best quality of security from around the world. Various kinds of safety and protection products will be displayed there, including Smart City, the Internet of Things, Cloud Computing, Big Data, Cameras and Surveillance, Intelligent Household, Video Door Phones, Burglar Alarms, Access Monitors, Alarm Services, Access Control, Perimeter Precaution, Parking Management etc. as well as public safety products such as Intelligent

Transportation, Fire Control, Criminal Investigation, Counter-Terrorism, Security Checks, Anti-Counterfeit, Police Equipment, Internet Security, Emergency Rescue and Unmanned Aerial Vehicles. In addition to the four-day exhibition, there will also be a series of parallel activities, such as the 13th China Public Security Forum, the Global Security Forum & CPSE Golden Tripod Awards Ceremony 2015 and the Global Security Alliance Conference.

## Increasing Influence

Led by massive and ambitious infrastructure development projects like Safe City and the future Smart City programs, China's security industry has already experienced rapid development and still contains huge market potential. With the scale expanding continuously and with increasing international influence year by year, CPSE's position in the global security industry has been recognized. It has already made important contributions to promoting the development of the Chinese security industry and to accelerating the integration of the global security industry. In this context, CPSE 2015 is an ideal place to build and improve international business partnerships and networks. We look forward to meeting you at CPSE 2015!



This year's event has already attracted 1,500 exhibitors from around the world

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## BUILDING MANAGEMENT

# The Need for Speed

## Sovereign Installs an Elevator Destination System in Wales



Sovereign Fire and Security has recently completed a building management system at Ty Admiral in Cardiff. The new access control and elevator destination system reduces time spent by staff queuing and improves the efficiency of people getting to their work floor. The system, which has been developed together with TDSi and the elevator manufacturer Otis, is the first one of its kind in the UK.

Admiral is one of the largest employers in South Wales and has recently moved to their new HQ in Cardiff, with approximately 2,500 people. Admiral recognized there was a problem with staff waiting for elevators at break times, lunch times and other busy times of the day in its previous Cardiff building. Therefore they commissioned Sovereign Fire and Security to install an access control and elevator destination system into the design of their new premises. Sovereign has been working on the new system with the developer and manufacturer of integrated security and access control systems, TDSi.

### One Step Ahead

Previously when entering the building, employees would call the elevator and choose the floor they needed. With the new integrated system, once the employee's card is presented to the access control reader at the secure speed gate, a message is sent to the system and an LCD screen then displays the number of the elevator that the employee needs to take. The elevator will already be preset to their destination. The system will also send anyone else entering the building who needs to go to the same floor to the same elevator. This saves time not hav-

ing to stop at each floor. The new system will have the added benefit of making the company more environmentally friendly by saving electricity and improving time-management.

Mike Sussman, Technical Director at TDSi commented: „This solution utilizes our newly developed component for our Exgarde security management software and is largely the result of developments in network access and fully integrated security systems. Whilst this project was a bespoke development for Ty Admiral, this integration tool will be available to all our customers moving forward. Additionally, there is an option to integrate directly with the keypad on a modern elevator to ensure access for the individual is limited to authorized floors only, and can be amended quickly and simply by the security team.“

### Combining Systems

Marek Jakubczyk, Managing Director at Sovereign Fire and Security said: „Our company is helping businesses become more efficient through clever business management systems using the latest technology. The new access control and elevator destination system at Ty Admiral is a great example of how tech-

nology can be used with security systems to enable the business to run more effectively. Their system also has the added benefit of being more energy efficient and decreasing time wasted on breaks.“

The two companies have a close working partnership. Last year TDSi named Sovereign Fire and Security as the UK Platinum Partner of the Year 2014 in recognition of the close working ties and ongoing success. TDSi recognized its partner's specification and installation excellence, whilst Sovereign Fire and Security highlighted the reliability and compatibility of the manufacturer's products. Combining these strengths, the partners offer excellence and innovation to customers such as Admiral, whereby a vision and technical ability has provided a ground-breaking and highly successful solution for a busy business facility.

### CONTACT TDSi Ltd.

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## FIRE DETECTION

# There's No Smoke without Fire

## Video-based Early Fire Detection

Risk-assessed and reliable fire detection requires intensive and constant planning as well as a customized technical solution when used in critical public and industrial environments. Conventional products and applications often reach their limits in such situations.

Just the location and the ambient conditions alone can often already be beyond the operating conditions of some products, and more frequent faults or additional maintenance measures would negate the benefits of the chosen technical solution. In addition, during the risk assessment phase, the selection of technical methods to be used also needs to be taken into account, calling for additional technology in many cases. To better address the needs of critical infrastructure and installations, highly specialized intelligent video technology is being used ever more often for fire detection.

The sooner a fire is detected, the faster it can be fought, resulting in less damage. For this reason, very early and fail-safe fire detection has high priority in virtually any building design. But while this early detection can be realized quite easily in office buildings, hotels, shopping malls and many other venues with today's fire detection systems, planners and consultants face special challenges when it comes to applications in critical areas.

In large spaces with corresponding dimensions such as hangars or warehouses, common smoke detectors do not always ensure early and

reliable fire detection. In many cases, they can only be mounted far away from the expected fire source, due to their operating principle. The period between smoke emerging from a fire source and reaching the detector is often too long. The smoke can also be highly diluted or distributed because of the large dimensions of such buildings.

### Nowhere is Ideal

In such environments, additional special plant-specific detectors can be installed at a low height, but the smoke must first 'find its way' to them before it is detected. The thermal conditions in those areas that are to be monitored must of course be observed. Even with aspirating smoke systems, an issue can be that the smoke feed may be too slow. And especially in large buildings such as aircraft hangars, there are often few opportunities to install such detectors near to potential sources of fire.

Conventional detection technology cannot always be used satisfactorily in dusty and damp areas. Typical examples of such environments are recycling plants and production facilities in the textile and paper industries, as well as car parks

and tunnels. But even in such environments, reliable and early fire detection without false and deceptive alarms needs to be ensured to the greatest possible extent.

While there are solutions that are only partially satisfactory in all of these applications, there are also environments where common smoke detectors are no solution at all. These include, for example, areas with an immense fire load, such as woodworking companies. The risk-related planning is a major challenge not only for the semi-open areas of the wood delivery area, but also for the processing areas with all the machines and conveyor systems. In such applications, fire detection with commonly used technologies may not always be sufficient and will detect randomly or produce an unacceptable rate of false alarms.

### False Alarm Immunity Against Vapor and Dust

Video-based fire detection can be considered an additional technology that allows fire detection directly at the source and at a very early stage. The principle of this technology is a combination



The Bosch Dinion IP Starlight 8000 MP is a high resolution camera that can use intelligent video analysis to detect fires at a very early stage

The distance between fire source and detector can slow down detection

of a camera and an algorithm for intelligent video analysis. The real-time analysis takes place directly in the camera so that no additional evaluation hardware is necessary. This algorithm processes the video image and, based on typical characteristics, detects whether smoke or flames can be seen in the picture, enabling safer and significantly earlier detection. Interference from environment-related movement, reflections and changing light conditions can then be neglected by using video-based fire detection. The typical characteristics of different types of fire are firmly defined and exact physical fire models ensure very high reliability. With this technology, a developing fire is usually detected within 30 seconds, whereas standard fire detectors may trigger the alarm only after several minutes – a time span that can make the difference between a small fire and a catastrophe.

### Images In Real Time

In addition to the significantly quicker reaction, video-based fire detection has a number of other advantages. In the event of an alarm, a picture of the source of smoke or flame and its surroundings

is provided in real-time. This allows targeted fire-fighting at an early stage. Also, the live images allow the alarm to be simultaneously verified. A customized application will therefore avoid mistakes and resultant severe damage.

During extensive field tests, Bosch Security Systems found very high detection reliability for all known test fires, ranging from liquid fires and smoldering through to solid material fires. Video-based fire detection can be used for a variety of solutions and even in applications with difficult lighting conditions. There are two different scenarios for the use of video-based fire detection: firstly, it can complement existing fire solutions to increase the speed and reliability of fire detection and to support visual and real-time alarm verification; secondly, video-based fire detection is a solution for those environments for which no other economical alternative previously existed.

Video-based fire detection can currently only be used instead of already approved and standardized technology in special cases due to the lack of EN product and application standardization. Internationally however, the ISO is working on a

draft version (Active Work Item) for video-based fire detection alternative detection technology. The FM 3232 and UL 286B standards are already available today.

Video-based fire detection is scalable and possible configurations range from a single camera to an extensive network with a central operating workstation. A comprehensive management system provides support and can forward alarms to an existing fire alarm system or transfer them to a monitoring center or to mobile devices via Ethernet. Thanks to high-resolution live images, the emergency services can already get a clear picture of the situation while traveling to the site, making fire fighting even more efficient.

### CONTACT

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## SAFETY

# Safety and Health at Work

## A+A Is Celebrating Its 30<sup>th</sup> Run in Düsseldorf

People are the most important, and at the same time, they are the most fragile elements within a company. Therefore, safety at work and all measures of action with the objective of maintaining the work force are important topics and, in the light of the change taking place within the working world, the topic is more current than ever. New technologies are featured in companies, the consolidation of work is making progress. Demographic change is resulting in ageing workforces and consequently, labor shortage is already evident now in several industries.



The A+A in Düsseldorf, the number 1 event for safety and health at work (trade fair + convention), is meeting the requirements of the modern working world in companies with the three comprehensive key areas: Safety, Security and Health at work, and corporate health. These three areas traditionally form the key focus of A+A, which is "celebrating" its 30th run in Düsseldorf with A+A 2015 (from 27 to 30 October).

### Corporate Health: Prevention Pays Off

Current data from the Federal Agency for Industrial Safety and Occupational Medicine, (BAuA) show how important it is to deal with these factors correctly. According to this, noise-induced hearing loss, muscle and skeletal diseases, primarily of the lumbar spine (e.g. by lifting or carrying things incorrectly) as well as diseases of the respiratory system are among the most frequent types of illnesses in occupational contexts in Germany.

Thereby, the economic potential of prevention can be illustrated by the assessments of the BauA, whereby the total economic production losses due to illnesses or work disability have been estimated to be 59 billion euros (year: 2013) and the loss of gross value added was estimated to be 103 billion euros. In the light of demographic change, the situation that every third employed individual in German is older than 50 indicates the challenge faced to reacted to the changed labor structure using special solutions. This trend seems irreversible and therefore, it is time for companies to act!

Visitors will receive suitable answers to pressing questions from significant market players at

A+A 2015. The area Security and Health at Work / Corporate Health will have around 180 exhibitors this time. Thereby, not only information on products and services will be conveyed. Naturally, the "Live" experience must not be forgotten.

In this connection, a joint event stage for the areas of Corporate Health and Workplace Design is going to be offering a diverse program with practice-oriented short lectures, presentations, rounds of talks and discussions on all days of the event. Furthermore, the special show, Workplace Design, will be putting products as well as ergonomic production and office solutions into the spotlight.

### A+A Continues to Grow

The A+A started in the year 1954 as an event for "Safety and Medicine at Work" and has developed into a leading international meeting point for health and safety at work. It takes place every two years. With more than 1600 exhibitors and over 63,000 specialist visitors (from 69 nations), the A+A 2013 was able to attain the best results ever in the history of the event. Even this year, the A+A is continuing to grow. At the A+A 2015, organizers estimate participation to be around 1,800 exhibitors and about 65,000 square meters of booked floor space.

Therefore, nine halls will be occupied at the Düsseldorf Trade Fair Center Exhibitors for the field of personal protective equipment (including corporate fashion) are being presented in halls 3, 4, 5, 7.0, 9, 10 and now also additionally in hall 11, corresponding to the increase in demand again for space.

Themes concerning safety at work (including special equipment for fire protection and disaster management), being concentrated in halls 6 and 7a, are going to be offered to specialist visitors. Just like in the area for health at work/corporate health (hall 10), live presentations held in special event zones are going to be taking place in the areas for personal protection and safety at work, conveying suggestions and knowledge for practice-oriented solutions in a diversified way.

The established theme parks of occupational fire protection/emergency management (in hall 6/ partner: The Fire Brigade Association (WFV), the "Innovation park Safety & Security" in hall 7a must be mentioned as a presentation space for especially innovative products and services as well as the A+A Fashion show in hall 11.

### Extensive and International – the Congress Programme

In addition to the trade fair and the integrated theme parks, the international A+A Congress is an integral component of the A+A, which had been lastly visited by around 5,500 participants. In around 60 series of events, it is programmatically oriented toward the fields of safety, health and ergonomics. Select topics are going to be simultaneously translated by interpreters (German – English) and are therefore not only appealing to a German-speaking audience. For example, international items on the program include: Occupational diseases, personal protective equipment, green jobs and prevention, training and qualifications or also audits and certification.

[www.aplusa.de](http://www.aplusa.de)



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A nighttime cityscape featuring a prominent bridge over a river. The scene is overlaid with a digital grid and various icons representing technology and security, such as laptops, a shield, and a server rack. Concentric circles emanate from a central point on the right side of the image, suggesting a signal or network. The city lights are reflected in the water below.

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## FIRE DETECTION

# Real or Fake?

## Avoiding the Dangers of Counterfeit Fire Detection Devices

When it comes to fire detection equipment, the rigorous design process, validation testing, testing before and during production and ongoing quality checks that authentic professional companies carry out is key to the reliability of their life safety products. Counterfeit products may, to the untrained eye, look identical, but no copycat product will ever benefit the end user in terms of protecting and saving life as well as one which has been through the meticulous testing procedures of a genuine and reputable fire detection manufacturer. Paul Pope of Apollo Fire Detectors tells us how to avoid falling foul of counterfeit products.



During and after the design process, our products are subjected to the most comprehensive testing procedures to ensure performance and reliability to real life conditions is achieved. Our Havant site in the UK includes five test laboratories, which put every piece of equipment through its paces, not only as part of new product development, but also as ongoing quality control. Crucial to our success are our own in-house fire test facilities, and one of only a handful which are capable of in-house testing throughout Europe. These different laboratories, with £2.5m worth of state-of-the-art equipment, cover every possible replicable scenario a product may encounter, from extreme environmental conditions to harsh electrical and radio inference.

The fire testing laboratory allows products to be tested in varying fire conditions, with the conditioning testing offering tests against a wide variety of different conditions, including fluctuating temperatures, humidity, vibrations and shock. The performance and verification lab comprises large-scale heat, smoke and gas tunnels and the electromagnetic compatibility (EMC) lab tests against a variety of factors such as noise, interference, static and lightning strike conditions. Finally, the audio and visual (AV) laboratory is used to test the performance of notification devices to exacting standards.

The combination of these five laboratories results in a highly stringent testing process where products are not only tested to meet European regulations, but also the approval requirements of every country to which we supply our products. Such is the strength of our test facilities, that other fire detection companies regularly outsource the testing of their own products to go through the Apollo process, helped by the fact that our company is one of only a few manufacturers able to perform full EN54 product standard tests.

Once the testing stage is complete, a product will proceed to the third party testing stage for the appropriate certification, for example EN54, before heading to manufacture. The whole testing process can take anything from three to six

◀ Detectors undergoing soak testing



**Paul Pope is Business Innovation Manager at Apollo Fire Detectors**

months for an MCP switch, to up to two years for a new fire detector.

**The Risks, and How to Avoid them**

The two main dangers of counterfeit fire detection equipment are firstly their non-compliance with industry standards, and secondly their non-compatibility within an overall fire detection system. In a situation where every single piece of equipment, no matter how small, contributes to the safe and effective working of a detection system, the consequences of even one counterfeit element can be devastating. The authenticity of fire detection equipment should never be taken for granted and should always be verified at source.

Checking approval logos and relevant certification numbers on the product is the first step in ascertaining a product's authenticity. But what if a counterfeit manufacturer copies these logos and product numbers?

Chris Ellis, Laboratories and Validation Manager at Apollo explains how even the small details can give the game away: "Counterfeit manufacturers will try and save money wherever they can, and this scrimping on quality often shows in terms of their products. If you place a genuine fire detector next to a fake one, there are a number of differences which can often be seen. An example of these is the grade, and therefore the color, of the plastic used. Genuine detectors tend to be a bright white, whereas counterfeit products are often a creamier-yellow color. Also, if you take the front off a counterfeit detector, you'll see a marked difference compared to a modern original. It's a bit like comparing a 1980s TV with a modern one. Counterfeit detectors often use old technology with cheap boards and lots of copper compared to the modern layered boards used today by reputable manufacturers. Other differences include details such as the quality of the labeling, and even the fact that the font on the labeling may look 'cheap'. These are all signs that the detector may be an imitation device."

All of these pointers are great, but what if you are new to fire detection products, or have no

genuine product against which you can compare? The advice that we'd give would be to always use a reputable distributor or supplier, to do your background research by looking at a company's website and checking your device against the images and certificates shown, and above all else, to use your common sense, as Chris Ellis comments: „Cost will almost always be the strongest giveaway when it comes to looking out for the warning signs of a counterfeit detector so if a product appears too cheap, then it's worth making additional checks.“

**Third Party Certification**

LPCB provides the independent, third-party certification of fire and security products and services worldwide and we've worked with them for many years. Speaking about the issue of counterfeit fire detectors, LPCB International Business Development Manager, Tony Dodkin, says: "The certifications which LPCB carry out give independent confirmation by an expert third party that a product, system or service meets, and continues to meet, appropriate standards. Certification gives suppliers and purchasers confidence that products and services will perform as expected, through a combination of regular company audits and a schedule of ongoing auditing. Our certification work in the fire detection industry sees us not only examining and certifying a new end product, but also carrying out factory inspections at manufacturers' premises, random product audits, and equipment checks."

