02 Volume 13
June 2016

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- 4K Video Surveillance
- Alarm Monitoring
- Fire Protection
- Perimeter Protection
- GIT SECURITY AWARD
- IFSEC 2016

**COVER: VICON**
**VIDEO IS THE BIGGEST BIG DATA**

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# Don't be Afraid of Big Data

A lot of security professionals have already moved to IP systems and do now see the benefits of modern integrated systems.

But without doubt big data and data innovation is perceived by some security officers as a threat rather than an additional source of evidence that can help them in their daily job. A key topic of the last issue of GIT SECURITY was data security within the security industry and our authors have shown that by undertaking some basic measures, data security threats can be held under control.

Another challenge is the pure volume of data that is acquired in modern systems. The amount of security cameras deployed in various situations all over the world is constantly growing. Higher resolution cameras also lead to massive data volumes.

I'm using the term "Big Data" to refer to the ability to analyze a large amount of data from different sources, such as video cameras, access control systems and marketing data. Information can be scary, and even more so when we find ourselves humbled by its immensity.

While it can be daunting to collect all that data and get it in a format that can easily be analyzed, companies do not necessarily have to have a data specialist on staff; third-party providers make these services accessible even to small and medium businesses. It is true that big data analysis requires a new set of skills which may not necessarily be in the luggage of security professionals. But modern systems like video management systems and PSIM help processing such big data, turn them into meaningful data and therefore facilitate a better business. A good example of how clever systems can help to cope with big data issues, is described in our cover story on page 22. Turning data into actionable insight is the approach Vicon has promoted as the future of video surveillance.

It is true that big data analysis requires a new set of skills within your organization and within the companies that provide products and service for the security industry. But it does not mean that big data analysis will put security experts out of work. There is some misinformation or misperception out there. Traditional skills and expertise are still needed. Research that looks at the past and tries to provide options for the future will continue to be valuable. Data innovation and the analysis of big data are a new type of evidence that complements traditional forms of security work. The added value of data innovation is that it allows a much quicker analysis and it can develop quick feedback loops that allow, almost in real time, to make changes and take the appropriate action needed without the need to wait for a later analysis of incidents.

Advanced systems and products are the valuable tools in our daily work. GIT SECURITY wants to promote the introduction of new products and has introduced GIT SECURITY AWARD years ago. On page 26 we start with the presentation of the products our jury has selected this year as finalists for GIT SECURITY AWARD 2017.

In this issue you will also find a preview for IFSEC and FIREX and many companies are showing what you can expect at the show.

If you attend IFSEC and FIREX please feel free to visit our stand G335 in London.

Enjoy reading this issue!

Heiko Baumgartner
For GIT's Safety and Security team

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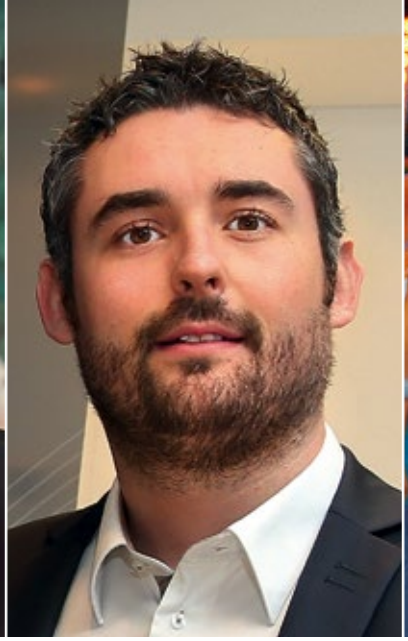

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## Security Essen Puts the Focus on Networked Security

Over 1,000 exhibitors will be expected at Security Essen 2016 in order to present their products and services. The requirements on security are becoming ever more stringent with Industry 4.0 and increasing networking – as proven by a large number of hacker attacks in the recent past. Security Essen 2016 will take account of this. Over two thirds of the exhibitors will show solutions relating to digital security technology. 670 national and international companies will introduce the state of the art in this area. Cyber security will play a decisive role in this respect. The companies which have promised to participate include the Group Security Services of Deutsche Telekom, Itenos, secunet Security Networks, Astrum IT and Fink Secure Communication. Moreover, the Federal Office for the Protection of the Constitution and the Alliance for Security in the Economy (ASW) will each be represented with a booth at Messe Essen.

**www.messe-essen.de**

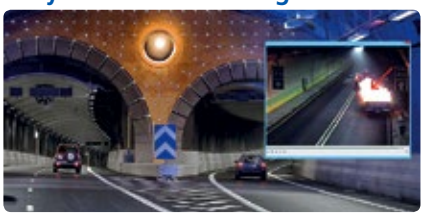
## Organisation of Islamic Cooperation chooses Conference System from Bosch

The Organisation of Islamic Cooperation (OIC) has installed a DCN multimedia Conference System from Bosch in its headquarters in Jeddah, Saudi Arabia. Al-Khobar-based Nesma Trading Company was entrusted with the responsibility of installing a new conference system to ensure flawless conferencing and interpretation in the executive meeting room. Given the high profile of the organization and the challenging expectations, Marcel Zaatar, Senior Audio Visual Engineer at Nesma Trading, and his team chose the new DCN multimedia Conference System from Bosch. DCN multimedia is an innovative conference system based on a newly developed IP-based Omneo media network architecture from Bosch. Its components include multimedia conference units equipped with a touchscreen that uses a version of the Android operating system. **www.boschsecurity.com**

## Cognitec Face Recognition System Supports Macau Casino Security

Cognitec's specialized face recognition technology FaceVACS-VideoScan was selected to strengthen physical security measures in major Macau casinos by alerting security staff in real time about banned persons entering the premises. In partnership with Melco Crown Entertainment, Cognitec supported the large-scale design and implementation efforts on site, resulting in multiple efficient system installations that now successfully prevent losses and criminal activities. Cognitec's software solution uses advanced face recognition technology to detect people's faces in live video streams and compare them to databases of banned persons. Security staffs receive real-time alerts and can deny entrance to the detected individual. **www.cognitec.com**

## Axis Acquires Video Analytics Provider Citilog



Axis Communications announced the acquisition of Citilog. The addition of their advanced surveillance technology and experienced personnel strengthens Axis' best-of-breed solution and further expands its opportunities in the fast-growing traffic analytics market. Citilog is a privately held company with 30 employees, headquartered in Paris, France and with offices in the USA, Hong Kong and Spain. The company offers a suite of video analytics tools and sensors for transportation monitoring, such as automatic incident detection, traffic data collection and intersection control. Its products improve road safety, limit risks and help reduce travel time. Axis and Citilog have worked together for several years on both engineering and sales to provide integrated solutions to a number of mutual customers. **www.axis.com**

## Xtralis will become part of Honeywell Security and Fire

Honeywell has entered into a definitive agreement to acquire Xtralis, a provider of aspirating smoke detection along with advanced perimeter security technologies and video analytics software, for $480 million from funds advised by Pacific Equity Partners and Blum Capital Partners. Xtralis aspirating smoke detection solutions protect many Fortune 500 companies, iconic sites and critical infrastructures worldwide. They are used in data centers, historical buildings, airports, industrial sites and manufacturing facilities to provide very early warning and verification of threats to speed response time and minimize facility damages and potential injuries. "This acquisition fits perfectly with Honeywell's technology innovation and leadership," said **Alex Ismail**, president and CEO of Honeywell Automation and Control Solutions. **www.xtralis.com**