"We do receive requests from installers and distributors questioning the validity of new products that they are looking to install or stock, or checking that certification numbers are authentic and we welcome this level of vigilance. As well as checking directly with us, anyone wanting to check a genuine approved product can search the industry 'red book' – an online resource (redbooklive.com) which lists all certified manufacturers and their products. All users need to do is type in the certificate number and they can see a detailed description and also any additional testing details."

"The fire detection industry can be perceived as one which is slow moving in terms of new technology, but there's no doubt that it is also one of the most driven in terms of industry standards and legislation. By checking a product against these many certifications, people can avoid the pitfalls of counterfeit devices."

A true manufacturer's product will, above all else protect and save life, and any building owner has the significant responsibility to customers, staff or whoever uses their facilities to ensure that this responsibility is taken seriously.

**CONTACT**

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 marketing@apollo-fire.com  
 www.apollo-fire.co.uk

**Single and Combined Detectors**



Apollo Fire Detectors has unveiled new addressable detectors in the Soteria detection range, which is designed to improve detection, reduce false alarms and deliver improved reliability. The range will cover all detection methods such as heat, optical and CO, individually or in combination, and has been extensively tested at the company's in-house facilities to meet and exceed EN54 standards. The 'serpentine' smoke entry path provides separation of smoke and dust, and enables smoke to pass to the cone chamber but acts as a barrier to dust and insect ingress. The Cone technology allows light from the LED to be entirely absorbed, reducing reflections in the chamber. This initial launch will include an Optical Smoke detector, Heat detector and Multi (Optical/Heat) detector, and later this year the range will be extended to include three further detectors encompassing CO/heat, Tri Sensor and an Optical 4. [www.apollo-fire.co.uk](http://www.apollo-fire.co.uk)

**Picturing Alarms**



Bosch Security Systems has introduced a safety management system for up to 31 networked fire panels with a maximum of 5,000 detection points. The monitoring and visualization software is compatible with the company's 1200 and 5000 series fire alarm systems and supports up to ten operators simultaneously. The system can be licensed for up to 2,500 (FSM-2500) or 5,000 detection points (FSM-5000). These are sophisticated solutions for fire applications where visualization is mandatory while integration into a comprehensive building management system is not required. They connect to either stand-alone panels or a panel network via Ethernet or CAN-based over copper or fiber-optic cables. [www.boschsecurity.com](http://www.boschsecurity.com)

## ALARM MANAGEMENT

# Easy As Pie

## Intuitive User Interface for Optimal Security



The use of mobile devices is growing both in frequency and scope. In Germany, for example, one out of every two persons has a smartphone – that is a 25% increase between 2013 and 2014, according to a study by the Bundesverband Digitale Wirtschaft (German association for the digital economy). Smartphones and tablets are being used in many different ways: as televisions, cameras, calendars, travel guides and so much more. For all their multiple talents, one stands out: ease of use. It usually takes just a glance to identify the functionality behind the unique icons. The device is easy to control via the touchscreen with a few simple gestures, such as swiping, tapping or pinching. It practically operates itself, and even new or unfamiliar functions are often easy to learn simply by trying them out, making lengthy operating instructions unnecessary. Moreover, manufacturers are continuously honing the devices for even greater simplicity.

The buzz word is usability, the highest possible degree of user-friendliness. The term describes the user's experience when interacting with a system. The European ISO 9241 standard, which covers the guidelines for human-computer interaction, offers a somewhat technocratic definition of the term: „The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.“ Users appreciate the high degree of usability of tablets and smartphones in the private sphere, hence their increasingly popularity in the professional world. This is also true for software solutions in the security industry. More and more users place great value on usability and modern, visually attractive user interfaces. In the security industry, therefore, usability has become an important differentiator.

### Intuitive Operation Supports Swift Response

Software ergonomics is key to developing a usable software solution. The design of the software must fit the abilities and needs of those working with it – not the other way around. If the user is forced to let the machine dictate how the interface is used, the mental demands may be too great, which virtually invites mistakes. Software ergonomics is also much more than an aesthetically pleasing interface design. Clear structures, familiar design elements and transparent navigation simplify how information is perceived and evaluated. That is precisely why optimal ergonomics and the intuitive use it promotes are especially important in the security industry. These two factors ensure stress-free operation and fast response times, even in complex deployment situations.

Ergonomics also implies giving the user a good deal of flexibility in operating the software. Web-based applications ideally run on all the modern Web browsers such as Chrome, Firefox, Internet Explorer and Safari. That way users can operate the system from a desktop or tablet with a choice of interaction modalities:

traditional mouse and keyboard or modern touch control, depending on preference. Modern, user-centric systems have another distinct advantage over conventional solutions when it comes to their ease of operation: intuitive operation cuts down on training and ramp-up time for the operators. This is especially important at sites that use external security personnel with high staff turnover.

ties: traditional mouse and keyboard or modern touch control, depending on preference. Modern, user-centric systems have another distinct advantage over conventional solutions when it comes to their ease of operation: intuitive operation cuts down on training and ramp-up time for the operators. This is especially important at sites that use external security personnel with high staff turnover.

### Consistent Base for Different Solutions

Siemens recognized the value of usability long ago. Since 2006 the company has organized an annual employee conference to discuss the latest trends in usability and to exchange knowledge. The 2015 conference brought a new development to light: the Sishell framework for the Siveillance security portfolio from Siemens. The new UI (user interface) framework has a well-organized homepage, an intuitive operating concept and a modern design, and it supports different end devices. User requirements came from comprehensive user analyses and were built into the framework from its inception.

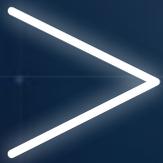
Siport is the first product from the Siveillance solution portfolio to use the Sishell framework. Siport is a modular system for access control and time recording that can be used to manage cardholder and building data in real time. The new Web applications in Siport 3.0 have an easy-to-use interface that can be accessed from any current browser. The operator has quick and straightforward access to the extensive system functions from the clearly arranged homepage. Customized applications are available for specific use cases, thus greatly reducing complexity. Even day-to-day tasks like access authorizations, user administration and door and room management are noticeably easier.

Users can also customize operation to their individual needs. One of the options is selecting from among various input methods. Another allows different users to log into the same workstation in their preferred language and thereby work effectively. Multilingual login is available in German, English, and French. Integrating other languages is possible. Messages can also be output bilingually, such as in English and Arabic. This is especially beneficial for international enterprises and companies whose employees come from many different countries. All the functions of the Sishell framework will also be available in any future new applications of the Siveillance product family. The goal is to create a consistent, cross-product operating concept and a uniform look and feel to facilitate faster response times and reduce the need for training.

### CONTACT

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[www.siemens.com/buildingtechnologies](http://www.siemens.com/buildingtechnologies)

# AN EVOLUTION IN FIRE DETECTION STARTS NOW



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So much of modern life – from boiling a kettle to national security – relies on the safety of our critical infrastructure. If the electricity supply is interrupted, business and the economy grind to a halt. Without safe, uncontaminated drinking water, we can neither cook food nor stay clean. The individual elements of our infrastructure are increasingly interdependent and a single failure can set off a cascade of consequences.



Critical Infrastructure requires flexible access control – CLIQ keys can be programmed with flexible access rights and schedules

## COVER STORY

# The Key to Effectiveness

## Protecting Our Dependency on Utilities

Consider the effects of a major electricity outage on our water supply. Pumps would be inoperable, interrupting the supply of fresh water as well as our ability to process waste; a domino effect. Potential threats to critical infrastructure are many and varied, from intentional water contamination to the theft of valuable equipment from electricity generation or distribution sites. To a utility company, the cost of shutdowns can be huge and the damage to the reputation of the business can impact on stakeholder value and confidence. To complicate the security picture, sites associated with utilities tend to be dispersed and remote. They rely on a vast array of contractors and service teams to keep them running. Physical security at these sites is especially difficult, yet equally crucial. Utilities need to guard

against sabotage, theft and trespass, while guaranteeing access to those who need it – at any time of day or night, and often at short notice.

CLIQ is a mechatronic locking solution that combines the highest standards of electronic and mechanical security. The range comprises keys, cylinders and padlocks, software and key programming devices. Each key is programmable by a system administrator to open only the locks for which its holder has authorization. Keys have replaceable batteries that power the key, and this energizes the cylinder when inserted. Communication between cylinder and key is encrypted to ensure a high level of security. Because locks are wireless, installation time is minimal; on-site maintenance requirements likewise.

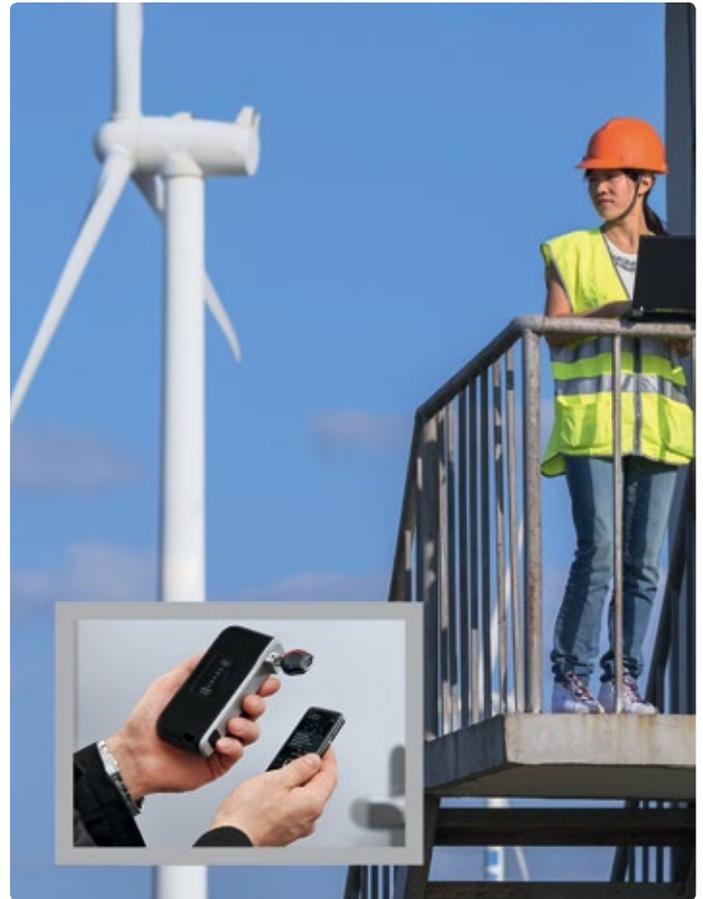
### Near or Far

“CLIQ is a tried-and-tested technology with many thousands of installations around the globe,” says Kevin Hoare, Business Development Director CLIQ at Assa Abloy EMEA. “It has already proven its high-level security capabilities in the field, and is very cost effective compared to wired access control solutions.” The system is fully scalable and can be configured to suit smaller installations or mega locking solutions with 50,000 plus locking points spread over a wide geographic area. It already secures facilities as diverse as a remote reservoir in Wales, power stations in Finland and district heating plants in Kiel.

The system has several advantages over traditional locks: any key can be immediately de-



Remote objects can be secured using the same system as in the office – power comes from the battery in the key



Access to outlying resources is granted only to authorized personnel via mobile programmers

Images: ©Stock.com/ASSA ABLOY

authorized if it goes missing, minimizing the risks associated with lost mechanical keys that can degrade the security of traditional locking solutions. In the words of Mats Fagerström, chief security officer at one of the company’s customers, Helsingin Energia: “If someone goes out on a Saturday night and loses the key, it is not a risk to us anymore.” Administrators can tailor the access rights of every key, so that it opens certain locks in a facility, but not others, or it only grants access rights at certain times. This allows security managers to introduce fine-grained permissions for employees, service crews and contractors.

For Annica Strandberg, Security Manager at Eskilstuna Energi och Miljö, this flexibility is vital: “Programmable keys allow us to give access to certain doors, to certain people and at a certain time.” Where previously some employees had to carry an enormous bunch of keys for their day-to-day work, one single CLIQ key has both lightened their load and upgraded company security. On the access control software side, the Web Manager software allows administrators to program, amend or delete keys remotely and instantly. It is straightforward for security managers to generate time-stamped audit trails for any lock or key, and trace access workflows. Remote programming devices enable users to update keys anywhere.

**Not Just for Doors**

“Our locks and keys are also designed to withstand working in the harshest environments. They can be easily retrofitted to interior and exterior openings, with minimum disruption, and work across multiple types of enclosure,” says Kevin Hoare. The product range includes cylinders for doors, gates, windows, machine guards, equipment enclosures, elevators and many other internal and external structures, as well as cylinders for explosion-prone areas. Because there is no cabling required, nor the need to visit the cylinders to maintain batteries, installation in remote settings presents no problems.

At Helsingin Energia, one of Finland’s largest energy companies meets about 90 percent of the heating needs of the capital Helsinki and has around 1,250 employees and 1,500 contractors, with ever-changing access requirements. In 2013, most of the openings throughout the company were secured with CLIQ – around 3,500 interior and exterior doors across 70 different locations, ranging from power plants to warehouses. “When employees arrive in the morning, they update their access rights. The audit trail for the previous day is collected at the same time,” says Mats Fagerström.

Another utility that has made the switch to CLIQ is Stadtwerke Speyer, which supplies a Rhine-

land town with power, gas, water, and district heating. Around 50,000 residents rely on the company to keep operating, safely, around the clock.

Stadtwerke Speyer installed approximately 300 CLIQ locking cylinders across its multiple critical sites. It is now quick and easy for security staff to reprogram cylinders when access rights need to be changed. As security demands at Stadtwerke Speyer also change – or operating sites are removed or added to the portfolio – it’s easy to manage all doors, padlocks, gates, and windows under the same CLIQ locking system. According to Ralf Lange, Stadtwerke Speyer’s security officer, “CLIQ makes daily work much easier, thanks to its flexibility.”

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The rapid scanner enables higher flow capacity

Morpho (Safran), the supplier of biometric identification and security solutions, has launched Morphowave Tower, a biometric access solution featuring high-speed touchless fingerprint matching. It captures and matches four fingerprints at high speed as the user simply waves a hand over the sensor to be identified.

## ACCESS CONTROL

# Walk, Don't Touch

Secure Frictionless Access Control by Contactless Scanner



The MorphoWave Tower, frictionless access control solution

The new terminal is a frictionless access control solution that is equally effective in both high security and high throughput applications, where users can be identified on the move without any need to stop or slow down. Because the sensor is touchless, its surface remains clean through repeated scans, and it reads wet and dry fingerprints without difficulty. The absence of residual latents, moisture, or transferred contaminants on the sensor contributes to the speed and accuracy of fingerprint acquisition. And the company's advanced algorithms ensure high matching accuracy.

The color touchscreen, located above the sensor, incorporates an IP videophone capability and can be programmed for time and attendance features, text and video messaging, as well as customized graphics, and administrative functions. The product was designed with all key interfaces, allowing direct and easy integration into existing access control and time and attendance systems. It has already been seamlessly integrated with over 20 of the industry's most commonly found access control systems, adding tremendous value and security to the existing installations. It can also be

used as a stand-alone device for quick deployment at temporary events and facilities.

### Quick and Accurate

The modern design of the Morphowave Tower and the extensive configurability of its functions make touchless identification a compelling option for government, business and commercial venues. Whether the objective is rapid, reliable identification or identification and timekeeping, it enables more people to be accurately identified in less time, within the context of a comfortable, efficient user experience. The device was recently named Best New Product by the Security Industry Association (SIA) at the 2015 International Security Conference and Exposition, also known as ISC West.

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[www.morpho.com](http://www.morpho.com)

[www.safran-group.com](http://www.safran-group.com)

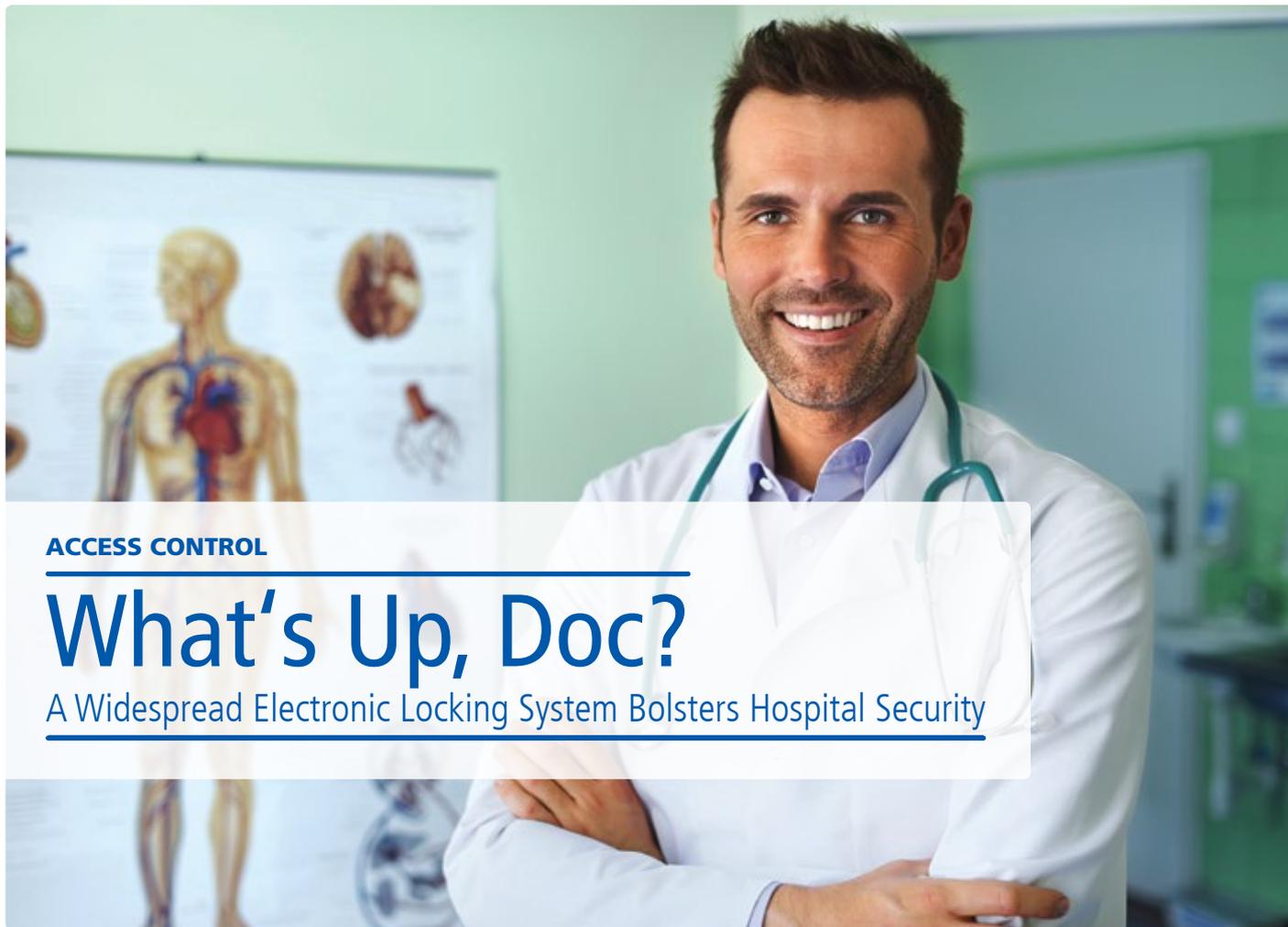
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## ACCESS CONTROL

# What's Up, Doc?

A Widespread Electronic Locking System Bolsters Hospital Security

With Europe's longest beach, the Adriatic coast in Emilia-Romagna in Italy has been a center of beach tourism for many years, thanks to numerous sports and leisure facilities, first-class hotels and a vibrant night-life, a true dolce vita. There is no problem if anyone should need to go to hospital while enjoying what the region has to offer. With its five affiliated hospitals, the local health authority provides comprehensive medical care for this region. But the constant coming and going in hospitals and administrative buildings poses enormous challenges for building security systems. The authority now meets such challenges with a SimonsVoss locking and access control system.

The region's health authority headquarters is located in Rimini from where the authority manages hospitals in Rimini, Riccione, Cattolica, Santarcangelo and Novafeltria with a capacity of 1,000 beds, all located within a 30 km radius. These institutions provide care for almost 47,000 patients a year. The authority employs a workforce of 4,500 – doctors and nurses from all branches of medicine plus office employees, technicians and service employees. It also has 250 external cleaning staff as well as 100 external technicians and other service providers. These employees all enter the different buildings at different times of day and night, depending on their shift. There are also patients, visitors and suppliers who can move freely around the hospital premises.

Enrico Panigalli, the administration's Technical Project Manager, soon discovered problems. "We were simply no longer able to guarantee security

in the administrative building or the hospitals with our mechanical locking system" he said. "It was becoming increasingly difficult to control who entered specific rooms and for how long." This posed a greater security risk as a hospital has extremely sensitive areas such as pharmacies, equipment and storage rooms, intensive care units, operating theaters, cash offices and EDP centers

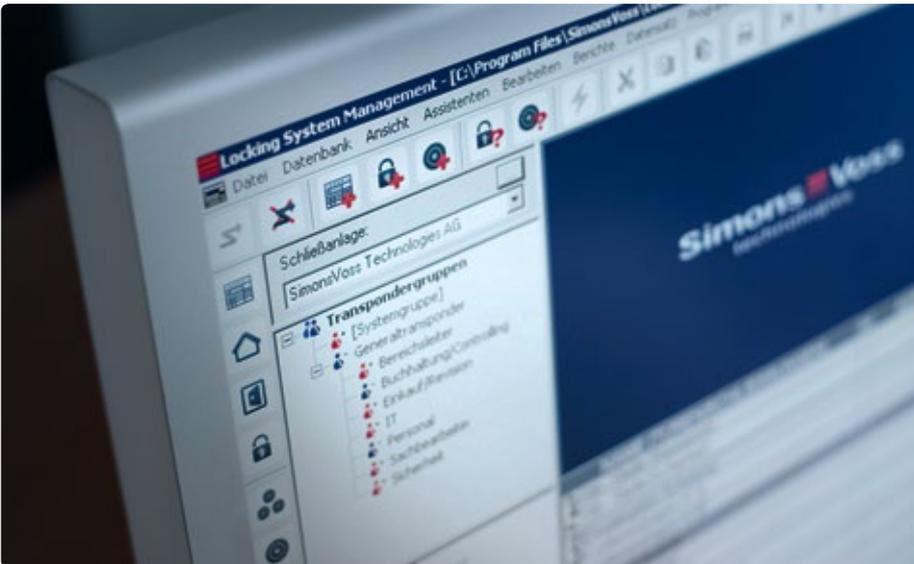
"We could no longer guarantee protection against theft, misuse or damage. We had already experienced a few incidents of theft from changing cubicles," confirms Panigalli. Employees also frequently lost their keys. "Every key lost meant that we needed to replace at least one cylinder, if not more, depending on how many doors the key could open. The loss of a master key in particular would mean a major security risk and high costs to make a new key and replace the locking cylinders. And access control was not possible. Nobody

knew who was in the building at any given time, where they were or for how long."

The health authority came round to the idea that they needed to invest in a new locking system that could be used to control access to buildings and individual rooms. "The lack of flexibility was no longer sustainable," Panigalli added. As a result, he started to look for a new locking system in June 2010. After a rather long planning phase and numerous comparisons of proposals, he found an ideal solution from SimonsVoss with its 3060 digital locking and access control system. It featured exactly what he was looking for: simple installation, access control, easy programmability and instant response to key loss.

### Easy Access Authorization

SimonsVoss employs a digital transponder that replaces the conventional mechanical key. This



System management is intuitive and fast



device communicates with the digital locking cylinder via a wireless link, thus activating up to 300,000 doors, gates, entrances, lifts and even turnstiles. The locking system management software allows the administrator to issue or withdraw access authorizations to transponders or users as required. Misplaced transponders can be quickly blocked online. "The new system allows us to issue, delete or change access authorizations with just a few clicks of the mouse on the PC. We can easily deal with logistical challenges such as a change of ward, relocations or lost transponders by simply reprogramming on the locking plan," says a pleased Panigalli about his newly acquired solution. "We can now control access to rooms perfectly and manage the locking system fully ourselves. This is extremely practical as our buildings are located at different sites."

### Wireless World

When asked about the criteria which convinced the authority to purchase the chosen system, Panigalli replied without hesitation: "Compared to other providers, SimonsVoss offers a longer battery life and batteries can be replaced without dismantling the locking cylinder." The cylinders are powered by an integrated battery, as with all digital

components in the system. Batteries last for up to a million activations or up to ten years in standby mode.

The changeover to the new system was introduced without a hitch, the project manager remembers. "We were even able to install the system effortlessly ourselves since there is no cabling and no need to drill doors or frames. And if we install another door, we won't need to open up any walls to install cabling. That is a great advantage." They are now already reaping benefits from the system. Theft from changing cubicles has already fallen by 80%. Costs for frequent cylinder replacements and copying of keys have also been eliminated, an enormous saving. The health authority and its affiliated hospitals are now using around 1,300 digital cylinders and 4,000 transponders. "We are very pleased with the locking system and will continue to replace our old systems," concludes Panigalli.

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### Ethernet Switch with Optical Interface



ComNet Communication Networks of Danbury, Connecticut, a USA-based manufacturer of fiber optic transmission and networking equipment, is introducing a four-port Self-Managed Ethernet switch, the CNGE2+2SMS. The switch has two copper TX ports and two Gigabit SFP (Small Form-Factor Pluggable) Ethernet ports. These self-managed switches with PoE supply are designed as a simple, yet cost-effective solution to allow IP video to be introduced in multiple locations on a ring network topology without the cost and complexity a managed switch requires. The unit features Gigabit TX ports that take in IP video and two SFP optical ports that take in data from the previous network device and forward it optically to the next device in a ring topology. The unit is pre-programmed and meets the IEEE 802.1w RSTP (Rapid Spanning Tree Protocol) for a true self-healing network in the event of a path failure.

[www.comnet.net](http://www.comnet.net)

### PTZ Thermal Camera



Flir Systems has launched an affordable pan/tilt thermal security camera. The PT-602CZ multi-sensor security camera delivers thermal imaging from a long-life cooled, mid-wave thermal detector that provides excellent long-range perimeter intrusion detection and surveillance. The multi-sensor allows users to see two times farther than uncooled thermal security cameras, even in complete darkness, bright sunlight or through dust and haze, making the camera ideal for critical infrastructure, petrochemical and border security applications. ONVIF Profile S-compatible for easy integration into most third-party systems, the camera consists of a 14x continuous optical zoom cooled thermal camera and a 36x zoom color visible camera, with human detection at a distance of 4 to 5 kilometers.

[www.flir.com](http://www.flir.com)



ACCESS CONTROL

# Smart Hospitality

Bloc Hotel, Gatwick Airport, to Become UK's First Keyless Hotel

In the competitive, not to mention crowded, world of hospitality, standing out from the competition and convincing travelers that you have something different to offer can be a hard call. Bloc Hotels have pulled this off in style at Gatwick Airport's South Terminal. Establishing a niche by taking the hotel room as a blank design, stripping out all the stuff you don't need while upgrading the finish around all the stuff you do. Rooms are offered at a competitive price with everything booked, accessed and controlled by the very latest in smart technology.

The company opened its first hotel in Birmingham's Jewellery Quarter in 2011. This has been well received within the city, its small but perfectly formed rooms bringing a touch of class to the low-cost hotel concept by offering four-star standards at two or three star prices. In March 2014 the group opened a second property in a very different location at Gatwick Airport.

Bloc use Hospitality specialists Boxbuild to design, procure and fit out the physical rooms and to provide the smart technology solutions the Hotel runs on. The key to their success is to build the individual hotel rooms off site in pre-fabricated kits. These are then delivered to and rapidly assembled on site. High quality, long lasting materials are used so no plastering or painting is needed speeding up the fit out process and providing a long lasting space that requires little maintenance. The bathroom is modular so it simply fits into place and is connected to power and water. The result is a uniformly dark, but practical and contemporary room that perfectly suits the needs of the business or family traveler.

The Gatwick hotel is spread across five floors with 245 rooms divided into standard, business

and executive level offerings with 5 disabled-friendly rooms per floor and is located in an old renovated office block built above the airport with reception inside the South Terminal – just steps from departures.

## The Technology

According to recent research by hotels solutions provider HRS, guest demand for the use of smartphones, tablets and corresponding apps as part of their hotel experience is increasing. The new research surveyed 4,377 users and found that 44% of guests from the UK would like the use of a tablet PC in their room, and 42% would rather operate their hotel room's lighting, air conditioning and television via a touch screen display instead of using a separate remote control or switch. The survey also revealed that business travelers in particular are looking for a home-from-home experience when it comes to the use of smart technology in their hotel room.

"Research such as this is encouraging as we know the hospitality industry is exploring the use of smartphones and tablet technology, but we're

probably 12 to 18 months ahead of everyone else when it comes to having a fully-functioning, cutting edge hotel that has been designed from the ground up to operate this way," says Gary Holmes, Managing Director of ConnectedHotels, the technology division of Boxbuild.

"The technology we've delivered for Bloc goes far beyond just offering free Smart TVs, free Wi-Fi and super-fast broadband; it encompasses everything from the Guest Experience including mobile and web, access, self-service kiosks for check-in and tablet control of in-room systems, through to back of house operations processes, automating and integrating check-out and housekeeping, building management, energy efficiency and operation of the live hotel environment.

"Take room access, for example. We had a good look at what other hotels were doing and what they were using and decided we wanted something that was sleek, cutting edge and contemporary, not to mention smart. If you look at the door locking systems a lot of other hotels still use they are big, bulky, and in many cases downright ugly. Often they run on old-fashioned swipe tech-

nology because it's cheap and guest security in some cases is not always their highest priority. We were determined to be different.

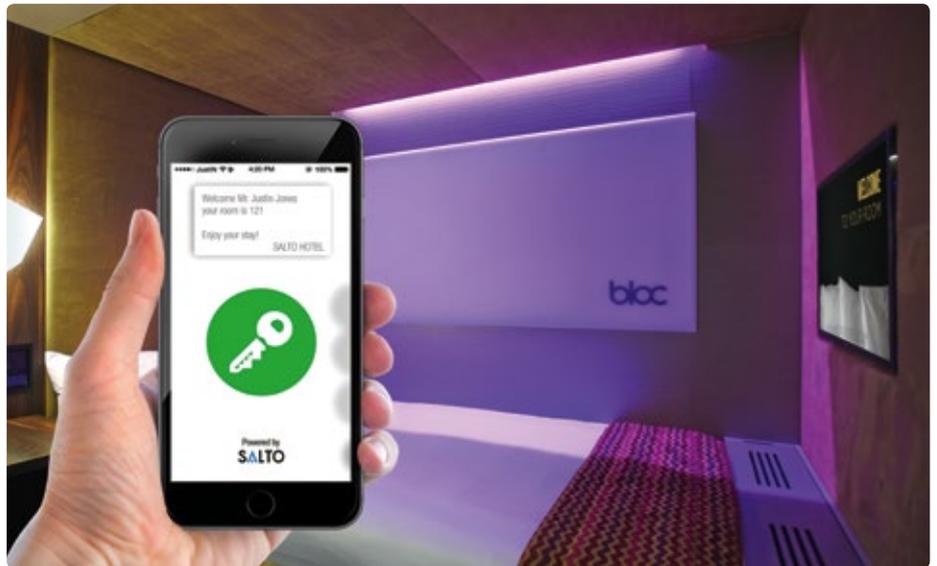
"Our strategy is focused around the use of mobile apps that are free for Guests to download from the Apple AppStore or Google Play and able to tap into developments such as NFC (Near Field Communications) or BLE (Bluetooth Low Energy) so that the Guest's own smartphone becomes not only their room key, but their wallet and remote control device as well.

"With this complete digital experience, guests can book a room, check in and use their smartphone as their electronic room key. Once in the room, a passive infrared sensor detects their presence and turns on the lighting and if we want, the air conditioning to a preferred temperature, and switch the television on with a welcome message. The same app then enables the smartphone to control room features such as lighting, air conditioning, electric blackout blinds and the smart LED television. Each room also has a dedicated Samsung Galaxy Tablet to provide in room controls with a very simple interface so guests of any age or technical ability can use the features of the room without downloading the app.

"Finding a room lock that could work with this technology to our high standards was a fairly short search as many manufacturers' offerings were simply not up to the job. This led us to Salto who offer wire free and wireless access control technology and have an established reputation as manufacturers of advanced security solutions to the hotel and hospitality industry".

**The Product**

Salto's Aelement has been developed with the needs of hotels in mind and features a range of



**The app enables the smartphone to control room features such as lighting, air conditioning, electric blackout blinds and the smart LED television**

hospitality-specific applications including the ability to control the security of the entire hotel from a single location. This includes granting access privileges to individual guest rooms and gathering audit trail data from every door in real time – all without leaving the front desk. Other benefits for the hotel include instant room move and instant extended stay abilities as well as lost card cancellation, intrusion alarm, door ajar alarm, remote opening, real time audit trail, passage mode activation for meeting rooms and automated low battery reporting.

"Aelement is also NFC (Near Field Communications) enabled so it was the perfect choice of product to work with the Boxbuild mobile device

approach", says Darren Keating, National Account Manager Hospitality for Salto. "This in-built technology gives the hotel the ability to continuously upgrade their security without having to upgrade their locks, saving them long term operating costs while providing the hotel with what it needs most – total control."

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more info at [www.PRO-4-PRO.com/security](http://www.PRO-4-PRO.com/security)

**Security Products**

**Mini Thermal Camera**

Flir Systems has announced their TCX Thermal Mini Bullet camera, a security camera combining 24/7 high-contrast thermal video and high-performance built-in video motion detection. It is powered by the company's Lepton camera core. Flexible for integration in any environment, indoors and out, even in temperatures as cold as -40°C, the camera is ideal for ensuring the safety of public buildings, industrial facilities, large and small businesses or residential areas. Featuring both intrusion detection and accurate video alarm verification in one device, it supports lighting control, people counting, retail traffic flow and queue management.



[www.flir.com](http://www.flir.com)

**Very HD Camera**

Avigilon Corporation showcased a single-sensor 7K (30 MP) security camera. Delivering extremely high image detail, the 7K HD Pro camera simultaneously provides maximum scene coverage while minimizing bandwidth and storage consumption. The company also announced the launch of the 6K (24 MP) HD Pro camera. The 7K HD Pro camera, when coupled with the Avigilon Control Center (ACC) software featuring the company's patented HD stream management (HDSM) technology, provides clear image detail, effective processing power and efficient bandwidth and storage management. The 7K camera delivers horizontal resolution exceeding 7,000 pixels and a total of more than 30 million pixels.



[www.avigilon.com](http://www.avigilon.com)

## PERIMETER PROTECTION

# Illuminators Identifying Intruders

## IP Video Solution and Network Lighting in Las Vegas Country Club Community

Raytec Vario IP PoE LED Network Illuminators have been installed in a large estate in a Las Vegas country club community – unlocking system intelligence and proactively deterring crime. With multiple residences having experienced break-ins at night that resulted in extensive losses, the owner of the estate turned to IP Video technology for protection; with Raytec network lighting at the very centre of the solution.