## Osprey monitoring with Milestone Video

Milestone Systems' open platform IP video management software (VMS), is the foundation for remote monitoring at James Cook University's Daintree Rainforest Observatory in Australia. Researchers there have observed ospreys nesting in Daintree for years, but now a Milestone solution is giving them the chance to finally view and track their behavior up close. James Cook University (JCU) in Australia enlisted the help of CoastalCOMS, a longtime Milestone Solution Partner specializing in cloud-hosted environmental digital asset management. They mounted a high-definition, fixed Sony network camera and a high-speed Sony PTZ network camera on a crane boom and tower over the osprey nesting area. Fiber optic cabling connects the cameras to the server. The cameras, which operate at one megabit per second, are controlled, viewed and recorded via Milestone XProtect Essential video management software. **www.milestonesys.com**

## Genetec: Technology Collaboration with Allegion

Genetec announced plans to support the Schlage AD-Series of hardwired and wireless locks. Through this integration, the Schlage AD 300 and 400 Series can be seamlessly integrated into Genetec Synergis —- the IP-based access control module in Genetec Security Center, the company's unified IP security platform that combines access control, video surveillance and automatic license plate recognition (ALPR). Customers can expect to enroll Schlage AD-Series into their Synergis access control system in Security Center version 5.5 (expected in Q2, 2016), and will be available through the Genetec Channel Partner Program. Existing Allegion customers will also be able to migrate to a true IP access control solution without having to reinvest in additional or replacement access control hardware. **www.genetec.com**

## BSIA: Nominations for the 2016 Apprentice Installer Awards

The British Security Industry Association bestows the 2016 Apprentice Installer Awards. These esteemed awards recognize the very best emerging talent from the electronic security industry. Awarded by the BSIA, the Apprentice Installer Awards serve to acknowledge the achievements of second and third year apprentices involved in the installation of alarms, CCTV, access control or a combination of these systems. This year's awards will be presented at the industry's most prestigious event, the BSIA's Annual Luncheon, which is set to take place at the London Hilton on Park Lane on Tuesday 12th July 2016. The awards are presented by a high-profile public figure during an outstanding award ceremony, attended by some of the industry's most influential figures. **www.bsia.co.uk**

## Morse Watchmans' Key Management Solutions for Purple Parking

Purple Parking has improved operations and increased efficiency at London's Heathrow Airport using Morse Watchmans' KeyWatcher key management system. With their 38 distinctive purple buses, numerous company cars and 110 drivers on site at the five-terminal airport, Purple Parking uses their automated KeyWatcher system to control vehicle usage and improve driver accountability. The KeyWatcher system is used to regulate, store and track keys for vehicles used to transport customers between the various Purple Parking facilities and the airport. Keys are kept in the tamper-proof cabinet when not in use, and only pre-programmed authorized users can access a vehicle key during their working hours. All access activity is automatically recorded, allowing management to view live or recorded data showing which keys are out and with whom, and when the keys were returned or are scheduled to be returned. **www.morsewatchmans.com**

## Morpho: Facial Recognition Technology at Changi Airport

Morpho (Safran) has signed a contract with Changi Airport in Singapore to supply a solution to facilitate the passenger journey using facial recognition. This biometric control system involving self-bag drop, integrated border clearance and self-boarding gates will increase the airport's operating efficiency and improve passenger travel experience. This solution is based on MorphoPass Biometric Applicant Management System and MorphoWay automated gates to support the airport's Fast and Seamless Travel (FAST) concept for Terminal 4 which will open in 2017. **www.morpho.com**

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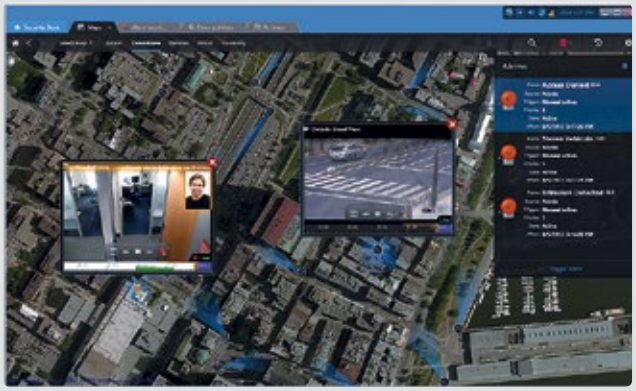
## Idis: HD Cameras with Genetec's Unified Open-platform VMS



Idis announces that it is integrating a range of its market-leading high-definition (HD) cameras with the video management software (VMS) from Genetec Inc. The development – which builds on an established relationship – brings to market a powerful combination of Idis network dome cameras, including vandal-resistant and infra-red models, with Genetec Security Center, an open-architecture, unified IP-security solution. Security Center seamlessly blends IP access control, video surveillance and automatic number plate recognition (ANPR) within a single intuitive interface to simplify the management of security operations and situational awareness. Through this collaboration, Idis and Genetec will make it much easier for organizations to improve safety, security and protection for their people, property and assets while benefitting from the multiple commercial and competitive advantages offered by smarter HD surveillance. **www.idisglobal.com**

## Hikvision Opens New European Head Office

Hikvision announces the opening of a new European Head Office and Logistics Centre in Hoofddorp, The Netherlands. The new European Head Office occupies a total space of over 2000 square meters, giving Hikvision the capacity to accommodate more employees, and providing more warehouse space for storage. The end result is that the company is able to immediately provide the most up-to-date and comprehensive product solutions for its European customers. The new office is also equipped with much larger demonstration and training areas, where customers can see and learn about cutting-edge technologies from Hikvision. **www.hikvision.com**

## Qognify's new Head-Office in London

Qognify announced the opening of its EMEA head-office in central London. The new office is the home of Qognify's regional sales and management team that also provides training and support services to its partners and customers Located in Blackfriars on the bank of The River Thames, the new office boasts a cutting-edge solution demonstration suite, showcasing the company's full portfolio including the latest version of its Situation Management platform – Situator 8.0 (incorporating the Operational Intelligence Center), its new Intelligent IP Video Surveillance Suite and Management Systems- VisionHub, and the next generation Real-Time Video Analytics solution – Suspect Search. Qognify has a well-established business partner program and an impressive customer-base throughout EMEA, which includes Aeroexpress, ProRail, Oslo Airport, Millennium BCP, Naftoport and many others. **www.qognify.com**

## Resolutions at the 2016 AGM of Assa Abloy

The Assa Abloy Annual General Meeting re-elected many existing members of the Board of Directors, and elected Ulf Ewaldsson as new member of the Board. Lars Renström was re-elected Chairman and Carl Douglas was re-elected Vice Chairman. PriceWaterhouseCoopers AB was re-elected as auditor until the AGM 2017. The AGM approved a dividend of SEK 2,65 per share proposed by the Board and the CEO, expected to be distributed by Euroclear Sweden AB starting Wednesday May 4. The total Directors' remuneration will amount to SEK 5,950,000 (excluding remuneration for committee work). The AGM resolved to adopt guidelines for senior management that remuneration and conditions should be in line with market conditions and be competitive. The AGM also authorized the Board of Directors to repurchase Series B shares until the AGM 2017, at no time exceeding 10 per cent of the total number of shares. The AGM resolved to implement a long term incentive program for senior executives and key employees within the Group (LTI 2016), as proposed earlier by the Board. **www.assaabloy.com**

## Dallmeier Launches International Facebook Channel

Dallmeier has already been on Facebook since the middle of 2012. Now the company has opened an international Facebook channel especially for English-speaking fans. The ‚Dallmeier Global' profile gives the company a purely Anglophobe channel through which it will regularly report on international trade fairs, new product announcements or reference projects. Like it!