Axiom Design, a technology consulting firm specialising in the design of Security, Communication, Entertainment and Integrated Environmental controls, was responsible for the system design and technology integration for the project. The Company was faced with a situation that required a broad security solution to help successfully detect, identify and alert the client and an off-site central video monitoring station. The system was also required to be easy for the client to operate efficiently and quickly in order to confirm activity on the premises and alert the authorities. The city of Las Vegas has a 'No Response' policy which states that without verification, no emergency responders will be dispatched as the level of false alarms is far too high.

### Integrated IP Lighting Solution

Following a thorough risk assessment, Axiom recommended a solution with the highest level of protection for the client. A fully integrated and multi-faceted IP security system was custom designed to the clients' needs, with information centrally managed and seamlessly relayed between all devices by two software platforms: a Crestron integrated home automation control system and a Mobotix video software (VMS) platform, to deploy the best security response in the exact place needed on site.

Given that most crime happens during the hours of darkness, Axiom recognised that responsive IP White-Light LED technology was a crucial element for tying all parts of this project together and achieving not only the CCTV image verification needed for a police response, but also to deter crime from occurring in the first instance; Axiom did not hesitate to recommend Raytec.

"Having worked with Raytec high performance LED products before, and knowing the integral re-

quirement for identifying a perpetrator, we knew that their White-Light network illuminators would provide the powerful solution we were looking for", comments Robert Kranson of Axiom Design, who was in charge of managing the project. "We could also fully integrate the IP lighting into the managed network solution and configure the detection and identification process based upon multiple triggers from various security devices, providing different light outputs centered around the nature and severity of the alert and threat."

The final hardware system consists of an early detection laser, Mobotix M15 thermal and S15 optical cameras, and Raytec's 'Vario IPPoE' White-Light Network LED Illuminators.

Fully integrated into the Crestron home automation system with a range of other access control devices, the laser detector raises an alarm into the Crestron system on identification of an intruder on site. This in turn raises an alarm into the Mobotix VMS to activate the thermal camera in the exact area that the intruder has been detected.

Based on heat detection, the thermal video analytics identifies the subject and recognises the proximity of the intruder to the home, in complete darkness. The VMS solution then sends HTTP commands directly to the whole group of Raytec network illuminators and triggers them into a specific deterrent flashing mode, providing a noticeable White-Light warning to the intruder that they are being watched and recorded. But the illuminator

**The Raytec IP lights enable the camera system to provide enough lighting to deliver clear and detailed images for identification purposes during the night ►**



located in the exact area of concern, is configured to produce a solid-on White-Light output to allow the 5MP Mobotix optical camera in that area to generate a detailed night time colour image of the intruder for identification; displayed both on-site and streamed live off-site to the central video monitoring station.

The high quality images provide sufficient verification of the intruder, and qualify the site for dispatch of an emergency police response.

**Clear Images for Identification**

Robert Kranson confirmed that “the Raytec IP lights enable the camera system to provide enough lighting to deliver clear and detailed images for identification purposes during the night. This process ensures improved police response time and allows potential false alarms to be significantly reduced”.

The project also presented hurdles when it came to specifying the lighting, but thankfully the network illuminators from Raytec helped Axiom to easily overcome them, and delivered huge performance, operational and installation benefits. During the security retrofit, the site also underwent a significant upgrade to its landscape lighting to improve the quality of light. The new LED landscape

lighting radically improved the aesthetics over the previous halogen low voltage lighting, but was not able to provide enough supplemental light to allow the cameras to deliver a good colour image. But with the addition of the LED Network Illuminators, this provided a dedicated layer of security lighting to not only allow the cameras to generate clear colour CCTV images for precise subject identification, but also to capture every detail in the entire scene, evenly illuminating all targets at different depths.

This is thanks to Raytec’s holographic lens technology and elliptical beam patterns with Hot-spot Reduction Technology. The holographic lensing spreads and controls the light for an outstandingly even light output across the full width and depth of the scene with no dark or bright areas in the image. The highly targeted elliptical beam pattern focuses the light where it is needed most, reducing light spill both upward and in the foreground, eliminating potential hotspots caused by over exposure at close range.

In addition, where the White-Light was used in a flashing mode, it provided an extremely effective visual deterrent to stop crime occurring in the first place. Using lighting on demand in this way, triggered only when needed, also significantly reduces electrical consumption.

Furthermore, the site had extremely high temperatures, often reaching up to 50 °C (122 °F) in Las Vegas. But all Raytec illuminators can operate comfortably and faultlessly in temperatures ranging from -50 °C to +50 °C with a lifetime of ten years plus whilst requiring zero maintenance – eliminating ongoing bulb replacement costs associated with older style lighting technology. Also, due to the Raytec lighting being PoE powered, it was extremely cost effective when it came to the installation. They could be controlled, managed and easily added to the newly deployed high performance fibre optic network infrastructure, and connected at local PoE switches at each camera point, further leveraging the LAN.

“Raytec’s support was second to none”, further comments Robert Kranson. “Their engineers were extremely helpful with product selection and software support for configuring and controlling the IP lighting”.

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At the Arecont headquarter in Glendale, California: Arecont Vision Executive Vice President Scott Schafer, Heiko Baumgartner (GIT SECURITY) and Jeff Whitney, Vice President of Marketing

INTERVIEW

# Added Value for Resellers and End Users

## Arecont Focusses on Innovative Megapixel Technologies and Business Practices

At IFSEC in London Arecont Vision was showcasing an impressive offering in Megapixel technology backed by support programs and business best practices for the benefit of integrators and end users. The company continues to drive the widespread deployment of megapixel cameras globally and the latest products deliver increased performance and situational awareness while lowering Total Cost of Ownership. GIT SECURITY asked Arecont Vision Executive Vice President Scott Schafer about Arecont's strategy and the product developments.

**GIT SECURITY: What is more important in these days, product performance and innovation or service and integration?**

**Scott Schafer:** As a pioneer in megapixel imaging solutions for professional surveillance applications our success was always equally attributable to both, superior technology and outstanding support processes and programs behind them. We have always been at the forefront of Megapixel technology but have always backed this up with support programs and our service offering. From the beginning we believed that megapixel imaging was a disruptive technology that would significantly impact the professional security and surveillance industry. This has undoubtedly proven to be true and we have been on a deliberate path delivering high levels of education, programs, and support to drive this trend, while maintaining our technology leadership.

**On the technology side, what are the latest advances?**

**Scott Schafer:** We are now offering the industry's most comprehensive line of megapixel cameras,

ranging from compact single sensor 1.2MP cameras to multi-sensor panoramic cameras with up to 40MP resolution. There are some features like innovative processing capabilities and low light performance that further differentiate us from our competitors. Our Stellar technology dramatically increases low light color imaging performance. In addition, features like remote focus and zoom are now offered across an entire range of our cameras while the new AV-IP Utility software delivers further simplified setup, operations, and firmware updating. Our fifth generation of MegaVideo cameras includes the Stellar technology. MegaVideo G5 cameras are enhanced with on-board SDMC card storage up to 32GB and with CorridorView which allows the camera image to be rotated 90 degrees for increased coverage of hallways and corridors.

**Multisensor cameras are becoming very popular and more and more vendors have them in their portfolio now. How do you see Arecont Vision's position here?**

**Scott Schafer:** Multisensor cameras are fantastic tools to cover complex surveillance challenges and

we are proud to have set the trend here. While you see a lot of prototypes and market introductions here at the show, we already present our fifth generation of SurroundVideo panoramic cameras at IFSEC. We introduce the 5MP SurroundVideo G5 with Stellar technology and remote focus P-iris lenses. Both standard and smaller form factor versions of 12MP and 20MP SurroundVideo G5 cameras have also been added, each with double the frame rate of previous models. This is the company's fifth generation of multi-sensor panoramic camera systems that delivers superior 180° and 360° wide area coverage and strong financial benefits. With the addition of remote focus and p-iris lenses and delivering double the frame rate over previous models, we continue to be the leader in multi-sensor surveillance technology.

**Integration is the big topic here at IFSEC. What efforts do you undertake to make the integration of your products easier?**

**Scott Schafer:** The Arecont Vision MegaLab helps ensure seamless integration of a wide range of leading VMS solutions and other system components for design, installation, and support activities to further enhance the end user and reseller experience. These features and programs combine to make new installations both faster and easier, saving time and money for installing systems integrators and dealers.

**Can you give us an example how you help customers on the service side?**

**Scott Schafer:** The unique combination of performance and support benefits incorporated in Arecont megapixel cameras provide integrators and users with the complete package. To complement these technology advancements, we have paid close attention to the educational and operational needs of our reseller partners and customers. Our new Tactical Assistance Center (TAC) and the enhanced Reseller Partner Program are perfect examples. Initiated to further assist integrators with system design, implementation, and post-installation support, the new TAC provides live and on-line support for authorized reseller partners and end users. The TAC delivers world-class responsiveness, currently answering approximately 90% of incoming tech support calls during primary support hours in less than 60 seconds and escalating support requirements appropriately for rapid problem resolution. Our advanced replacement RMA process is part of the program.

**What other tools do you provide your reseller and technology partners to help them grow their businesses?**

**Scott Schafer:** The updated Partner Program provides two entirely online programs to assist in the sale of our products. The online demo equipment loaner program provides fast access for resellers to the products they need to effectively demonstrate the value of megapixel solutions. The project registration program ensures authorized resellers receive strong price protection and excellent margins while delivering outstanding value to end users. Authorized resellers are also supported by our University's Channel Partner Certification Program, which provides the education and tools needed to sell, design, deploy, and support megapixel surveillance solutions. We continue to make it as easy as possible for security professionals to capitalize on the performance, convenience, and cost advantages that Arecont megapixel cameras offer. We believe we deliver the best combination of technology and support in the security industry, attested by the numerous accolades we've received and our continuing customer satisfaction survey results.

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At IFSEC in London Tyco Security Products was featuring an expanding portfolio of integrated solutions and products. The solutions displayed at IFSEC included several examples of the company's commitment to providing a portfolio of unified, intuitive solutions that offer additional flexibility, mobility and intelligence for the customer. GIT SECURITY had the opportunity to speak with Peter Ainsworth in his new role as Director for Product Marketing and Management for EMEA about the Tyco Security Products portfolio and the approach to develop a more unified offering.

Peter Ainsworth, Director of Product Management EMEA at Tyco Security Products

## INTERVIEW

# Increased Connectivity

## Security Products Built for Intelligent Solutions

**GIT SECURITY: Integration and business intelligence are the hot topics here at the show.**

**What do you think about their role for the security industry?**

**Peter Ainsworth:** I truly believe in creating a smarter, safer world and I have a passion for developing and marketing solutions for clients that help them improve their Return on Investment through business intelligence gained from security systems. Now that we are in an IP digital world, what would have been previously viewed as only a security system can be turned into a business intelligence system if you use the opportunities that integrations can offer.

**What is your role at Tyco Security Products and what is your approach to move the things forward in that direction?**

**Peter Ainsworth:** The passion described above has driven me to spend my business career in

Product Management. As the Director for Product Management for EMEA, I manage the European product portfolio for Tyco Security Products. The main goal for me is to ensure that there is a full integrated solution that can match the client's needs across each vertical and horizontal market. It is also my mission to ensure that these solutions are marketed in a targeted way utilizing the digital world to reach the real decision makers. I am responsible for a team of product marketing experts in the field of Video, Access Control and Intrusion Detection.

**Is it difficult to approach the market with all the different brands that are joined under the Tyco Security Products umbrella brand?**

**Peter Ainsworth:** For the most part, because our brands have their individual product strengths as well as regional influence and focus, approach to the market has not been an issue. What is more

important for us is the experience the end-user receives when he uses the products from different Tyco Security Products brands and builds a solution. We will continue to build on this end-customer centric focus and leverage our unique ability to capture, analyse and deliver actionable intelligence to customers at nearly any level.

**Can you give us an example how you help customers with solutions?**

**Peter Ainsworth:** The best example is the Victor unified platform which provides complete video and access system management from a single interface and a single database. Operators can now manage events and create incident reports with a few simple clicks. The newest version of the Victor VMS manages live and recorded video from all of Tyco Security Products' recorders, as well as Kantech and Software House access control systems, DSC intrusion solutions and third party solutions in

a single, intuitive interface. This new update significantly improves the user's experience in organising and managing events as well as the creation of incident reports allowing a holistic management of alarms, reporting and investigations from diverse systems including: access control, intrusion, fire, intercom, elevator and HVAC systems. Having the most critical information about their organisation available in a single interface is no longer a luxury for operators and investigators, who need access to this information quickly.

#### And you have developed an anti-theft solution for the retail market?

**Peter Ainsworth:** Yes, through our Exacq brand, we have announced an integration with the Sensormatic anti-theft system from Tyco Retail Solutions. The combination of exacqVision video management system and the Sensormatic system gives retail customers a unified Tyco solution, capturing loss event data and providing video recognition to improve loss prevention efforts. The Sensormatic pedestals capture valuable loss prevention data to create a surveillance zone at the end of a check-out lane or at the store exit. When an alarm event occurs, the system notifies store employees when

someone exits the store or if merchandise still has the electronic article surveillance tag attached. With the exacqVision integration, retail customers have the benefit of an added layer of video surveillance and real-time loss event insights. Retailers can view live video images of the alarm event as it occurs or search previous EAS system events and see the corresponding exacqVision video at the time the event happened.

#### On the product side, what is new at Tyco Security Products?

**Peter Ainsworth:** Leading the introductions from the video surveillance portfolio is the new line of Illustra Edge cameras, a complete high definition video system combining an Illustra IP camera, pre-installed exacqVision video management system (VMS) software and SD card storage into one, out-of-the-box solution. On the access control side, the new Kantech KT-1 Ethernet one door controller is an economical, yet feature rich controller that was designed with installers in mind. With a simple network connection and the push of a touch sensitive button, the KT-1 controller is automatically detected and enrolled on the EntraPass security management system, making it quick and simple

to install. PowerSeries Neo 1.1 from DSC is an innovative solution for residential and scalable commercial installations that combines the flexibility of a modular, hardwired system with the simplicity of a wide range of wireless devices and peripherals. In addition to these headline solutions, we have introduced the American Dynamics VideoEdge NVR v4.6 which has the unique ability to provide up to 84 dynamic video streams per NVR cluster without the need for any dedicated transcoding server. New with CEM is the AC2000 WEB which makes it easier to securely access key AC2000 access control functionality anywhere through a web browser.

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more info at [www.PRO-4-PRO.com/security](http://www.PRO-4-PRO.com/security)

## Security Products

### Remote DVR

Avigilon Corporation has added the Avigilon Control Center Edge Solution High Definition Recorder to its product portfolio. The recorder with PoE ports supports HD cameras up to 7K (30 MP) resolution and powerful remote access capabilities in a compact design. It is ideal for centralized monitoring of critical infrastructure and offers intelligent monitoring deployed on-site at the network edge, the ability to store high amounts of HD video data remotely and the ability to view live or recorded video from long distances upon demand. Locations such as upstream oil and gas pipelines, power substations and telecommunications towers are typical locations to record critical video and keep people, property and assets safe. The appliance is available in 2 terabyte (TB) and 4 TB storage models. [www.avigilon.com](http://www.avigilon.com)



### LTE Gateway

Moxa, a manufacturer of communications equipment for the Industrial Internet of Things, is helping to take full advantage of LTE for M2M applications by introducing their first LTE cellular gateway, the Oncell G3470A-LTE. The unit features an integrated, high-speed 4-port Gigabit Ethernet switch that allows devices the ability to NAT and route between the cellular connection and wired ports. It is equipped with built-in power and antenna isolation to counter EMI, along with dual SIM support for cellular connection redundancy, dual power input and Guaranlink technology for connectivity. Together these ensure uninterrupted video streaming over LTE networks in harsh and demanding industrial environments. The device comes with Moxa's Oncell Central Manager v2.0 software that allows up to 2000 network devices to be configured, managed and monitored. [www.moxa.com](http://www.moxa.com)

### High Resolution Dome Camera

Panasonic recently launched a dome camera which delivers 'true 4K' image quality and has also expanded their portfolio with a 4K Network Video Recorder and 4K video wall screens, providing a complete 4K system. The WV-SFV781L true 4K camera can cover a view four times larger than 1080p cameras, and a view nine times larger than 720p cameras. It can also cover two and three times the distance of 1080p and 720p cameras respectively, reducing the overall cost of a surveillance system by as much as half. "We want to provide a working, off the shelf, 4K system, that will reduce overall surveillance costs," said Sean Taylor, European Head of Marketing and Channel at Panasonic Security Solutions. [www.panasonic.co.uk](http://www.panasonic.co.uk)



### Rugged Mobile DVR

TeleEye have announced their mobile DVR, specifically designed for securing the safety of public and transit vehicles applications. The RX538 in a robust housing was recognized and awarded the "Best Crime Preventive Product Award" in June 2015 by the Hong Kong Security Association. This 960H DVR is able to withstand harsh conditions such as temperature fluctuations from -25°C -50°C and power interruptions. The unit is engineered with good stability and is not affected by vibrations, so it will continue to record smoothly. The device operates on a 3G/4G mobile network. Where low latency and unreachable fixed networks are a concern, this DVR, using SMAC-M technology, ensures that operators in the control room can stream the video footage smoothly without any buffering and disruptions, permitting real-time monitoring and recording. [www.teleeye.com](http://www.teleeye.com)

## VIDEO SURVEILLANCE

# ONVIF Profile Q

## Easy Configuration of IP Cameras

Out-of-the-box, easy, plug and play interoperability. It is what we all want and expect as end users in today's market. No matter what the brand or even platform, the expectation is that when we buy a new tablet or wireless speakers and hook them up, the devices will work in concert with one another. Though the technology is on a larger scale and arguably more complex, integrators, system providers and end users in the physical security industry have similar expectations about IP-enabled security devices. In fact, recent surveys of ONVIF users and integrators have shown that easy configuration is the number one requested feature for future profiles.