**www.dallmeier.com**

## Euralarm presents Manifesto for a Safer and More Secure Europe

Euralarm, the association of European manufacturers, installers and service providers of the electronic fire safety and security industry, has presented its Manifesto for a Safer and More Secure Europe, 2016-2019. This is the industry's view on six policy areas where the European Union's Institutions should soon take action to ensure that EU citizens live in a safe society. Euralarm will constructively help policymakers to craft legislation that meets these objectives as well as shape an open, efficient and dynamic marketplace for the EU electronic fire, safety and security industry; a market growing by 11% over the next five years according to a recent EU Commission report. This newest publication backs the EU goals of boosting employment, growth and investment, and strengthening the Single Market. With the right political, legislative and regulatory environment, the fire, safety and security industry can play an important role in achieving these goals. **www.euralarm.org**

## Factory Award

Assa Abloy Czech and Slovakia Rychnov's operational transformation has been recognized by the 2016 Czech Top 100 Association award for the ‚most admired company' in the engineering industry sector after evaluation of around 1,000 organizations. Jan Galda, MD, says the recognition dates back to a transformation in 2005. "Today we produce over 8 million cylinders annually, compared with 1.4 million in 2005," Galda says. "This has been achieved with the same size of workforce of around 500 people." Rychnov has employed a Kaizen manager since 2011 and focuses on lean ways of working, operational excellence and sustainability. He adds, "My own values place teamwork, respect, and a good relationship in a team right at the top. A strong team with good relationships is a critical success factor in everyday business, and especially on difficult days." **www.assaabloy.com**

## A Good Start to the Year for Assa Abloy

"The first quarter of the year showed stable demand for Assa Abloy products, with increased sales of 4% during the quarter," said Johan Molin, President and CEO. "The operating income improved by 4% and organic growth was good with a 3% increase. The strong sales trend on the US market continued, while Europe and Entrance Systems showed good growth. There is a clear market trend towards digitized locks both on the commercial and residential markets increasingly being connected online, a very beneficial trend. The acquisition of Lighthouse was especially exciting as a first step in the strategic development of direct sales and service of industrial doors by a new business unit in Entrance Systems in the American market. ADAEZ was also acquired and will be an excellent complement to our range of energy-efficient products directed towards ‚net zero' buildings". **www.assaabloy.com**

## Tyco's Sensormatic Brand Celebrates 50 Years of Innovation

Tyco Retail Solutions is proud to celebrate the 50th anniversary of its Sensormatic brand. The company's first anti-theft pedestals and tags were disruptive technologies to an industry that relied on physical security for merchandise protection. Today, the company has nearly 60 billion consumer and apparel items protected worldwide and more than two billion RFID-based Sensormatic hard tags deployed since program inception. Tyco builds on the strength of its trusted brand with information-based solutions designed to better manage inventories, shopper activity, employees and facilities to improve operations and profitability. Over five decades, the company has innovated with its technology, represented by more than 1,600 patents issued and 700 applications pending worldwide. **www.tycoretailsolutions.com**

## Gunnebo to Provide Security for UAE Nuclear Power Plant

The Gunnebo Group has received an order worth MSEK 20 to supply entrance security solutions to a nuclear power plant being built in the United Arab Emirates (UAE) for ENEC. Delivery and installation is planned for the second and third quarters of 2016. As a provider of entrance security to other high-risk sites in the Middle East region, the manufacturer has been selected by Atlas Security, ENEC's security partner for the power plant project, to supply exterior and interior entrance control solutions for the plant. "Providing security solutions which give high-risk sites control over the flow of people and vehicles is one of our core businesses," comments Henrik Lange, Gunnebo President and CEO. **www.gunnebogroup.com**

## Ansell Acquires Protective Clothing Manufacturer Microgard

Ansell has announced that the settlement of its purchase of Microgard Ltd. has been completed. Founded in 1975, the protective clothing manufacturer with headquarters in the UK and a strong track record of introducing new technology and designs to the market was acquired for a total consideration of GBP 59M (approximately US $91M). They have sales in over 75 countries and a manufacturing facility in Xiamen, China. The company has grown rapidly, primarily in EMEA and APAC, with sales of approximately USD $40 million in 2014 and 750 employees worldwide. Ansell expects the acquisition, including all transaction costs, to be marginally dilutive to EPS in F15, and accretive in F16 **www.ansell.com**

## IEC Adopts ONVIF Standard

The IEC international standards body has adopted the ONVIF specification for access control as its new standard for electronic access control systems. The IEC develops international standards and is the leading organization for the preparation and publication of international standards for all electrical, electronic and related technologies. It is playing a significant role in the continued development of the Internet of Things by establishing interoperability between electronic devices. The ONVIF specification will now be considered the global access control standard in countries, projects and industries all over the world. The soon to be released standard (IEC 60839-11) specifies minimum functionality, performance and testing and applies to granting of access, including logging, identification and control of information. **www.onvif.org**

## Hikvision Camera Wins iF Design Award

Hikvision, a supplier of video surveillance products and solutions, is proud to announce that it has received a prestigious iF Design Award for its Pano Vu DS-2DP1636-D 16MP 360-degree panoramic camera. The annual iF Design Award is recognized as a symbol of design excellence around the world, attracting more than 5,000 submissions from 70 different countries, and is judged by a panel of over 60 design experts. The camera was praised for its simple design, compact structure and easy installation. It provides 360-degree distortion-free Ultra HD images with 8 x 1/1.9" Progressive Scan CMOS sensors in one device. This allows users to replace multiple cameras with one multi-sensor unit, curtailing costs and reducing technical complexity. **www.hikvision.com**

## Tyco Security Products Acquires Innometriks

Tyco Security Products announced it has acquired substantially all of the assets of Innometriks and 2DogsStudios, developers of high assurance readers, software and mobile solutions for FIPS-201 (Federal Information Processing Standard) smart card credentials. This acquisition strengthens Tyco Security Products' position in the federal market by adding the Innometriks team's open, seamless high-assurance solution integrated directly into Tyco Security Products' Software House C-CURE 9000 access control and security management ecosystem, as well as enabling the ability to integrate with systems from other manufacturers. This is achieved with an open architecture that moves government credential authentication directly into the physical access panel, and leveraging OSDP (Open Supervised Device Protocol) capable readers. These combined technologies will become part of Tyco Security Products' access control solution portfolio. **www.tycosecurityproducts.com**

## UNESCO World Heritage Pompeii protected by Mobotix

Pompeii is a world-famous ancient Roman city near modern Naples that was destroyed and buried under volcanic ash when Vesuvius erupted in 79 AD. To protect the extraordinarily well-preserved artifacts and decorated surfaces and to prevent potential damage caused by the 2.5 million visitors every year, over 380 Mobotix dual-dome cameras were installed at the inner heart of this archaeological site. The company won the order especially because of the high image quality and the decentralized system structure that results in less network infrastructure and a reduction of the overall system costs. **www.mobotix.com**

## Apollo Fire Detectors appoints Global Finance Director

Apollo Fire Detectors has appointed **Pete Browitt** to the post of Global Finance Director, reporting directly to Apollo's Managing Director EMEA, Steve Brown. Announcing the new appointment, Steve, said: "We are delighted to welcome Pete to the management team. Pete's wealth of finance expertise – coupled with a proven track record in project management – make him a valued new Apollo staff member. I'm confident his considerable experience will bring a host of other benefits to the company." Pete graduated with a BSc in Physics from the University of York. He is a member of the Chartered Institute of Management Accountants (CIMA) and his career encompasses a variety of financial roles at 3M and Halma . Most recently, Pete held the post of Finance Director at Avire – another Halma company. He was also appointed as Halma Fire Sub Sector Finance Director, a position that he will continue to hold in addition to his new role at Apollo. **www.appollo-fire.co.uk**