Profile Q, ONVIF's newest draft specification, has been created in direct response to this feedback. The new profile answers the call for easy installation and out-of-the-box functionality using the ONVIF specification, catering to the security-specific needs of an easy set-up mechanism and basic device level configuration. Slated for final release in July 2015, manufacturers will have ONVIF automatically enabled for every product that is Profile Q conformant. This means that an integrator or user doesn't have to find a switch to activate ONVIF, or search for instructions issued by the manufacturer or printed on a label on the device.

ONVIF Profile Q conformant devices are easily discoverable and allow the installer to set common settings such as IP address, time, authentication and security settings. It does not matter what type of device the client is communicating to, as the ONVIF commands are common to all device types. When replacing a camera in an already existing system, an ONVIF Profile Q device can be configured quickly by using the data from a backup. The new profile also features a factory reset functionality that will bring a conformant device back to its original out-of-the-box state, thereby always retaining interoperability with other ONVIF IP security devices. Events can also be managed through ONVIF Profile Q conformant devices. These device events can include fan, power supply or storage failure, as well as critical temperature and last backup.

### Security Features

Another essential element of ONVIF Profile Q has been developed in response to recent changes in infrastructure and management philosophy. In the days of analog, dedicated networks for CCTV and access systems provided not only the expectation of plug and play interoperability, but also the peace of mind that the information transmitted between devices was free from harm. The IP equivalent of those private networks is a dedicated IT network for security devices, but the reality is that the expense of maintaining a separate network for security and another for other business operations is a luxury few organizations can afford in the long run. Therefore, networks are converging and being streamlined in order to affect cost savings. When sharing communication infrastructure with other business networks, however, CCTV and access systems need particular information security capabilities in order to provide the same security as a system that is operating in a dedicated network.

ONVIF Profile Q answers the call for advanced information security features, in addition to providing necessary out-of-the-box interoperability. An integral part of interoperability is setting up secure connections between devices and clients. ONVIF Profile Q does this by supporting Transport Layer Security (TLS), the primary security feature of the new profile. TLS is a widely used cryptographic protocol that is designed to provide communi-

cation security. The protocol uses certificates and asymmetric cryptography to authenticate the data transferred between the parties.

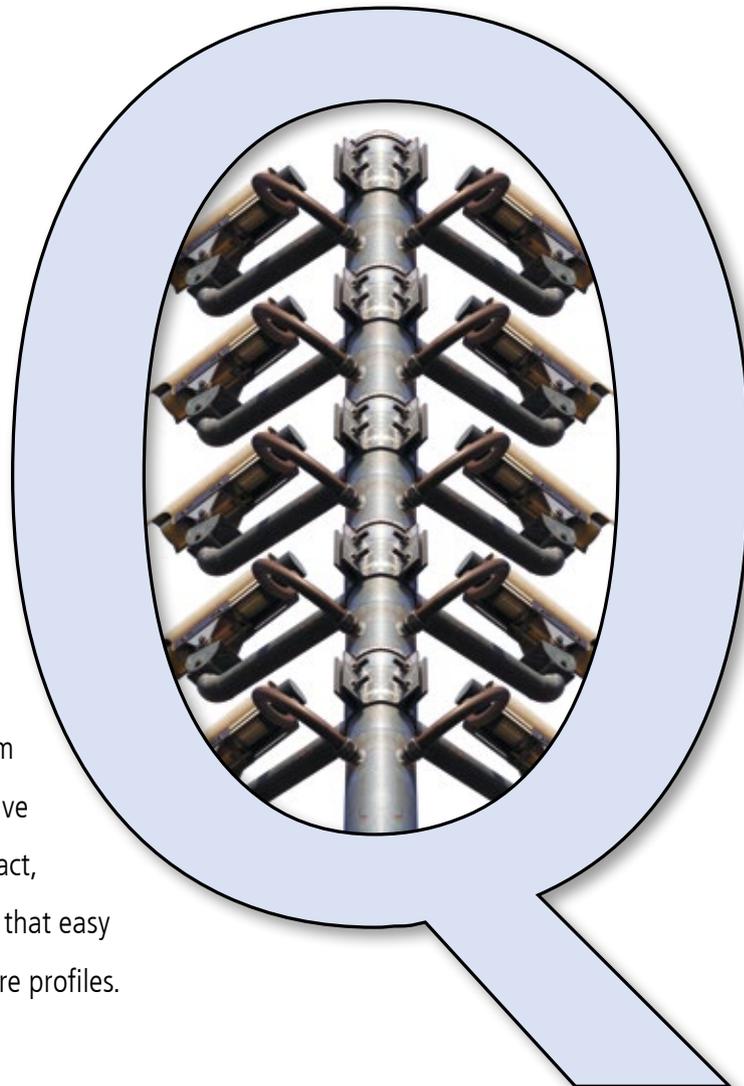
As a prerequisite for TLS, ONVIF Profile Q also allows for the management of certificates and keys on ONVIF devices themselves. Once set up, ONVIF Profile Q devices and clients can communicate across the network in a way that prevents tampering and eavesdropping even though the network is shared with other systems.

### Main Features are Security Features

It is no coincidence that the two main features of ONVIF Profile Q are easy set up and advanced security features. The two are inexorably intertwined. If a product is too complicated to set up and configure, then it often goes unused. If security features, too, are difficult to install, configure and maintain, busy and frustrated operators often turn them off. This, of course, though understandable, leaves devices and networks vulnerable to attack. ONVIF Profile Q makes configuration and the implementation of advanced security easy for integrators and users, saving their valuable time and ensuring that their networks are safe for multiple uses.

### The ONVIF Profiles

Profile Q is one of four profiles currently offered by ONVIF. In addition to Profile Q, ONVIF has de-



veloped three other profiles: Profile G for video storage, which was released in July of 2014; Profile C for physical access control, released in March of 2014; and Profile S, ONVIF's first profile, which was released in January of 2012 and helps end users and system designers in determining interoperable components of a physical security solution.

ONVIF Profile G is the specification that encompasses on-board video storage, searching, retrieval capabilities and media playback. Profile G was created to further refine the interoperability between live video and video storage. It covers cameras, encoders and network video recorder (NVR) devices as well as client systems such as video management systems, building management systems and physical security information management (PSIM) systems, among others.

Through Profile C, systems integrators, specifiers and consultants are able to achieve interoperability between clients and devices of physical access control systems (PACS) and network-based video systems. Compatibility between access control edge devices and clients is improved, installation simplified and training time diminished because of the reduced need for multiple proprietary monitoring systems to handle different PACS devices. Profile C conformant devices within the access control system provide door and access point information and functionality related to basic door control activities such as locking and unlocking doors, when a door has been accessed and other door monitoring tasks.

Profile S describes the common functionalities shared by ONVIF conformant video management systems and devices such as IP cameras or encoders that sends, configures, requests or controls the streaming of media data over an IP network. The profile includes specific features such as pan, tilt, zoom control, audio streaming and relay outputs.

**Ease of Use**

As described above, Profile Q, ONVIF's newest profile, recognizes the importance of easy of use and the need for increased security across business networks. It provides users with easy configuration and set up, as well as the advanced security features necessary for operating a con-

temporary and effective security network. Profile Q works across brands and profiles to give end users and systems integrators the tools that they need to connect systems and devices as seamlessly as possible, in order to create a truly interoperable security system.

The Release Candidate for ONVIF Profile Q will be available online for member review and comment through July 2015. If no technical

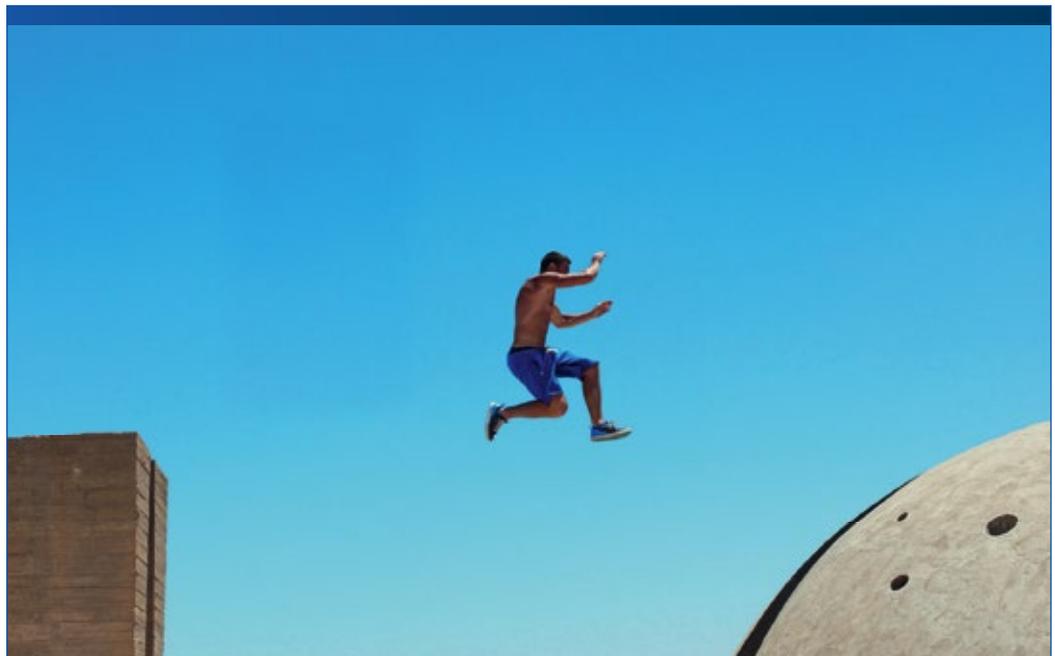
modifications are necessary, the final publication of ONVIF Profile Q is expected in late summer 2015.

**The Author**

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## SECURITY FOR BANKING

# ATM Attacks

## IP Video Surveillance: Tackling risks related to cash withdrawal from Automatic Teller Machines

Will cash still be used in 2020? Although it is an increasingly technological world, where financial transactions can be made through our smartphones and a simple internet connection, or by using traditional credit cards, debit cards or other electronic systems, we still feel the need to pay with cash. However, cash in circulation, and everything that relates to cash withdrawal from ATMs, is associated with risks. IP Video Surveillance can ensure more safety – says Pietro Tonussi, Business Development Manager Banking Southern Europe of Axis Communications.

People will continue to use cash for a number of advantages (real or perceived), including the belief that they are using a more secure payment system, because they do not need an Internet connection (think of all the areas in the world, but also in Italy, in which the so-called „digital divide“ is experienced, the different possibilities of accessing the Web), because they can make payments without an intermediary, there are no transaction costs and it is easier to retain control over money, or even because it is anonymous and there is no risk of identity theft. In short, the use of cash is perceived by people as simple, practical, efficient, fast and inexpensive, all factors that justify these results and forecasts on its use until 2020.

This involves a series of consequences that must be taken into consideration with increasing attention by those who deal with security in the banking sector and financial institutions. First of all, there is the presence of more ATMs in the area but also more places for their positioning (even in unconventional areas such as shopping centres, airports and stations). This means more cash in circulation, and consequently, greater risk not only for the money itself, but also for customers and for everything that relates to cash withdrawal from ATMs. By analysing this situation more thoroughly, it is shown that

even criminals, increasingly savvy and without any particular scruples, are aware of the general trend and are organised accordingly to implement their intent with regard to banks, the individual branches and especially ATMs, with increasingly advanced technologies and actions that result in attacks on ATMs which represent the preferred target.

### Attacks on ATM banks are Increasing

According to data in ABI-OSSIF's Report on Intersectoral Predatory Crime, the overall increase in the number of predatory crimes is in fact growing, as demonstrated by the high number of complaints of thefts and robberies to the judicial authorities, +2.2% and +2.6% respectively in 2014 compared to 2013; the other important factor is that from year to year the attacks on ATM banks are increasing: in only the first 9 months of 2014, 433 incidents were registered when compared to 321 in 2013, representing an increase of 34.9%. Moreover, these criminal acts represent approximately 80% of total attacks, demonstrating how ATMs have become criminals' first absolute target, primarily because of their function as dispensers to cash.

With reference to the type of attacks on ATMs, these can be divided into two main categories:

those that are ‚physical‘, where criminals intervene directly on the ATM, and the ‚software‘ type, such as fishing, that is, data transmission fraud. The tools that are used most in physical attacks are gas/explosives, saws, dynamite, hammers, and other burglary tools. „Cash trapping“ is the preferred system by criminals to steal money from ATMs, because it is the easiest to apply and requires no special computer knowledge. Among the methods of physical attacks, the most used are undoubtedly those with gas and/or explosives, but it is skimming that often has more serious consequences for the unfortunate person who suffers the scam. Finally, we must divide ATMs into two categories depending on their location: on-site, near the agency or in a free-standing ATM, normally adjacent to the local branch office, or off-site, those installed in shopping centres, airports, stations and the like, these are the ones that are clearly more prone to vandalism of any kind.

In the face of these kinds of numbers and data on attacks that are on the rise, we must also consider the emotional impact that is caused in the person who endures, for example, a robbery while they are withdrawing. It is essential to safeguard the security of the individual, while at the same time respecting their privacy. Cameras are then



viewed as objects for the security and protection of the Company asset (the ATM) but also and above all of safety, that is to say, in order to ensure efficiency and better customer service.

### IP Video Surveillance as a Solution

Guidelines to curb these types of attacks are basically three: the use of security camera systems (video surveillance), the use of biometric controls and the geo-location of the valuables, that is to say, the possibility that the ATM or cash deposit can be referenced geographically. Axis Communications has network cameras in its product range suitable to handle these types of attacks and can be truly considered to be the ideal partner for banking institutions to ensure the safety of ATMs.

Among IP cameras that can make a major contribution to the banking world, there are those for area control, which give image quality and supervision on a 180° basis which is their strong point, as well as those that can be installed anywhere near or in an ATM, such as the super compact pin-hole size, and with high performance HDTV video.

Axis network video systems, further to high quality video surveillance, can improve customer service (safety) and facilitate various activities while optimising costs. Above all, thanks to the surveillance of the entire area surrounding the door with the use of panoramic 360° cameras that allow complete surveillance, and with the aid of a single area camera, eliminate blind corners. HDTV cameras with a pinhole lens, mounted inside ATMs, and installed properly, can ensure a high detail of the scene inside the ATM with exceptional image quality, even in difficult ambient lighting conditions, such as in the presence of large windows or entrances with glass doors and polished floors. Ultimately, the first cameras, useful for area control generate an overview, while the second capture details, achieving an ideal break-even between privacy and safety of the customer. In addition, they offer the considerable advantage of being able to be integrated with alarm systems and access control, even remotely, for a comprehensive and efficient security platform.

### Growing Awareness

According to a 2014 survey conducted by ATMIA, a non-profit association that is responsible for analysing the ATM environment worldwide, it appears that there is a growing awareness on the part of managers responsible for banking security on the importance of technological solutions, such as IP video surveillance, in addressing the problem of attacks on ATMs. Apparently, installing further technology in existing plants could be perceived as an additional cost, but we bear in mind that, when criminals attack an ATM, the bank deals with costs that are much higher and which are not

only those of the damaged ATM, but it may also be damage to the structure of the building that houses it, any injuries to passers-by or – in worst case scenarios – victims.

Also, we should not forget other phenomena that often occur at the time of withdrawal: If a customer is subjected to a robbery after a withdrawal from an ATM, that branch will not suffer direct damage but will have lost a customer who does not feel safe to carry out this simple task. The emotional impact on the customer may be even more serious because it will affect the level of „customer dissatisfaction“, an element which, in future, a bank will have to take more and more into consideration to provide a good quality service and to improve customer service (safety).

Another fairly typical scenario is that of a user who goes to a free-standing ATM and wants to withdraw cash: there are two possible situations that can cause direct or indirect damage to the bank. Let us start from the first: the customer may find a homeless person within the free-standing ATM who has chosen to sleep in this place because it is warm, offering shelter from the weather outside; the result will be that the customer will not enter to withdraw because it does not feel safe, thus creating indirect damage to the bank. Now, let us imagine that a person enters the area of the free-standing ATM and feels suddenly ill, falling to the ground: without an adequate video surveillance system, the bank is not able to ensure the safety of the customer in the best way (direct damage). Two different situations, that exemplify how, thanks to intelligent algorithms which detect the presence of a man on the ground, it is possible to recognise if a man is in a horizontal position because he is sleeping or because he feels ill; the bank has at hand a useful solution to ensure the presence of safety & security. The same analytics that banks want in order to limit a possible problem, which can also occur in other environments as well as in free-standing ATM areas. Axis solutions, thanks to anti-tampering alarms and the detection capability function of objects, as well as applications of Axis partners such as the one just

mentioned, also enable the quick identification of potential activities of skimming and trapping of banknotes and cards or other criminal activities to the detriment of the ATM.

### Attacks with Gases and Other Burglary Tools

And when attacks occur with explosive gases or other burglary tools? Even in this case, IP video surveillance can be useful to the bank. Let us consider first of all what happens in these cases and what is the human behaviour of criminals who carry out an attack of this type, in order to understand how technology can solve this problem. Certainly, a criminal who wants to blow up a safe will not have a calm attitude like a person who simply wants to withdraw. Statistics on these types of attacks also indicate that there are two gases most used by criminals: oxygen and acetylene. Above all, because they are both odourless and are not detected by electronic sniffers. Moreover, oxygen is chosen because it explodes without fire, preserving the banknotes from the flames, which would otherwise be unusable. Statistics show how physical attacks are the ones that are most committed, but as we have said, with cameras you can achieve a behavioural analysis, because there is always a certain excitement in these gestures that are typical of these attacks: analytics is precisely able to detect such movements, thus offering the possibility of triggering almost immediate actions in the face of a potential criminal act or to report a potential suspect case.

In terms of physical attacks one should in every case make more use of deterrence for preventive purposes which can be obtained in two ways: with cameras located in the area outside of the ATM machine, which may deter criminals from implementing certain actions, but especially with cameras that can also be used inside the ATM to analyse scenes that may be suspicious, for example, relating to people who have made one or more visits in the days prior to the attack on the ATM.

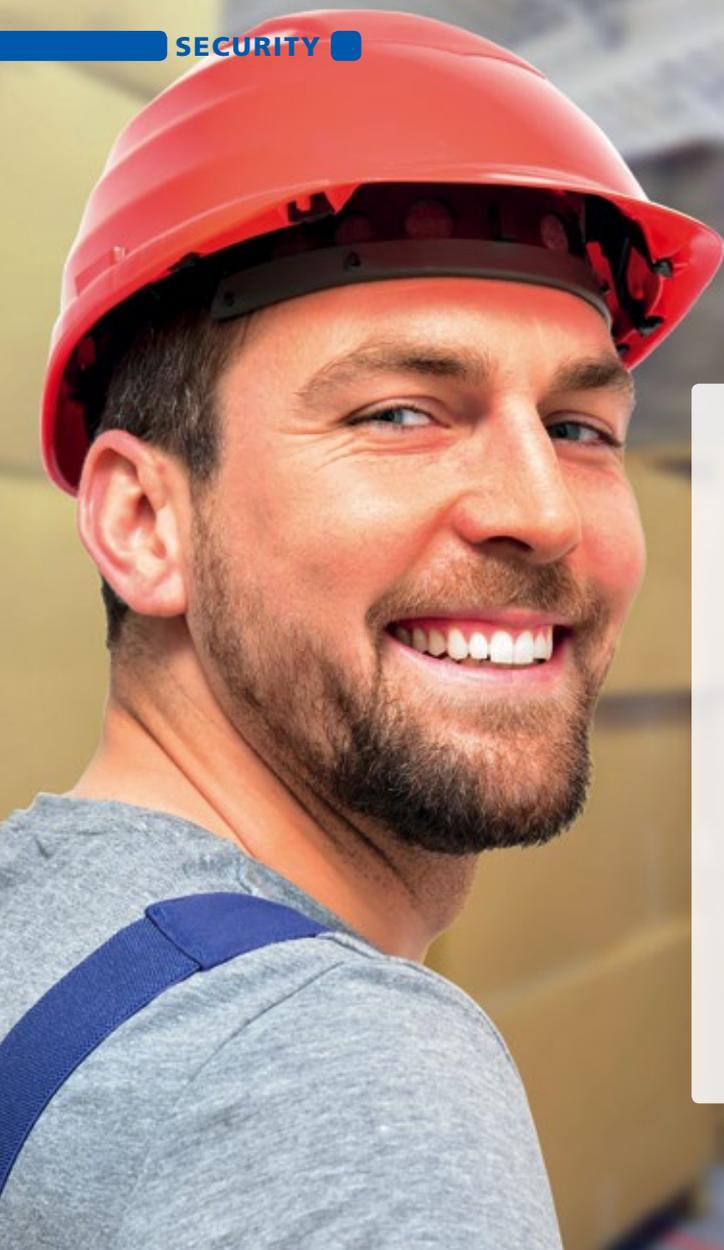
Finally, if we analyse data on ATM attacks provided by OSSIF-ABI and ATMIA and given the numbers of criminal acts perpetrated to the detriment of banks, it is apparent that despite greater insight on the importance of these technologies in preventing and ensuring the safety of ATMs and branches in general, they are still not as used in a capillary manner. It is inevitable that we have to make comparisons between investments and cost containment, but a third element must be taken into account when decisions of this kind are made, which is the safety of the customer, who every day uses the services that the bank offers.

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## VIDEO SECURITY

# Keeping an Eye on the Job

## Kardex Mlog Provides Optimized Warehouse Logistics Using Mobotix Cameras

Fast, punctual deliveries are the key to success in logistics, and successful deliveries require an efficient storage system. For example, storage and retrieval systems arrange Euro-pallets in fully automatic high-bay warehouses. If these systems stop running, this results in major economic losses for the company.

Kardex Mlog, a supplier of integrated material flow systems and high-bay warehouses, equips its storage and retrieval systems with Mobotix S15D cameras as standard in order to keep downtimes to a minimum. Customers benefit from the economic advantage of short downtimes as well as an increased level of safety for their employees. The supplier has over 40 years of experience in planning, development and maintenance of fully automated logistics solutions for storing pallets, small parts, long goods and staging elements. At the heart of

these solutions are the storage and retrieval systems that must be both reliable and dynamic.

The storage and retrieval systems are like unmanned forklifts that run on tracks through rack aisles up to 100 meters in length and 40 meters in height. They use telescopic arms to transport Euro-pallets and place them at the designated place on the shelf. To do so, they extend the telescopic fork fully automatically and once the pallet is correctly positioned, the storage and retrieval system heads for the target shelf and unloads the pallet.

Kardex Mlog works closely with IBC Raif to install the cameras on their systems.

The IT and automation service provider is a specialist in consultation, planning, installation, operation, training and services for security systems. "An S15D with a lens on the left and the right is mounted on every storage and retrieval system," explains Norbert Raif, Managing Director

at IBC Raif. "We have been distributing Mobotix video systems for several years and are thoroughly impressed with the solutions." Kardex Mlog especially appreciates that the video systems can be adapted to existing IT infrastructures and that they do not require any additional cables or software.

"The cameras allow the operators in the high-bay warehouses to clearly see whether anything is hanging over the side of the pallets that could potentially lead to machine downtime," explains the technical director of Kardex Mlog. "That is also the main reason why we fit cameras on the storage and retrieval systems in the first place. Time is money with logistics and if the warehouse comes to a standstill this results in high costs for the company. The downtimes for the storage and retrieval systems therefore need to be as short as possible." Furthermore, it is not necessary to perform complex and dangerous on-site analyses in high-bay warehouses thanks to real-time monitoring. Employees no longer have to climb to heights of up to 40 meters in order to see what stopped the system.

### Troubleshooting for Greater Efficiency

The Mobotix video systems also record events before a disruption, allowing an extensive er-



◀ S15D hemispheric cameras check pallet loading and highlight problems



Automatic warehousing still has to be monitored



Whether working in the light or dark, the cold or heat, all warehousing components and the cameras that monitor them need to be robust

ror analysis to take place. "The last four minutes are always permanently saved before a disruptive event," explains the technical director. "The camera automatically overwrites the previously stored image sequences during uninterrupted operation." The video images make it possible to process faults quickly and accurately, often without a service technician having to inspect the affected rack aisle with the systems switched off. If it is necessary to correct the fault on-site, the video images can be used to determine how many employees are needed and what protective and auxiliary equipment or tools and replacement parts are required.

In the camera manufacturer's decentralized concept, every camera serves as a high-performance computer. Data and image processing as well as coding is carried out in the camera itself. The PC or video control center now serves purely for viewing and controlling the cameras, but not for analysis and recording. The user therefore does not require potentially expensive video management software.

### Hemispheric Technology Saves Costs

Kardex Mlog previously used Mobotix M1, M10 and later the M22 and M24 cameras to ensure a clear view of the palettes. These only had one lens each, meaning that two cameras were installed on each storage and retrieval system. The double hemispheric S15D cameras have been in use since autumn 2013. This model features two miniature lens units and allows for a huge range of even more flexible application scenarios.

The hemispheric lenses are linked to the main housing via a connection cable and are attached onto the storage and retrieval system in a way that makes it possible to see what is happening around the palette from a bird's-eye view. They also offer two distortion-corrected, high-resolution 180° panoramic images, each with 3.1 megapixels. "The hemispheric technology gives us a 360° all-round view without any blind spots and now we only have to install one camera," explains the technical director of Kardex Mlog. The dual camera also offers another important advantage: with a multi-camera system, objects constantly move from one viewing area to the next, but with a hemispheric panoramic camera they never disappear from the video feed, nor do they double up in overlapping viewing areas.

### Good Visibility Even In the Dark

If a disruptive event occurs, the storage and retrieval systems will automatically come to a standstill. The installed video systems now also give the warehouse operators the option to analyze the cause of the disruption using the recording and quickly implement appropriate troubleshooting measures. In order for the warehouse workers to obtain a clear video image, even in the dark high-bay warehouse, Kardex Mlog developed a solution together with IBC Raif where small halogen spots have been installed on the left and right of the storage and retrieval systems. These LEDs switch on automatically during loading and unloading.

"There is also the option of working in black and white, which delivers a significantly better image in the dark. However, this is not used in many

warehouses because it needs to be possible to precisely identify the color of the product stored there. Therefore color mode is generally used together with halogen spots," explains Raif.

### System for Standard and Special Applications

The robust, fiber-reinforced housing, the broad operating temperature range from -30 °C to 60 °C (-22 °F to +140 °F) without ventilation and heating and the fact that there are no mechanical moving parts ensure the high reliability of the cameras in all environmental conditions. This plays an important role in such fully-automated high-bay warehouses. The containers may need to be stored at a cool temperature depending on the industry in question, for example in a pharmaceutical or a food company. The installed systems and devices therefore also need to be temperature-resistant.

"We analyzed how long the downtimes were before using the current Kardex Mlog with the camera and compared them with the current state. The figures are impressive as the downtimes have reduced on average by 25 to 30 percent since the camera system has been installed," summarizes Norbert E. Raif. "The warehouse operators save several thousand Euro by using this video solution for the storage and retrieval systems."

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## VIDEO SURVEILLANCE

# Analog Surveillance in High Definition

## Idis Launches HD-TVI Surveillance and a Highly Scalable VMS

Idis recently unveiled its HD-TVI surveillance solution, called DirectCX, at IFSEC International, alongside a fully-featured VMS, the Idis Solution Suite (ISS). The addition of an analog HD-over-coaxial system and the highly flexible and scalable ISS to the product line-up realizes the surveillance company's promise to present its most comprehensive surveillance solution at this year's exhibition.



Idis recently launched the DirectCX surveillance solution at IFSEC

The Idis DirectCX range is ideal for customers and installers seeking analog CCTV and looking to leverage existing coaxial cabling and power lines. The product line-up includes a range of HD-TVI video recorders (TVRs), cameras, video management software (VMS) and peripherals. The fully-featured ISS works across any combination of the company's recording platforms, including the flagship NVR-based offering, DirectIP as well as DirectCX TVRs, and presents customers with the powerful functionality offered by server-based recording. Using a cost-effective modular design, ISS works seamlessly with every single Idis device and allows customers to choose only the modules they need, such as administration, monitoring, recording, streaming, backup, redundant recording, failover and video wall services.

ISS allows customers to mix and match network and analog HD over coaxial cable technol-



Idis Europe Managing Director, Brian Song

ogy, while those looking to migrate from DirectCX to DirectIP or to scale up from DirectIP to ISS will find a virtually identical user interface. This future-proofs their investments by giving customers the flexibility to expand while minimizing training requirements and ensuring a low cost of ownership. Speaking at the show, Brian Song, Managing

Director of Idis Europe, said, "Our philosophy is to meet the surveillance needs of businesses across a range of market sectors by offering a total surveillance solution. We also have a commitment to combining high performance with simplicity and a low cost of ownership. From the perspective of operation, there is no difference between using any of our products. IDIS Center, bundled within our DirectIP offering, is already a powerful VMS that we offer at no cost, supporting up to 1,024 devices or 32,768 cameras. Now with ISS, customers can scale up and expand to, say, 64 simultaneous remote client logins and gain the power and redundancy of server-based recording. This is often required by larger enterprises with mission critical security operations, yet the user experience remains the same. The modular design of ISS also ensures customers only pay for what they want and need."



The compact DirectCV HD video recorder

### CONTACT

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## Multi-functional Public Address

Bosch has launched Paviro, a combined public address and voice evacuation system with high audio quality. It is EN54-certified, easily and quickly specified and configured, and is very efficient in power consumption. Thanks to its system-wide four-channel matrix architecture, the highly flexible, modular system makes it an attractive, complete system solution for small – to medium-sized installations, including office buildings, regional airports, hotels, factories, schools, department stores and more. Up to four audio signals – such as announcements or playback music – can be distributed simultaneously to different loudspeaker zones. At the same time, individual announcements in any zone do not interrupt music in the other zones. The combination of dynamic source routing and intelligent amplifier input switching reduces the number of high-efficiency class-D amplifiers required and therefore ensures a lower initial investment.



[www.boschsecurity.com](http://www.boschsecurity.com)

## Reduced Bandwidth Storage

Brickcom Corporation, an IP surveillance solution provider, has announced i-Stream technology that allocates bandwidth smartly and effectively as well as saves storage space. Limited bandwidth is a big challenge that forces many users to encode video in their camera and sacrifice the image quality to fit an NVR's bandwidth limitation, or have limited storage space to save the valuable evidence. This technology reduces bandwidth consumption but keeps important details by defining regions of interest. The system automatically calculates the most suitable bitrate for the interest areas and non-interest background. It can save at least 30% of bandwidth in various scenarios.

[www.brickcom.com](http://www.brickcom.com)

## Long Range Day/Night Lenses

Ulisse Radical is the name of the new range of PTZ cameras from Videotec. They are all IP and can be managed via the ONVIF-S protocol. The camera and lens are pre-configured during the production stage. Extremely high-performance 18x or 33x lenses up to 500mm are used to obtain flawless images even at very long distances. The cameras feature Full HD, 1/2" CMOS sensors and 1080p/60fps for daytime and nighttime broadcast quality video. They are equipped with advanced autofocus and a Visible Cut Filter that removes disturbances caused by haze or excessive heat. In complete darkness two powerful illuminators ensure clear illumination up to a distance of more than 300 meters. The range is designed for continuous operation even in extreme temperatures from -40°C to 60°C.



[www.videotec.com](http://www.videotec.com)

## VMS Plugin

Net2 Access Control and Digital Watchdog have announced the Spectrum VMS Plugin. This integration provides enhanced access control and video management on a single platform, allowing the user to view events footage from within Net2. The DW Spectrum is fast, powerful and user-friendly IP Video Management software, highly optimized to provide unlimited scalability, significant bandwidth savings and simplified system setup and management. It features unlimited layout designs and smart network bandwidth auto-adjust.

[www.paxton-access.com](http://www.paxton-access.com)

## Upgraded HD Cameras

Vicon Industries, a designer and producer of video security systems and high-performance IP cameras, has announced the next generation of its Iqeye Alliance-mx HD megapixel series of cameras. The completely updated and improved models offer a new motorized remote-focus lens, an increased field of view and a modified housing for better flush mounting. The line now includes 1MP and 2MP cameras, with fully featured 3MP and 5MP versions. New features include enhanced processing power needed to run analytics or VMS applications at the edge, WDR, built-in IR illumination, on-camera storage and true day/night capability. They are both ONVIF and PSIA compliant and work seamlessly with Vicon's Viconnet as well as all leading NVR/VMS providers.



[www.vicon-security.com](http://www.vicon-security.com)

## Lenses for 4k Cameras

Theia Technologies, the IP video surveillance lens specialist, has announced the launch of a new range of 4K 12 megapixel (MP) lenses. The lenses are designed to resolve the 1.55 micron-sized pixel of the smaller 1/ 2.3" 4K sensors, while at the same time resolving the 1.85 micron pixels and covering the larger area of the 1/ 1.7" 4K image sensors. The IR-corrected lenses are extremely compact at only 64mm long, allowing them to fit into dome and bullet cameras or traditional box cameras. The varifocal lenses will cover a horizontal field of view from 112 degrees to 9 degrees, with focal ranges of 4-10mm for the SL410 lens and 12-50mm for the SL1250 lens. They will be offered in CS or D25 board mount versions and the SL410 4-10mm lens also in a C mount version.

[www.theiatech.com](http://www.theiatech.com)

## Remote Access Control Integrated with Mobile Workforce Management System

Maxxess has unveiled Remotepoint, an advanced Efusion module that allows remote access control and verification through the company's security management platform. Seamlessly integrated with ambit, the mobile workforce management solution, the integration of the two technologies is driving operational efficiencies across both facilities management and security operations. Using handheld devices, the module allows security personnel to perform access control transactions anywhere, verify staff credentials and perform mustering in the event of an emergency. Already utilized by oil and gas plants and universities, it allows organizations to establish instant access points where traditional access methods are expensive or infeasible.



[www.maxxess-systems.com](http://www.maxxess-systems.com)

## Height-strip Network Camera for Facial Recognition

Vivotek has launched their height-strip network camera, the CC8130(HS), featuring 1-Megapixel video resolution at 30 fps, a 180 degree wide-angle lens and height-strip housing design, allowing the camera to deliver clear images for reliable facial recognition with no dead angles. Combining low-profile and high-level features, the camera is ideal for discreet indoor applications. „Capturing clear facial images is one of the most critical issues in surveillance. With discreet eye-level mounting, it allows capture of clearer facial images than ceiling-mounted cameras, even when subjects wear hats or hoods," said Tim Su, Director, Marketing Division.

[www.vivotek.com](http://www.vivotek.com)



Certified Partner United Security Alliance was commissioned to secure 4 high schools and 2 middle schools

## VIDEO SURVEILLANCE

# School Is Out, Surveillance Is In

## Geutebruck Secure Florida School District with Video Monitoring

When Mick Miller reached the school grounds, his normal good mood was ruined when he saw that large areas of the facade of the building and the entrance area were once again covered with graffiti. The school gate was broken and that weekend someone had obviously had a barbecue party in the school yard, judging by the garbage. This meant yet again a great deal of work and significant expenses for repairs and renovation.