## Iluminar Joins Arecont Vision Alliance Program

Arecont has announced that Iluminar has joined the Arecont Vision Technology Partner Program. Iluminar offers innovative lighting solutions for the professional video surveillance market. The range of highly-efficient infrared and white light LED lighting products provides significant operational cost savings over traditional bulb-based competitors. The products are now available in the Mega Lab as part of the agreement to enable pre-installation integration and new product testing. "The opportunity to pre-test Iluminar IR and white light illuminators with Arecont Vision megapixel cameras will be of great benefit to our integrators and end users, with the advanced knowledge of what configurations and models work best together" said Eddie Reynolds, Iluminar President and CEO. **www.arecontvision.com**

## Hikvision Steps into the Intrusion Alarm Business

Hikvision has announced the acquisition of Pyronix, the UK-based intrusion alarm security firm. Julie Kenny CBE DL, founder of Pyronix, said: "This acquisition represents a huge opportunity for Pyronix, Rotherham, and the region. The foreign direct investment that this will bring to the UK will be huge. Hikvision has big plans for the growth of Pyronix and the continued development globally. In the last 15 years Hikvision has demonstrated what can be achieved in the video surveillance market. With this guidance, Pyronix can achieve great things in the global market place." Jiang Feng Zhi, recently appointed chairman of Pyronix, commented on the acquisition: "These are exciting times for Pyronix and Hikvision as the two companies work together. Hikvision has plans for significant investment in the UK and particularly in its UK-based manufacturing, with plans to dramatically expand operations. We are delighted to welcome Pyronix to Hikvision group, and we look forward to growing the business through introduction of intruder alarm products to the global market." Hikvision plans to apply Pyronix expertise and know-how in intrusion detection systems to its leading position in the video surveillance market. The result, says Sebastian Herrera, managing director of Pyronix, will mark the future of security systems: "Hikvision and Pyronix combined know-how will bring new advancements and innovative products to the market, converging two security technologies in video surveillance and intrusion detection." **www.hikvision.com**

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SECURITY MANAGEMENT

# Choose Your Profile!

## An Introduction to Available ONVIF Profiles

Founded in 2008, ONVIF now consists of over 450 member companies in six continents and more than 5,000 profile conformant products. The introduction of profiles is important, as ONVIF is active in different fields of the market, such as access control and video surveillance.

### Building a Foundation

ONVIF was founded by Axis, Sony and Bosch to create a global standard for the interface of network cameras and video management systems. It sought to provide greater freedom of choice for installers and end users to select products from a variety of different vendors. By establishing a basic standard for video in its early days, the founders also hoped to simplify product development for manufacturers. Early on, ONVIF realized it had to make some adjustments to its approach to creating a standard. Although members had agreed on how to specify APIs for video, the way the manufacturers deployed these in their products varied. As a result, ONVIF turned to the profile concept. The idea with the profile concept was that if manufacturers developed products in accordance with the profile, their products would work together regardless of the manufacturer of the VMS or camera.

Bluetooth experienced a similar chain of events when it introduced an updated version of its headsets specification. Bluetooth introduced its 'Headset Profile' to work regardless of when a device was manufactured. A new profile with a new name was created when future changes were needed. ONVIF is using the same approach: if a product is Profile S conformant, for example, it will always be conformant, regardless of when it is manufactured.

ONVIF has taken a similar approach to standardization, one in which a profile consists of fixed sets of functionalities for devices and clients that are mandatory for declaring conformance with an ONVIF profile. An overview of ONVIF's profiles is presented in the following:

### An overview on Profiles

#### Profile S for Streaming Video

A device, conformant with Profile S, is a device that sends video data over an IP network to a client. A Profile S device also includes support for PTZ, audio and metadata streaming, and relay outputs if those features are present on the device. For example, a device conformant with Profile S may be an IP network camera or an encoder device.

A client conformant with Profile S is a client that can configure, request and control streaming of video data over an IP network from a Profile S conformant device.

#### Profile G for Recording and Storage

A device conformant with Profile G is a device that records video data over an IP network or on the device itself – a device conformant to Profile G may be an IP network camera or an encoder device.

A client conformant with Profile G is a client that can configure, request and control the recording of video data over an IP network from an ONVIF device that is conformant with Profile G. Profile G also includes support for receiving audio and metadata streams if the client supports those features.

#### Profile C for physical access control

A device conformant with Profile C is a device that is a part of a Physical Access Control System (PACS). In order to be considered Profile C conformant, this device must provide information regarding the PACS related entities included in the system, as well as the status of these entities, including PACS-related events. The device must also provide basic door control. A client that is conformant with Profile C is a client that can get information regarding the PACS-related entities and performs basic door control. It must also retrieve and receive standardized PACS related events.

#### Profile Q for Easy Installation

Profile Q gives end users and systems integrators the tools that they need to connect systems and devices as seamlessly as possible. Offering out-of-

the-box functionality using the ONVIF specification, Profile Q caters to the security-specific needs of an easy set-up mechanism and basic device level configuration. This new profile also ensures that every Profile Q conformant product will have ONVIF enabled automatically as the default setting. Profile Q works across brands and profiles with quick configuration and installation, providing innate discoverability and strong device monitoring and event management capabilities.

„ONVIF developed Profile Q in direct response to the industry's request for out-of-the-box functionality and easier configuration," said Per Björkdahl, Chairman of ONVIF's Steering Committee. „With Profile Q, systems designers and installers will be able to realize the full potential of interoperability more easily using ONVIF."

Profile Q also supports Transport Layer Security (TLS), a protocol designed to provide secure communication between devices and clients, with an authentication process involving the exchange of certificates and keys over a network. The profile manages certificates and keys on ONVIF devices themselves, which can then communicate with clients across the network in a way that protects against tampering and eavesdropping.

**New Profile A for Access Control Configuration**

Profile A was created in response to feedback from ONVIF members and the physical security industry at large, asking for a more advanced access control profile. It expands the feature set of Profile C to include the day-to-day operations of configuration of credentials, access rules and schedules, along with Profile S for video management systems. Integration with video can be performed on the Profile A conformant client.

Profiles Q and A are currently in Release Candidate status. ONVIF circulates new profiles first as a 'Release Candidate' for six months, allowing members and stakeholders a final implementation review. When that process is complete, the final profile is published and technology providers are able to test their products for conformance to the final version of thr profile. This process is intended to allow members to more quickly introduce conformant products when the final profiles are released in 2016.

## IEC and ONVIF

As the demand for interoperability between all devices increases and the concept of the Internet of Things becomes a reality, standards groups are working together more and more. ONVIF and the International Electrotechnical Commission (IEC) are working together in this collaborative way. The ONVIF specification has been included in the new IEC 62676 standard for video surveillance systems, the first international standard for video surveillance systems. The IEC's standard for Electronic Access Control has also incorporated ONVIF's newest access control specification in its soon to be released IEC60839 standard. This cooperation between standards organizations like ONVIF and IEC will likely continue in order to provide the highest levels of interoperability, which ultimately benefits the end user.

By examining the evolution of other standards, we can see how vital they are to other industries, often beginning with a relatively small focus on one specific market and expanding to include others as acceptance and use grows. What comes next for ONVIF depends on its members and the physical security community, who ultimately are together at the helm, driving us forward as new technology develops and evolves.

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SECURITY MANAGEMENT

# Monitoring Europe

## A Survey of the European Alarm Monitoring Market

Having been passionate about alarms and monitoring systems since 1995, Daniel Kaminski knows about new technologies and market interests. Since 1998, he has shared his knowledge, as an editor, with the Polish readers of Zabezpieczenia. As a guest editor of GIT SECURITY, he now presents his research about the main monitoring stations in Europe to the international audience.

Recently I was asked by one of the largest Polish security service providers (in the top 3 nationally) to collect information on the main central monitoring stations in Europe. The company was thinking of changing its monitoring software and was interested in finding out which solutions the major European alarm monitoring companies were using.

This task was quite challenging given that there is very little data available on the European alarm monitoring market compared to the market in the United States, where the data is easily accessible. Therefore, in this article I will present the information I gathered during the interviews I had with the chief executives of the main European monitoring stations and their software and hardware suppliers headquartered in Europe.

In the U.S monitoring services were first offered over 140 years ago. These days there are even a few US monitoring stations that are capable of and are currently tasked with monitoring over a million connections each. There are professional industry associations that provide information on these companies, certify them and then release service providers' rankings. However, my research has been limited to companies headquartered solely in Europe, mainly due to time zone differences, slower response times and onsite support costs.

In Poland alarm monitoring services were first introduced only 25 years ago, but since then, both the transmission channels and the actual handling and management of alarms have both significantly changed. As a result, today the largest Polish monitoring station handles more than 100,000 connections alone, and the following top two have reached more than 50 thousand monitored connections each.

**Daniel Kaminski**

In Europe, however, the monitoring stations have offered their services for many decades. The leading monitoring stations have more than 500,000 monitored connections. Such stations typically employ around 200 operators per shift. Nevertheless, there are only few of them. For most monitoring stations, reaching the significant figure of 100,000 connections can be extremely difficult to manage. As a consequence, only around 20 European monitoring stations attain this number. These are located in: Spain, France, UK, Sweden, Norway, the Netherlands, Turkey and…Poland!

### The countries with the largest monitoring stations

Sweden is the country where 110 years ago the first European security companies were created. Securitas, Sector Alarm and Verisure are the leaders in Sweden. They also dominate the Norwegian market.

The largest monitoring stations sited in Europe are located in Spain. They belong to two companies: Verisure and Prosegur. ADT is also worth a mention here as another company with the magical number of over 100,000 connections monitored.

The European country with the largest monitoring market is France. There are six monitoring stations each with over 100,000 connections. In this region the leading companies are EPS, Verisure, Prosegur, Delta ADT and Stanley. Interestingly, France is the only country globally that has established a statutory minimum wage for security industry employees.

In my view, the Netherlands provides the most advanced monitoring services. There are three monitoring stations protecting around 100,000 objects. These stations are managed by UTC (SMC), Securitas and Trigion. The Netherlands is one of the four countries in Europe, along with Spain, UK and France, where alarm verification is

obligatory to decrease the number of interventions due to false alarms.

The UK is another country with the substantial monitoring stations. Chubb(UTC), ADT(TYCO) and G4S are the main players on domestic market. A British particularity is their preference to stick to well-known and proven solutions. For this reason, the landline telephone is the most widely used transmission channel, therefore GSM only has a minor market share.

**Table 1: European monitoring stations reaching more than 100,000 connections**

| No | The largest European monitoring stations | Country |
|---|---|---|
| 1 | Verisure, Prosegur, ADT | Spain |
| 2 | EPS, Verisure, Prosegur, Delta, ADT, Stanley | France |
| 3 | Securitas, Sector Alarm, Verisure | Sweden/Norway |
| 4 | UTC (SMC), Securitas, Trigion | The Netherlands |
| 5 | UTC (Chubb), ADT, G4S | UK |
| 6 | Pronet | Turkey |
| 7 | Solid Security | Poland |

## International Activity – Linguistically Compatible Regions

It should be pointed out that some of the largest monitoring stations are present in more than one country. Linguistically and historically, we distinguish three major regions:

- Scandinavia: Sweden, Norway, Denmark and Finland
- Benelux: The Netherlands, Belgium and Luxembourg
- Iberia: Spain and Portugal.

In the Scandinavian countries the biggest players optimize their costs by running the main monitoring station in one country and a backup monitoring station in another. For instance, Sector Alarm has the main station in Norway and a backup station in Sweden. The Stanley Security or Securitas have a similar strategy.

## Market Leaders

Scandinavian Securitas is the oldest security company in Europe and one of the biggest in the world. It has a presence in almost all the countries of Europe which enables it to provide monitoring services to more than 600,000 connections at a continental level.

It should be noted that Securitas has played a significant role in the history of alarm monitoring in Europe – G4S (former Group4) and Verisure (former Securitas Direct) are both descendants of Securitas.

G4S' largest monitoring stations are located in Denmark, Holland, Belgium and in the UK. G4S monitors more than 400,000 sites across Europe. However, in the last few years, the company has withdrawn from some countries, including Sweden, Norway, Finland, Germany and Poland.

When Securitas Direct (Verisure) was established in1988, it first handled alarms from small sites (individual customers, small business and SOHO). In 2006 the company went public and in 2008 was recapitalized by the EQT investment fund. Since then, the company has been implementing aggressive marketing strategies to gain as much of the monitoring services market share as possible all over Europe. Verisure is also responsible for the design and manufacture of its own proprietary wireless alarm system. The strategy was so successful that today it is the most prolific monitoring company with more than 2 million monitored customers/clients in 14 countries.

ADT is also worth mentioning as it has been dealing with monitoring services since the invention of the telegraph! Worldwide, it handles around 9 million connections, mostly in the US. Although, ADT withdrew from Eastern Europe a few years ago, it is still one of the key players in Europe.

Prosegur is yet another European leader. Recently, it has been focusing more on Spanish-speaking markets, and not surprisingly showed the greatest activity in Spain and Latin America. However, that did not stop it from expanding in other European countries, e.g. 2 years ago Prosegur studied the Polish market by engaging in trade talks with top Polish companies.

**Table 2: Companies with the largest number of monitored objects at continental level**

| No | Company name | Region of activity |
|---|---|---|
| 1 | Verisure | Iberia, Benelux, Scandinavia, France |
| 2 | Securitas | UK, Benelux, Scandinavia, Iberia, Eastern Europe |
| 3 | Stanley Security | UK, Benelux, Scandinavia, France |
| 4 | UTC (Chubb/SMC) | UK, Benelux, Spain, France, Germany |
| 5 | ADT / Tyco | UK, Benelux, Iberia |
| 6 | G4S | UK, Benelux, Scandinavia |
| 7 | Prosegur | Iberia, France |
| 8 | Siemens | Germany, France, Netherlands |

UTC Fire &Security is the company with the fastest territorial growth. Most people associate it with the technical security market, however, Chubb, one of its subsidiaries, is strengthening its position as one of the leaders on the monitoring services market.

It is often very difficult to gather information on this subject comprehensively, due to different countries having different UTC companies providing services for them. For example in the UK, it is Custodian yet in the Netherlands it is SMC. I should also mention that MasterMind – the software used by a vast majority of monitoring stations – is a UTC product.

Our list of top European players comes to a close with Stanly Security. Although many associate it only with tools, for numerous years it has been leading globally in providing healthcare and security services. In Poland, Stanley Security is still virtually unknown but in Europe it monitors over 400,000 facilities.