This example is just one of many cases of vandalism at schools. But vandalism and destruction of property are not the only concerns at schools. Sadly, theft, assaults and campus shootings are important issues as well. According to an FBI study, the number of shootings in the US increased from an average of 6.4 incidents per year in the period 2000 to 2006 to 16.4 per year between 2007 and 2013.

These factors prompted the leaders of the schools in the idyllic Sarasota County School District on the Gulf Coast of Florida to take necessary precautions. The safety of students, faculty and staff must be prioritized and the best possible protection provided – a real challenge, considering that the Sarasota County Schools operate a total of 52 schools, educate 42,000 students and employ 5,000 teachers and other employees!

Partner United Security Alliance, certified by Geutebruck, was commissioned to secure 4 high schools and 2 middle schools at various locations. The technical design and equipment for all middle schools and high schools is already in the planning



phase and will be completed within the next two years.

### Twenty-four Seven

With United Security Alliance, a professional partner was chosen with many years of experience and deep technical knowledge. This made it possible to provide a solution that is not only fully mature from a technical perspective but that also provides additional benefits. All schools are interconnected and are controlled by a centralized control center, the Safety and Security Communications Center. The monitors with views from multiple cameras at all the schools are up and running there in real time: 24 hours a day, 7 days a week. This ensures both preventive monitoring as well as quick assessment, response and, in the best case, the immediate clarification of incidents and crimes. At the same time, school administrators and School Resource Officers on site can check recordings locally and directly follow up on incidents.

To provide these services, multiple re\_porter, Geviscope and Gevistore video management sys-

tems were put into use with the existing analog and IP cameras. At each school and in the central control center, Speedview stations are used as analysis units, from which the security personnel can access all live streams and recorded images. All images are archived for 45 days, placing high demands on storage capacity. The schools were initially equipped with 16 cameras 11 years ago. Today there are 4,300 cameras and more are planned.

**Storage Space**

Tim Butler is an experienced security system engineer who has worked in the security industry for many years. Specializing in cameras and access control, he has been employed at the Sarasota County Schools for the past 13 years. When asked why he chose this particular technology, his answer came quickly: „Storage was the largest challenge. State requirements mandate 30 days of storage but the school district’s goal is to keep at least 35 days’ worth. In the previous system, estimating storage needs accurately was difficult and



Geutebruck was able to provide what we needed. There were several systems that were considered at the enterprise level and this solution fits all the characteristics that we were looking for. In addition, the transition from analog to the world of IP was made easier by using this manufacturer’s equipment. All employees are trained internally and the staff can easily handle the equipment in the schools.”

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**Security Products**

**Video Security and Perimeter Protection Combined**



Geutebruck has updated the GeMIP and G-SWM interfaces that seamlessly connect its products with those of Southwest Microwave and enable video monitoring and perimeter detection systems to communicate. For example, if an intruder crosses an underground cable, an entire sequence of actions is automatically started: a pan-tilt camera moves to the reported position, the image resolution and frame rate for the live and recorded streams are increased and additional information is displayed in the camera image. A dual-detector dependency is also possible by combining perimeter detection and professional video analysis. The rate of false alarms caused by environmental factors is also close to zero.

[www.geutebrueck.com](http://www.geutebrueck.com)

**Security Equipment for Stadiums**

The 9th SPONSORS Sports Venue Summit will be held in Hamburg on 1-2 September 2015. The video company Dallmeier, which has installed modern video security equipment in many stadiums and arenas all over the world, will welcome visitors there and demonstrate its patented Panomera multifocal sensor technology at stand 2. With this equipment, large areas of the stands and terraces can be observed from a single location, and both a general overview and detail images can be obtained in the highest possible resolution at the same time. „The extremely high resolution enables positive identification of suspicious individuals and the image material is also admissible as evidence in court“, Roland Meier, Head of Panomera Multifocal Sensor Systems at Dallmeier, explains.

[www.dallmeier.com](http://www.dallmeier.com)

**International Video Surveillance Upgrade**

Theft of goods by customers, employees or service companies can lead to significant economic losses in the retail trade. Colruyt, with over 470 branches and 25,000 employees in Belgium, France and Luxembourg have invested to prevent theft, catch thieves and minimize these losses. In the past, video material was stored on DVRs and only viewed on site. Numerous new branches in Europe in recent years made the limits of the existing analog systems clear. The company’s IT department in Halle, Belgium, therefore evaluated alternatives and the focus quickly fell on SeeTec Cayuga where the IP-based solution permits both the use of the existing infrastructure and the desired centralization. Each branch now has a video surveillance system consisting of a distributed server, cameras and one or more recording devices. Existing Samsung DVRs were integrated in the SeeTec software, representing a major financial saving. Where necessary, the video images can now be seen not just on the workstation in the branch but also at the surveillance center.

[www.seetec-ag.com](http://www.seetec-ag.com)

**Intruder-resistant Sliding Door**

Dorma’s ST Flex Secure automatic sliding door combines contemporary aesthetics with maximum security to provide a stylish sliding door with the latest in anti-intruder and anti-vandalism protection. The latest addition to the Flex family, it retains transparency without compromising on security.



Compliant with UK and Ireland disabled access legislation and tested to RC2 resistance standard, the automatic sliding doors utilize burglar-resistant laminated safety glass with a secure four-point locking device at the main closing edge as well as anti-tamper protection to prevent the door being levered out. The entire range is designed for full compatibility with Dorma’s Codic Mastercard and Matrix Professional access control solutions. A Bluetooth Smartkey app will be introduced in early 2016.

[www.dorma.com](http://www.dorma.com)



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## VIDEO SURVEILLANCE

# Sit Down!

## School Buses Equipped with Cameras, DVRs and Driver LCD Screens

Hikvision is helping ensure the safety of pupils attending one of Dubai's largest schools, the Dubai-Sharjah-Ajman's National Charity School, through the installation of sophisticated CCTV systems in the school's 100-strong fleet of dedicated school buses.

Sixty large single and double-decker buses carry the majority of the children to and from school each day and each is fitted with Hikvision DVRs and either 2 or 3 Hikvision CCTV cameras to monitor all the seats and the access doors. In addition, all 100 buses and mini-buses are fitted with Hikvision CCTV reversing cameras and a driver's LCD screen for extra safety.

The CCTV and reversing systems were installed by a local specialist, Al Arabia Technical Supplies and Contracts. As well as facing up to the environmental issues of vibration, dust and changing temperatures thrown up by the bus installation, the installation team were also given just 60 days to complete the entire project – from surveying each bus, ordering all the equipment, installing and finally road-testing.

### Double-Deckers

According to Sabri Alkhawaja, Integration Manager at Al Arabia Technical Supplies and Contracts LLC, „Hikvision's response was immediate to all our requests for information and in equipment delivery. We opted to install 240 DS-2CE5582P IR Dome Cameras across the 100-bus fleet, matching 100 with LCD monitors for reversing and external viewing applications. The remaining 140 cameras were partnered with 60 DS-8104HMF1-T Mobile

DVRs, with three cameras being used in each of the double-decker buses and a pair of cameras in the single-deckers.“

The IP66 rating of the dome cameras allows it to be used internally or externally and the 12V DC supply suits vehicle and other mobile applications. With a 20m IR range, true day and night operation and good resolution from the large image sensor, this camera has the capability to provide high quality video of all the areas surveyed. The DS-8104HMF1-T Mobile DVR was selected specifically to withstand the vibration, dust and changing temperatures within the buses and benefits from dual SSD capability, built-in GPS module and 3G connectivity, a redundant power supply and power-off protection.

„The new CCTV systems have proven an immediate success“, says Sabri Alkhawaja. „Vitaly, all the Hikvision equipment has performed faultlessly, standing up really well to the harsh environmental challenges - and to the children!“

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## Clear Wireless Conference in Interference-prone Environments

The Digentis Wireless Conference System from Bosch provides reliable, flexible and interference-free communication with excellent intelligibility for up to 120 participants. It automatically finds the clearest free radio channel so disruptive interference is avoided and can co-exist with other Wi-Fi networks. It has been equipped with digital acoustic feedback suppression (DAFS) in order to eliminate disturbing feedback. Wireless set-up and configuration are quick and easy, making the system ideal for multi-purpose rooms and historic buildings.

[www.boschsecurity.com](http://www.boschsecurity.com)

## Customer Contact Center Launch

On 9th July 2015, Thomas Wagner, CEO of the Dorma Group, officially opened the company's new Customer Contact Center in Hitchin, Hertfordshire. It will play a fundamental role in the Service business, providing customer support to help maintain access all around the building. It is one of many investments the company has made since its acquisition of Ascot Doors in 2013. Since then, the integration process has led to the evolution of Dorma's customer servicing offering. A dedicated freephone number directs customers to this single point of contact for all service calls, whatever the door type, including 24 hour emergency response, planned maintenance, contract administration and billing services.

[www.dorma-uk.co.uk](http://www.dorma-uk.co.uk)

## Surveillance Stress Test

Doo Technologies, a company specializing in 360° technology and CCTV security, has announced a new version of their Camera Virtualization Software, Xstream Generator Suite (XsG). The software enables users to test network bandwidth, storage capacity and the Video Management System (VMS) pre-integration. The software tool enables a stress test of an entire CCTV system. As fully compliant ONVIF Profile-S software, the XsG runs with the major VMS of the industry. It simulates the behavior of a real camera system by virtualizing cameras through the network to the VMS without the need for a single live IP camera to be installed.

[www.dootechnologies.com](http://www.dootechnologies.com)

## New Video Analysis Appliance

The DVS 800 IPS compact and versatile SEDOR video analysis server appliance completes Dallmeier's entry-level analysis portfolio. The video appliance using the Videonetbox hardware platform supports analysis of up to four IP video channels and the recording of up to eight IP video channels. The analysis server software as well as the Smavia recording server software are already installed ex works. Both can be configured easily with a browser via Ethernet. Analysis results can be output in real-time and they can be sent as a message in XML format or used for the control of external relays over Ethernet.



[www.dallmeier.com](http://www.dallmeier.com)

## Full HD Dome Camera

Pelco by Schneider Electric recently announced the Spectra Enhanced Series high speed full HD 1080p PTZ dome camera. This top-tier dome provides high image quality with double exposure, 130dB wide dynamic range imaging, 60 frames per second video, extreme low latency PTZ and other features including single cable POE installation methods in all models and the full suite of Pelco video analytics. These along with Surevision 2.0 image processing make the camera an ideal discreet, PTZ video surveillance solution for almost any application in nearly any lighting situation.



[www.pelco.com](http://www.pelco.com)

## Miniature Network Cameras

Dahua Technology, a manufacturer and supplier of video surveillance products headquartered in Hangzhou, China has introduced its 2-inch mini PTZ network cameras. The series supports up to 25/30fps@1080P, 50/60fps@720P resolution and H.264 & MJPEG dual-stream encoding. It also features 4x optical zoom, WDR, weather resistance and a vandal-proof construction. In a minimalist design, the SD22204T-GN is just the same size as a credit card. With 360 degree wide viewing, the camera is able to capture increased level of detail and to zoom in to capture closer detail. The design of the SD29204S-GN has been awarded by Red Dot Award 2015.



[www.dahuatech.com](http://www.dahuatech.com)

## Electronic Locking Virtual Network

Developed and manufactured in Austria, the Xesar 2.0 electronic locking system from Evva offers companies a wide variety of products, areas of application and design. The product has been enhanced by a virtual network and numerous new functions only twelve months after its market launch. The virtual network uses the issued identification media to exchange information between software and doors to always keep the system up to date. Access authorizations can be quickly, easily and efficiently assigned. The highly secure system controls complex outdoor and indoor tasks in companies, such as offices, trade, retail, healthcare and educational facilities, but also in cultural institutions or leisure facilities.



[www.evva.com](http://www.evva.com)

[www.GIT-SECURITY.com](http://www.GIT-SECURITY.com)

## Hazardous Environment Cameras

Bosch has launched Extegra IP 9000 FX, a family of explosion-proof IP cameras developed for safe operation in hazardous environments. The cameras deliver high quality security relevant images no matter whether it is hot or cold (-50° to +60° Celsius), the lighting conditions are extremely poor, the objects are far away or there is a high level of moisture or dust. They are specifically designed and certified to operate in potentially volatile environments, such as in the oil and gas, chemical, petrochemical, fertilizer and pharmaceuticals industries, with the assurance that they will not cause an explosion. The IP 9000 FX cameras are tested according to IEC standard EN50130-5 and have CSA and IEC 60950-1 certifications. Stainless steel and aluminum housings to IP68 and NEMA 6P certified are available.



[www.boschsecurity.com](http://www.boschsecurity.com)

## Rapid Identification

Facial recognition specialist, Aurora, has launched Face Sentinel, a biometric access control authentication product powered by Deep Learning. Designed for integration with existing access control systems, the facial recognition system uses AI and infrared cameras to overcome the inherent challenge presented by fluctuations in natural light to achieve excellent facial recognition speed, accuracy and reliability. The product confirms within a second whether the person holding the credential is the same person registered within the organization's access permissions system. The Deep Learning technique – the result of work done by its R&D department led by Head of Research, Dr Tom Heseltine – is used to create a highly optimized Artificial Intelligence.



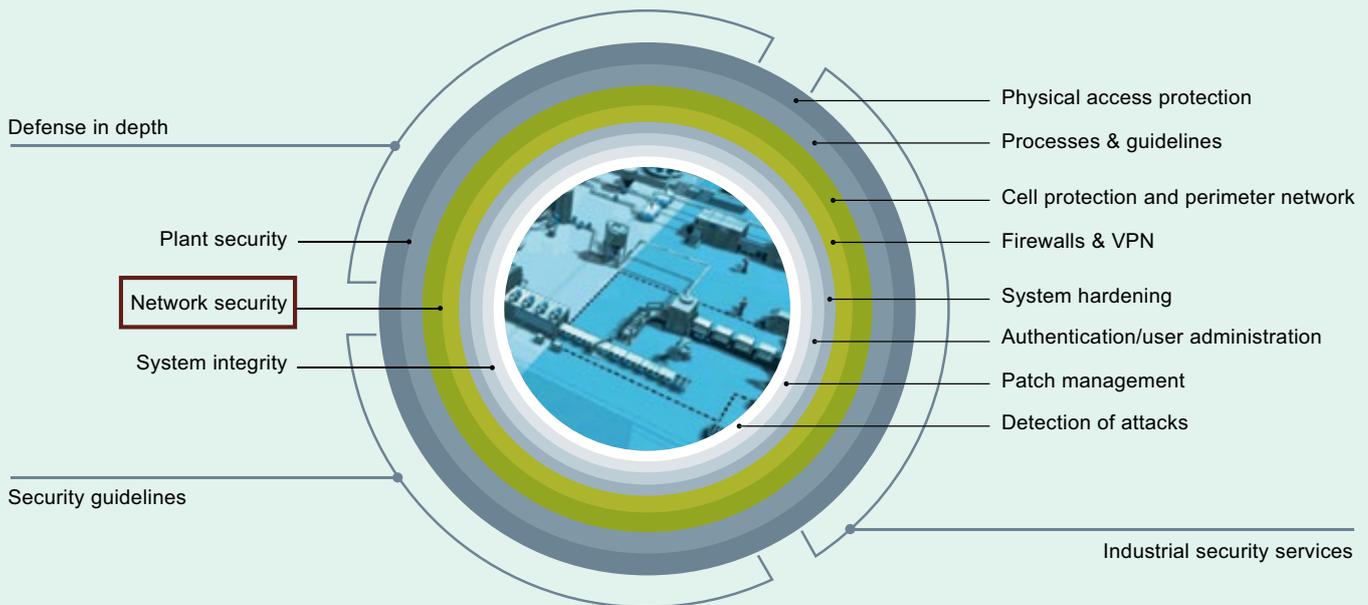
[www.facerec.com](http://www.facerec.com)

## Integrated PA and Fire Detection

Bosch Security Systems was recently chosen as the supplier of an integrated fire detection and voice evacuation system for both the domestic and the international terminals with more than 25 million passengers each year at Antalya Airport in Southern Turkey. Across the terminals, Bosch's local partner Ateksis installed 3,500 series 420 automatic fire detectors that are connected to six networked series 5000 modular fire panels. The fire system is interfaced with the fully digital Praesidio Public Address and Emergency Sound System. With more than 1,800 horns and ceiling loudspeakers as well as 300 sound projectors, this system covers multiple independent zones within the terminal buildings to allow for precise and targeted evacuation instructions in case of emergency.



[www.boschsecurity.com](http://www.boschsecurity.com)



Siemens industrial security strategy: Defense-in-depth

## INDUSTRIAL SECURITY

# IT Security of Automation Systems

## Staggered Protection Down to the Plant Structure

IT security in the automation is extremely important for our industrial location, since the automation and process control systems required are used in virtually all industrial sectors: From energy generation and distribution to water supply to manufacturing, traffic control systems and facility management. In order to protect people and plants, plant-specific measures are necessary. Help is provided by a staggered protection portfolio that reaches deep into the specific plant structure.

Especially due to the increasing networking of Ethernet connections down to the field level, the industry is becoming more concerned with the related security issues. Because open communication and increasing networking of production systems not only hold enormous opportunities, but equally big risks, whose potential damage to these networked systems must be identified.

The era of sealed off automation systems – based on proprietary protocols and inaccessible from the outside – is a thing of the past. A connection of automation systems to the Internet or to existing office networks is a given nowadays, although the requirements for automation networks differ greatly.

### Different Requirements for Automation Networks

In the current "ICS Security Compendium" of the German Federal Office for Information Security (BSI), the different requirements for classic IT

networks and automation networks are pointed out. It is intended to serve as basic guide for the operation of industrial plants with respect to safeguarding the production and processing systems, and is addressed to utility companies and water suppliers, providers of traffic control systems, and companies in the facility management sector.