## Monitoring Software Used by the Largest European Monitoring Stations

One of the pieces of software existing since the very beginning of the computer age is MasterMind MAS (now owned by UTC). It has retained the largest part of the market share and is currently chosen by the majority of the world's largest monitoring stations. In the past it was not particularly popular in Europe due to the lack of local support. Everything changed when MasterMind launched a European Development Centre. Moreover, it started to collaborate with the Dutch company ENAI, known for its own monitoring software, to support the sales on the Old Continent.

Global companies, such as ADT or Securitas, have agreed with UTC on setting MasterMind as the standard for monitoring stations in all countries. These companies also have their own in house departments providing technical support for the software. MasterMind is also used by Prosegur and Stanley Security. Naturally, Chubb and SMC, belonging to UCT, work on this software as well. Subsequently, MasterMind is the most commonly used software by the largest monitoring stations in Europe.

IBS is the second most widely used software. It has two divisions: the American (SBN) caters to very large monitoring stations and the European (Interview) is directed to Scandinavian monitoring stations such as Securitas, ISS, Falck or SectorAlarm. Indeed, the largest European monitoring company Verisure uses SBN software from IBS. For this reason, the American IBS has opened a branch office in Spain to be able to assist Verisure in Europe.

**Table 3: Alarm monitoring software used by the key players in Europe**

| No | Software | The biggest implementation |
|---|---|---|
| 1 | MasterMind, UTC (USA) | ADT, UTC, Securitas, Prosegur, Stanley |
| 2 | Sentinel Plus, Monitor (UK) | ADT, G4S |
| 3 | Safecon, Alcensoft (Denmark) | G4S |
| 4 | InterView, IBS (Denmark) | Securitas, ISS, Falck, Sector Alarm |
| 5 | SBN, IBS (USA) | Verisure |
| 6 | Solid, ENAI (Netherlands) | Trigion, G4S |
| 7 | M1/F1, ESI (France) | Prosegur, Stanley |
| 8 | A-traq, Comon (Turkey) | Pronet, G4S |
| 9 | Sims2, Sims Ware (USA) | Solid Security |

Below we can see different software used by the main European stations:

- SentinelPlus by Monitor – extremely popular in the UK. It is utilized by the monitoring departments within both ADT and G4S.
- Safecon from Danish Alcensoft – for over 25 years Alcensoft have been producing unique software specifically for monitoring stations in Scandinavia. Within G4S it also seems to be reasonably popular.
- M1 and F1 from the French company ESI. Both are present in French, Spanish and Italian monitoring stations.
- A-tracq from Comon. Mostly focused on the Turkish monitoring market.
- Sims2 from SIMS. Old DOS version but popular because of low memory requirements.

## Summary

The European alarm monitoring market is divided. In Western Europe, where the history of providing these services is a long one, the market is relatively stable. Alarm monitoring is developed the most in France, UK, Spain, Portugal, the Netherlands, Belgium, Sweden, Norway, Denmark and Finland.

In Eastern Europe, however, monitoring services appeared only after the collapse of communism in 1989. Nowadays, a rapid growth can be seen in the Baltic countries, the Czech Republic, Romania and Bulgaria.

Poland is the largest market in the region with about 800,000 monitored objects. In Poland, the monitoring stations are more similar to the European model than the U.S one. Moreover, monitoring services appeared only 20 years ago and thus certain development stages have been omitted (eg. telephone lines to the GSM network) but also there is still a lot to be done (e.g. further market consolidation, services outsourcing or introduction of value-added services).

To end, I hope that those who wanted to learn something more about the largest monitoring stations in Europe will find this article useful. I also sincerely hope that through articles like this we will all be able to extend our knowledge, connections and relationships with our colleagues in the European area who, like me, wish, share and exchange their experiences in this fascinating market sector.

Finally, I would like to take this opportunity to thank the many friends and colleagues from the many different companies across Europe who helped me to collect and compile this information.

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# Security Products

more info at **www.PRO-4-PRO.com/security**

### Low-light Technology at IFSEC

Canon Europe will be joined by solution providers Digital Barriers, Ipsotek and Intelico at IFSEC International on stand F500 to demonstrate Canon's expertise in lens technology and how this delivers solutions for vertical industries. The manufacturer will be showing its cameras' low-light capabilities, launching eight new cameras suitable for a range of industry sectors including the high-sensitivity VB-M50B network camera. This delivers low light performance, particularly at the telephoto end, to provide clear and detailed images of distant objects. The cameras also feature a wide angle of view and faithful color reproduction, enabling detailed images to be captured across different lighting environments. Seamless integration with VMS platforms provides business benefits beyond security, such as behavior analytics and site management.

**www.canon-europe.com**

### Giesecke & Devrient's Cloud Pay Solution Integrates Visa Token Service

Giesecke & Devrient has announced the integration of its Convego Cloud Pay solution with Visa Token Service (VTS). The solution provides provisioning and life-cycle management services for payment applications on Host Card Emulation enabled mobile devices. The relationship with Visa allows G&D to request and provide payment tokens from VTS to Visa issuers' HCE mobile wallets. Visa Token Service is a new security technology that replaces sensitive payment account information found on payment cards, such as the 16-digit account number, expiration date and security code, with a unique digital identifier that can be used to process payments without exposing actual account details. It is an industry standard EMV co-compliant service for the generation, life-cycle management and processing of payment tokens.

**www.gi-de.com**

EVENT

# IF SECurity is calling

## Security Experts Meet at ExCeL London

IFSEC International once again opens their doors to over 27,000 security professionals in 2016. From 21st to 23rd of June over 600 exhibitors can showcase their products at London ExCeL.

### What can we expect?

IFSEC International covers every aspect of security. Each area will consist of dedicated exhibitors keen to show their latest products and present solutions to business needs. This year the key focus areas at IFSEC will consist of seven main show areas:

- **Smart Buildings & Home Automation:** There will be a dedicated feature right in the heart of the show floor focusing on smart security. The Smar Zone will give you an in-depth interactive experience of Home Automation as well as provide development sessions on Smart Buildings.
- **Video Surveillance:** Covering all aspects of video surveillance, this product area will feature the very latest products and services, including video surveillance, central control rooms and the innovations with high definition technology.
- **IT & Cyber Security:** Threats from cyber and IT crime are increasingly important for businesses. When companies, governments and individuals rely on the internet for their day-to-day business, it's vital to protect your business and its assets. Find everything you need to know about IT and Cyber Security at IFSEC International.
- **Intruder Alarms:** You will find the leading manufacturers and distributors of the best product solutions for detecting any potential threats and ensuring that your business is protected. Products on display will include wireless alarm systems, control panels, shock sensors, home automation systems, digital video motion detectors and many more!
- **Integrated Security:** At IFSEC you'll see how systems are integrated so that each product doesn't work in isolation. This purpose built area will provide you with access to providers whose job it is to ensure that each area of security is integrated and managed effectively.
- **Physical & Perimeter Protection:** The Physical & Perimeter Protection area allows you to see a range of products such as perimeter protection, locking systems, safes and more. With increased security threats from terrorism, the need to protect your business from external threats has never been greater.
- **Access Control:** Securing assets is a major focus for international businesses with collaborative efforts between security and IT managers to protect both buildings and the equipment within them. Key to this is access control. Driven by rising concerns over public and private sector safety, the access control market is set to be worth a substantial $8.6 billion by 2018.

## Inspirational Speaker Series

Also returning for a second year is the Inspirational Speaker Series. Speakers for the 2016 inspirational speaker series have recently been confirmed and organizers are delighted to announce that Colonel Tim Collins OBE, Kate Adie OBE and James Cracknell OBE will each bring their own unique insights and personal experiences to the shows.