When it comes to the subject of network security, there are major differences:

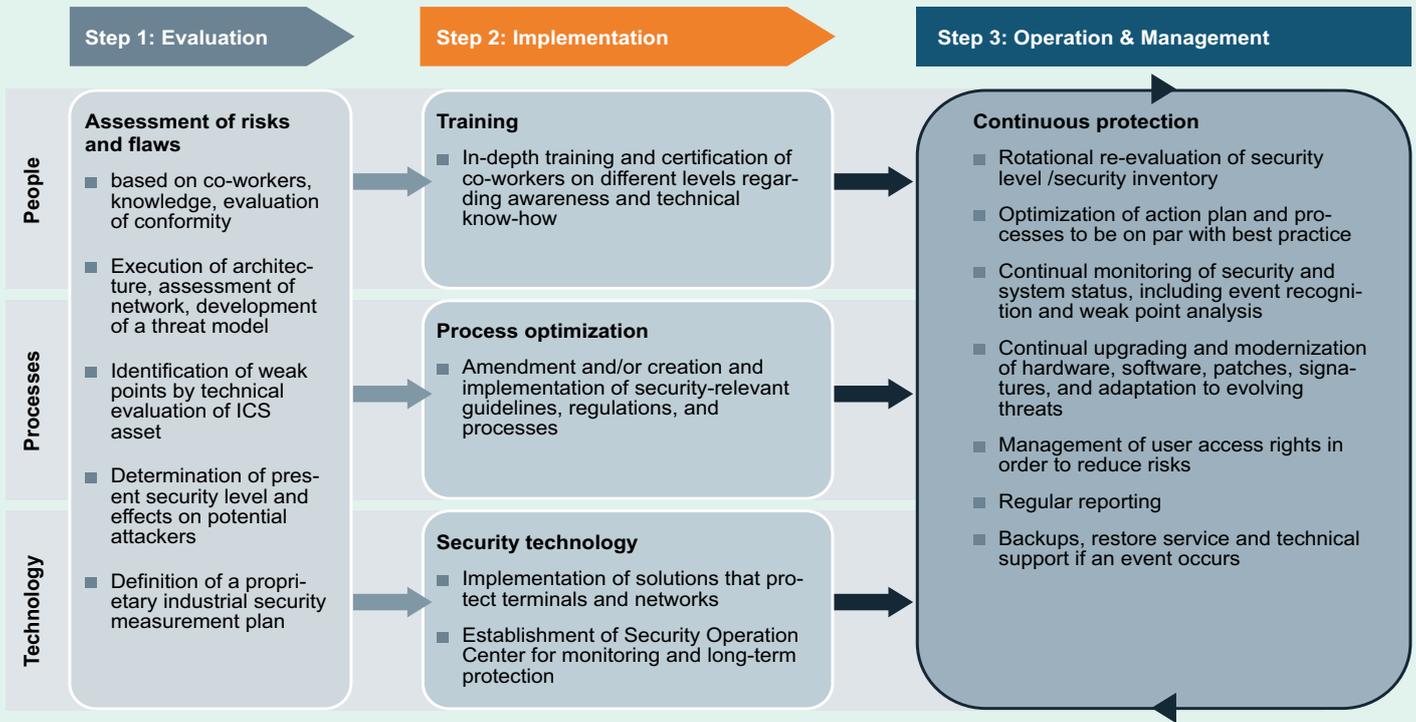
A significant difference is the assessment of the risks concerning the different systems. While an attack on the IT infrastructure "only" affects the data integrity and at worst results in a loss of company data, a hacker attack on the processes and the automation environment can endanger people, destroy production capacities and uncontrollably damage the environment.

To comprehensively protect an industrial plant against attacks in terms of security, appropriately staggered and coordinated measures must be taken.

It is not enough to just implement a simple password-protected system access, since attacks from the outside can take place at several levels. For a comprehensive protection of industrial plants, the Siemens AG has developed a defense-in-depth concept.

### Complete Protection that also goes Deep

With defense-in-depth, Siemens is offering a multilayered concept for industrial users that protects industrial plants against attacks from the outside as well as the inside in several layers. The concept is based on the components of plant security, network security and system integrity – according to the recommendations from ISA 99 / IEC 62443, the leading standard for security in industrial automation. While classic plant protection wards off physical access, network protection and system integrity protection prevent cyber-attacks and access by unauthorized operators or non-company



Steps for a secure communication in industrial plants

personnel. The advantage here is that an attacker has to overcome multiple security mechanisms, and that the security requirements of the individual layers can be taken into consideration plant-specifically.

**Success Factor: Network Security**

Network security means protection of automation networks against unauthorized (external as well as internal) access. This includes the monitoring of all interfaces, such as between office and plant networks, or the monitoring of the teleservice access to the Internet, which can be carried out by means of firewalls and, where necessary, the setup of a DMZ (demilitarized zone = security-relevant shielded zone). The DMZ is intended for supplying data to other networks, without granting direct access to the automation network. The security-relevant segmentation of the plant network into individually protected automation cells minimizes the risk and increases the security. The segmentation into cells and the assignment of the devices follow the plant-specific communication and protection needs. The data transmission between the cells is exclusively established via VPN connection (virtual private network), which is also encrypted and thus protected against data espionage and manipulation. The communication participants are securely authenticated. With the "Security Integrated" components from Siemens (e.g., the Scalance S security modules or security CPs for Simatic controllers), a cell protection concept can be effortlessly realized and the communication be secured.

**Components for Network Security**

For the implementation of such protection concepts, two means of security have proven themselves: the firewall and the VPN tunnel.

The firewall is used for the content-related protection of the data traffic. Through filtering, suspicious/prohibited packets can be discarded and, where appropriate, network access be blocked or granted packet-dependently. To secure the physical communication, the tunneling method is most often used. The firewall and VPN functions are supported by the "Security Integrated" products (red padlock icon) and thus provide the user with protection down to the automation cell.

**Choice of Various Security Products for Application-specific Plant Security**

To make it possible for almost all plant operators to effortlessly set up secure networks, Siemens is offering a wide range of "Security Integrated" products. A distinction is made between stand-alone modules, such as DSL modems/routers or cellular phone network routers, and communication processors, which directly integrate the security functionality into the controller world.

These products are marked with the typical red padlock. The "Security Integrated" products are designed for harsh industrial use and offer proven protection for production plants.

In addition to the security product offering, Siemens supports the user in the implementation of the defense-in-depth concept through Plant Security Services.

**Security is a Continuous Process**

Industrial security, however, is not only a purely technical subject, but also must be consciously embedded in the minds of management and personnel. Security is a continuous process that must be taken into account at all times. It is important to understand that the requirements of the classic office IT differ from those of the automation IT. It is therefore critical to employ proven security products in the automation environment. In the ideal case, the component manufacturers integrate the required/necessary security functions directly into their automation products as standard.

**Excerpt from the "Security Integrated" portfolio of the Siemens AG:**

- Cellular Phone Network Router Scalance M874 and M875 and DSL Router Scalance M812
- Security Module Scalane S
- Software SOFTNET Security Client
- Communication Modules CP 1628, CP 343-1 Advanced, CP 443-1 Advanced and (new) CP 1543-1 for the High-End Controller Simatic S7-1500

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## DATA CENTER

# A Rack for All Seasons

## A Versatile Rack System Accommodates Diverse Requirements

The applications are varied and complex: IT racks must be able to meet very different demands. They are used both as network and as server enclosures. They can perform simple distribution tasks or provide a safe environment for servers with intelligent climate control, power distribution and security technology. At this year's CeBIT in Hanover, Rittal presented its TS IT rack to show how a single modular system can provide more than 100 rack solutions.

Racks are found in many places in an IT environment: They are used as network enclosures for the servers and for the storage systems in the data center, as well as floor distributors and for accommodating the backbone technology. They house the passive and active network components. Generally 800mm in width, they also offer enough space for cable management. A variable 19-inch mounting frame can be used as an alternative to the standard 19-inch level for even greater flexibility. A glass door permits a clear view of the patch panels and the status indicators of the ports of the switches.

### Inches and Millimeters

To accommodate the heavy and, at the same time, deep server systems (both servers with a single height unit and blade systems), 600 mm wide and 1,000 mm to 1,200 mm deep server enclosures are used, depending on the climate control concept: with a closed glass door for rack climate control and with a perforated door in the case of bayed suite and room cooling.

The TS IT modular system offers a wide range of different enclosure dimensions and configuration options. „This way, we offer our customers the maximum installation diversity for a custom-fit solution for server and network enclosures“ says Bernd Hanstein, Rittal's Vice President Product Management IT. „This range forms the flexible base for the other components such as power distribution, cooling, monitoring and security. It is a platform that gives customers the solutions they require, from a single source.“

### Any Cable Type

The IT infrastructure system provider employs two compatible 19-inch technologies in the TS IT range. In addition to the previously available enclosure, whose 19-inch sections can be configured with modern snap-in technology and which can support loads of up to 1,500 kg, Rittal has also introduced a 19-inch mounting frame in different dimensions for this range. This provides even greater flexibility in cabling, and offers space for copper and fiber-optic cables as well as Ethernet and Fiber Channel (FC). This version of the TS IT rack supports a

maximum load of 1,000 kilograms, making it especially suitable for network components. The rack is available with protection category IP55 for use in harsh environments, such as those prevailing in production plants. The company also offers a secure, all-in-one solution with complete IT infrastructure in the form of the ‚Micro Data Center‘ safe solution.

Security company Prosecur, based in Ratingen, North Rhine-Westphalia, which specializes in cash logistics, is impressed by the TS IT. „Our new data center houses all the critical network components, more than 50 physical and around 50 virtual servers in twelve Rittal TS IT server racks,“ says Marco Matzke, Head of Organization and IT. „We have chosen exactly the right version for us from the modular system. The fact that one supplier could provide the complete range of data center services for us including the cooling system, the power supply, monitoring and the fire detection and extinguishing systems, made our decision easy.“ Prosecur is equipped for further growth, thanks to the standardized enclosures and further racks can be easily added. The company also provides an online IT selector that customers can use to pre-configure an enclosure according to their own needs.

### CONTACT

Rittal GmbH & Co. KG,  
Herborn, Germany

Tel.: +49 2772 505 0

info@rittal.com · www.rittal.com

## Customizable VMS



Pelco by Schneider Electric has announced the Videexpert video information management systems. It has been designed with a powerful, intuitive user interface, featuring a plug-in architecture for system expansion and third-party integration. „It is intuitive with a highly-customizable user experience and provides everything expected in a modern video surveillance solution; capturing and reviewing real-time and recorded video, quick playback with multiple camera syncing and multi-system information for business intelligence,“ said Kim Loy, Vice President Marketing. [www.pelco.com](http://www.pelco.com)

## Fire Panel Remote Access

Bosch has introduced Remote Services for fire panels. The IP-based solution for remote diagnostics and remote maintenance increases the reliability of fire panels and maximizes operational efficiency. It enables system integrators to monitor facilities remotely around the clock and to detect problems early so their clients benefit from quicker responses and less downtime. The solution is modular with three components. Its foundation is formed by Remote Connect, a secure Internet connection between the system integrator and the client, via Bosch Security Servers, that doesn't require specialized IT expertise to install. Remote Maintenance collects and analyzes real-time fire system data for predictive maintenance, detecting errors before they can cause downtime or damage. Remote Alert sends customized text messages and email alert notifications directly from the panel to the service team. Remote Connect for EN-54-certified fire panels has been available globally since July 2015. Remote Maintenance and Remote Alert will become available in late 2015 and early 2016, respectively. [www.boschsecurity.com](http://www.boschsecurity.com)



## Outdoor Analog HD Mini Dome

In the camera range from Abus is the HDCC32500 mini dome. It has a full HD resolution 1/3" CMOS image sensor with 1920 x 1080 images coming via its 2.8 mm fixed lens from a maximum range of up to 500 meters. The resulting image data is transmitted at 25 fps up to 300 meters (RG59) or 500 meters (RG6) via coaxial cable. The 24 integrated infrared LEDs, with a range of 10 meters, and the 3D DNR function and DWDR function provide noise-free images day or night without extreme backlight contrast. Good weather resistance is provided by the high protection class housing (IP66) that allow for 24/7 operation both indoors and in unsheltered outdoor areas. [www.abus-sc.co.uk](http://www.abus-sc.co.uk)



## Motion Detectors

Bosch Security Systems has introduced the Commercial Series family of motion detectors, expanding the portfolio of wall-mount motion detectors, which already includes Blue Line Gen2 for residential and small commercial applications and the Professional Series for mid-sized to large commercial environments. This series is intended for small to mid-sized commercial applications. They provide excellent catch performance and minimize false alarms by detecting intruders from wall to wall with a broad coverage range of 15 x 15 meters (50 x 50 feet). Features include sophisticated First Step Processing to deliver an instant response to the first step of an intruder. Dynamic temperature compensation also ensures detection at virtually any temperature and active infrared anti-mask detects materials being placed in front of or sprayed onto the detector. [www.boschsecurity.co](http://www.boschsecurity.co)



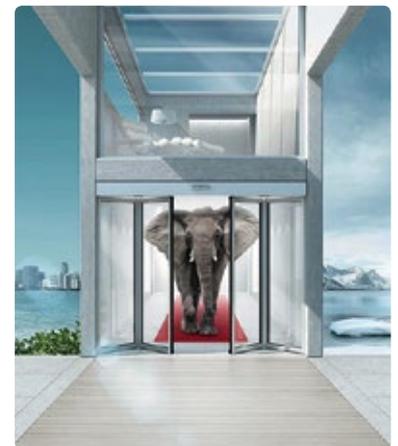
## Databases Without Limits

Geutebrueck is adding two devices to its G-Scope range: the G-Scope/8000-IP16SAS with integrated RAID system can accommodate up to 16 hard drives. The controller not only controls the internal RAID array but can also manage up to 15 JBODs (HDD enclosures), each with up to 16 hard drives. Database sizes of 256 TB can be easily implemented. Access times greatly affect ease of use so even at the maximum database size of 256 terabytes, images are available again after a restart in just about one minute. Searching for events brings up results in just a few seconds. Configuration of the system with RAID level 6 and 1 hot spare hard drive ensures that, even if a hard drive fails, redundancy in the database is still maintained. [www.geutebrueck.com](http://www.geutebrueck.com)



## Space-saving Folding Door

Dorma has launched the FFT Flex Green folding door. It provides a maximum width of up to 2.4m, offers excellent thermal separation efficiency and is certified for escape routes. The frames can be specified up to 2.5 meters in height and are suitable for both external and internal applications. Adhering to EN 16005 standards and with safeguarded self-monitoring sensors, the door also provides secure use for emergency exits. The intelligent drive system detects and compensates for wind loads, transmitting its power without toothed belts. The product range is compatible with Codic Mastercard, Matrix Professional electronic access control solutions, traditional card and proximity wall reader systems. [www.dorma.com](http://www.dorma.com)



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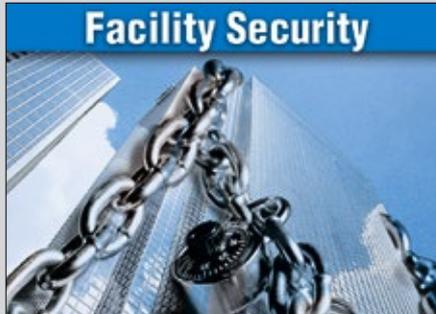
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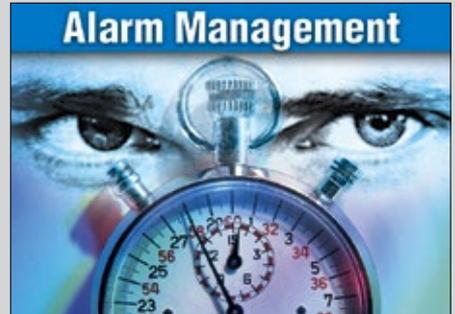


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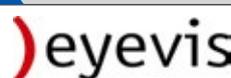
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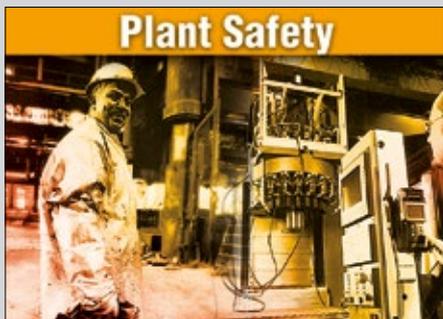


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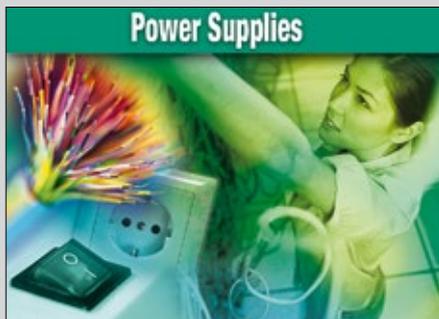
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## IMPRINT

### Published by

Wiley-VCH Verlag GmbH & Co. KGaA  
A Company of John Wiley & Sons, Inc  
GIT VERLAG  
Boschstrasse 12 · 69469 Weinheim · GERMANY  
Tel.: +49 (0) 6201 606-0 · Fax: +49 (0) 6201 606-791  
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GIT SECURITY is published 6 times per year.

### Subscription 2015

6 issues 78.00 €, single copy 15.40 € plus postage. Pupils and Students receive a discount of 50 % at sight of a valid certificate. Subscription orders valid until cancelled, notices 6 weeks before end of the year. Subscription orders can be revoked within 1 week in writing. Dispatch complaints are possible only within 4 weeks after publishing date.

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Print run: 20,000

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Elli Palzer - [elke.palzer@wiley.com](mailto:elke.palzer@wiley.com)

### Printed by

pva Druck und Mediendienstleistungen GmbH  
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