### Professional Development Zone

Seminars and workshops, part of the Professional Development Zone, is a dedicated area at IFSEC to develop skills and take your career in security to the next level. The seminars and workshops are com-pletely free and designed to ensure speakers, content and expertise that really are needed.

## New at IFSEC

IFSEC also expanded for some new areas in 2016. The Home Automation Zone will focus on the ever-growing Home Automation market. To demonstrate the capabilities of smart security technology, IFSEC is building a smart home right at the center of the show. It also has been confirmed that the Physical Perimeter Security Zone will be greatly enhanced for the 2016 edition. The new Physical Perimeter Security Zone will now offer much more space to specialist manufacturers to fully display and demonstrate their products with all aspects of the sector covered. Another first at IFSEC will be the ARC Village. IFSEC brings three key Alarm Receiving Centres onsite, in the heart of the Installer Zone: Southern & Northern Monitoring Services, Kings Security and emcs Independent. This is the chance to speak directly to all ARCs, improve your response processes and better serve your customers.

## Different Pavilions

### Door & Hardware Federation Pavilion

The Door & Hardware Federation (DHF) is thrilled to be part of the inaugural Physical & Perimeter Pro-tection area of IFSEC 2016. The DHF is well established within the Powered Gate Industry and formed the Powered Gate Group in 2010 after demand for gate safety awareness was requested by its members. The DHF continues to grow from strength to strength and offers the Powered Gate Safety Diploma training, site visits, as well as advice and guidance on legislation and compliance.

The DHF is hosting a meet and greet lounge area on stand C1810 where they will be available to answer your questions about membership. Nick Perkins DHF training officer will be on hand on Wednesday 22nd June when he will be delivering a presentation entitled Powered Gate & Barrier Responsibilities for Installers and Maintainers in the Trade Theatre at 15:40hrs.

### LPCB Red Book Fire Pavilion

In the LPCB Red Book Live Pavilion, you can access free information on products and services that have been certified by a highly reputable certifica-

tion provider. BRE Global Ltd, based near London, is an independent third party organization offering certification of security, fire and sustainability products and services to the international market. LPCB is the certification brand used for security and fire products and services. The LPCB mark is accepted worldwide and the LPCB now has representative offices in China, India and Malaysia. The LPCB is now owned by the BRE Trust, a charitable foundation and not-for-profit organization. LPCB listings can be accessed, free of charge, at www.redbooklive.com or via apps from Apple, Google and Windows. Whether you look after the security of an organisation or work in the security and fire safety industry, this is a must-visit area at IFSEC International, located at stand D1900.

## Women in Security

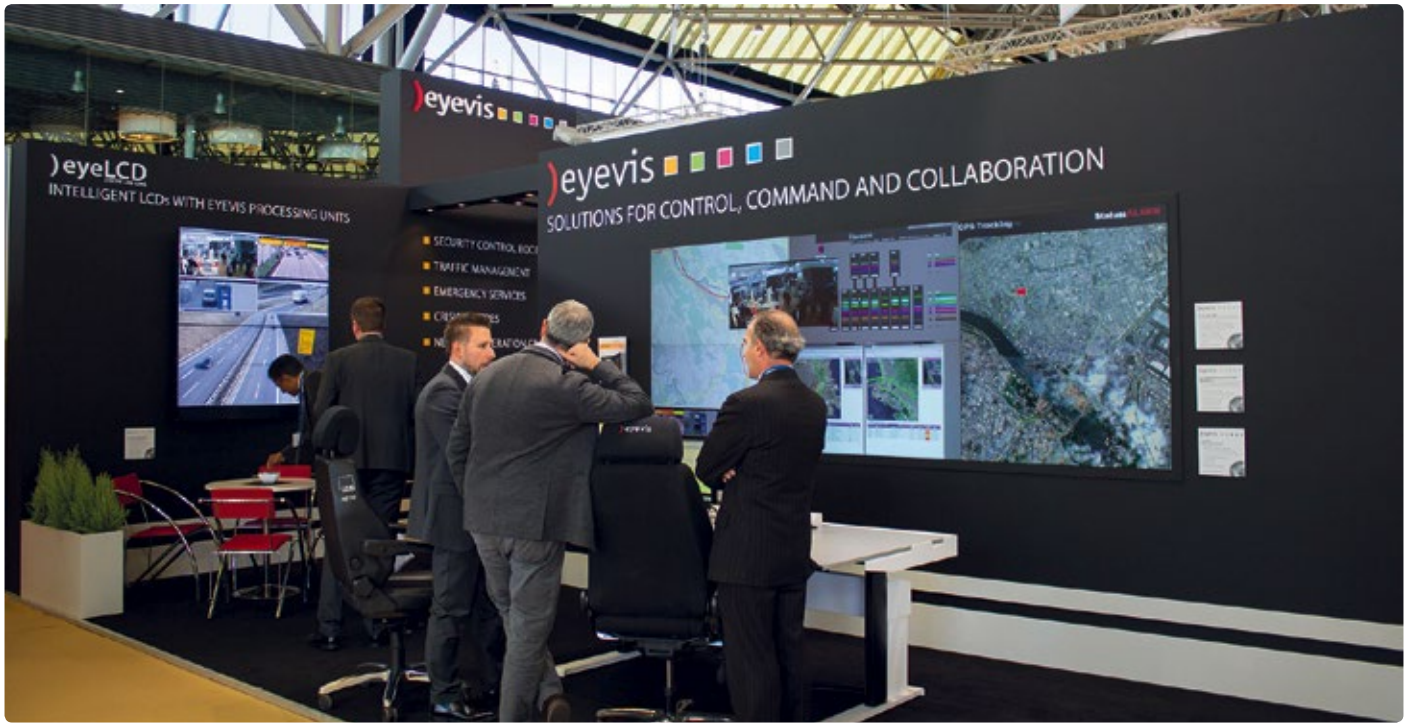
This year, there will be different panels and workshops around the topic Women in Security. Following workshops and session will be held:

- **ASIS International Women in Security:** This workshop, run by the ASIS UK Chapter, is your chance to meet like-minded security professionals in a relaxed environment, discuss the challenges you face – and find solutions to them. Presentations and discussions with leading security professionals will cover career development, education, certification and networking.
- **Women in Security Discussion Panel:** Dr Alison Wakefield and former Security Institute chairperson Emma Shaw are set to speak about their success as women in the security industry at IFSEC in June. They will form part of a panel discussing 'Inspirational Women in Security' and share their views on: How they achieved success in their careers, the challenges faced and how they overcame them and advice for other women in the security industry or those with aspirations to start a career in the sector.
- **SHE1000:** SHE1000 is a celebration of women working in the management and protection of buildings and people. 1000 successful females will join at this exclusive session on the 23rd of June for a presentation from networking expert Heather White, followed by prosecco and cupcakes.

## Also at ExCeL

IFSEC & FIREX International will be presented as part of UBM EMEA's Protection & Management Series, the UK's largest event dedicated to protecting and managing property, people and information. The series incorporates major events including IFSEC International along with FIREX International, Facilities Show, Safety & Health Expo and Service Management Expo. The series of events annually attract more than 40,000 attendees over three days.

**www.ifsec.co.uk/git_security**




CONTROL ROOMS

# Watch Out for the Traffic

## Versatile Large Display Systems for Traffic Control Rooms

A modern traffic control room without large format displays is unthinkable these days. Maps, road and rail networks, schedules, camera signals and the user interfaces of monitoring systems form the heart of the control room, and all these different sources need to be visualized in a user-friendly and efficient way. Eyevis recently presented an extensive range of solutions on a joint stand with Knürr Technical Furniture and Wey Technology. The three manufacturers showed complete solutions for traffic control centers at Intertraffic 2016 in Amsterdam.

Eyevis showed a wide range of rear-projection solutions, LCD screens, controller hardware and video wall management software that can be combined to build visual display systems meeting the customers' requirements. "By combining the strengths and components from three exhibitors, we were able to present holistic control room solutions to interested visitors", said Rainer Link, head of international sales at Eyevis. "We provided a tangible idea of how the components might interact and in a combination that is well tried in the field of control rooms".

### Rear-projection and LCD Large Format Solutions

The latest generation of rear-projection cubes, the EC-Slim series featuring DLP projection and LED technology requires an extremely shallow installation depth – just 487mm for the 60-inch Full-HD version. The OPS standard slot of the EyeLCD series professional LCD screens permits the integration of Eyevis processing units (EPU). The screens can be operated in video wall applications without needing an additional split controller, and multiple IP streams can be decoded directly within the displays thanks to compliance with ONVIF Profile S standards. The company's QHD series of professional 4K/Ultra HD monitor solutions deliver high-resolution content with, for example, a screen diagonal of 85 inches.

A smaller Quad-Full-HD screen with a screen diagonal of 65 inches demonstrated the EyeUnify video wall management software. Its modular, web-based software concept enables platform-independent control, runs under a variety of operating systems and permits a seamlessly scaleable number of clients whilst also being an open source project available to all users for free. Users with high security standards appreciate the added transparency that comes with disclosing the source code.

### Screen Management

The EyeCon comprehensive wall management software is a universal high-end solution for control room applications. It includes extensive functions to operate large display systems. Besides expectations of the display itself, image quality is primarily determined by the signal processing that is applied to control the video wall system. The netPIX controllers provide a freely configurable control solution, and generate a continuous screen surface across all display modules of a video wall, giving users one large desktop area on which they can freely place and scale all manner of sources and windows. NetPix controllers are based on high-end server components to ensure premium performance and reliability in 24/7 operation.

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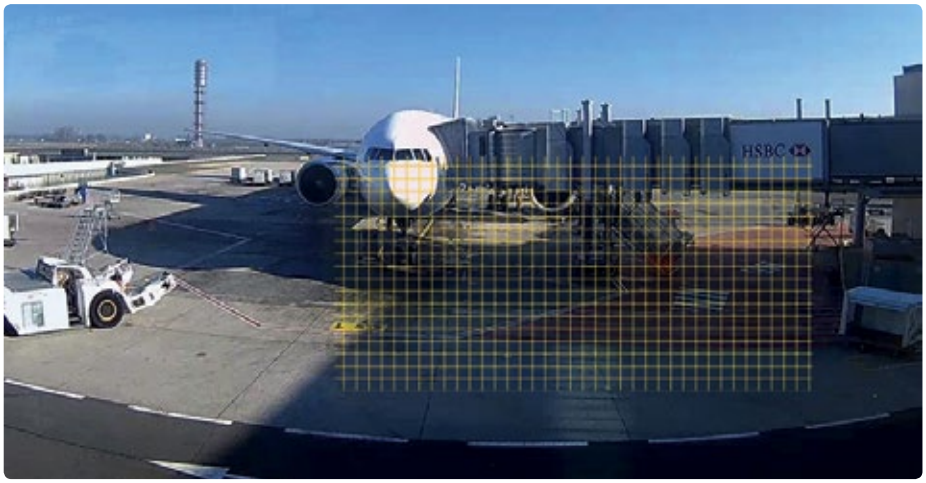
Eric Fullerton,
CEO and President
Vicon Industries



Vicon Analytics and Museum Search turn video data into insight

COVER STORY

# Video Is the Biggest Big Data

## Vicon's Latest Advancement in Making Video More Intelligent

We have been hearing a lot about big data lately. In essence, big data encompasses information gathered from sources such as social media, mobile devices, corporate databases, health records, law enforcement and video. In the last few years, video data has exploded, both in terms of its quantity and its applications. To put this in context, everyday Google processes 24 Petabytes of data, yet every day around the world 413 Petabytes of data is produced from surveillance cameras, mobile phones, drones and satellites. Clearly, when we speak about big data, video data should be a main focus of the conversation. But, although it seems like video data is a goldmine of information, it takes a lot to mine this data to make it relevant, meaningful and valuable.

Surveillance video has the potential to be one of the most valuable data sources, especially since it provides real-time data. Yet, most of the information and insights gained from video remains untapped. Extracting intelligence from video has mostly been a manual process and the majority of the video recorded goes unused since it is difficult to search, isn't readily accessible to all users, and it's costly and complex to store.

But similar to nesting Russian dolls, video data houses valuable insights and the more you can open and get to the next layer, the more power you have. Collecting large amounts of statistics and footage brings little benefit if there is no layer of added intelligence. So, companies like Vicon Industries, a pioneer in the video surveillance market, have been focused on seamlessly integrating video analytics into their line of camera products to transform video surveillance into actionable intelligence.

### Turning Data into Actionable Insight

Vicon recognized that the future of video surveillance lies with offering powerful, high-resolution cameras that provide video analytics to simply and seamlessly provide basic intelligence such as motion and intrusion detection. To ensure security incidents don't get missed and suspicious behavior is detected, Vicon has embedded video analytics into its line of IQeye cameras to help quickly identify and prevent incidents.

Video analytics, by definition, are software applications that generate alerts automatically to bring awareness to incidents occurring in an installation.

Analytics can help detect objects in a video stream and provide actionable insights that can quicky be addressed. With video analytics embedded in the IQeye family of Vicon cameras and seamlessly integrated into ViconNet video management software (VMS), video surveillance is no longer a passive tool, but an effective, proactive detection system.

Vicon includes a basic analytics package on all cameras in its IQeye camera line. Vicon's suite of license-free basic edge-based analytics intelligently detects exception conditions or threats in real time, allowing security personnel to respond in a timely manner. The basic analytics package includes camera tampering detection, intelligent video motion detection and intrusion detection.
With Vicon Analytics, alerts can be generated in real-time for:

- **Intelligent Video Motion Detection:** Vicon's Intelligent Video Motion Detection takes traditional Video Motion Detection to a new level. It reduces the number of false alarms by intelligently analyzing motion in a scene and filtering out false triggers, including lighting changes and non-human movements such as those made by animals and trees.
- **Intrusion Detection:** Vicon Intrusion Detection analyzes real-time video from secure areas and perimeters to provide alerts upon unauthorized encroachment. Intrusion Detector filters out noise such as lighting variations and tree movements and issues real-time alerts upon detecting people or vehicle intrusions into a preconfigured zone.
- **Camera Tampering Detection:** Vicon's Camera Tampering Detector analyzes video from a camera in real time to identify camera failures or interference, including when a camera lens is partially or completely blocked or the field of view or camera angle has been altered. Alerting security personnel about tampering interferences with cameras allows security personnel to respond in a timely manner to maintain video recording for forensic purposes.

With an integration into the video management software (VMS), the system can now proactively assist the operator of the security installation and improve efficiency. This is typically accomplished by graphically enhancing video streams to show bounding boxes around the detected objects in live and playback. The system can also automatically generate alarms and automated tasks based on the metadata created by the cameras.

Vicon Analytics can be used in almost any application including border patrol, perimeter protection, at transportation facilities, government institutions, landmarks, bridges, retail stores and entertainment areas.

Video analytics yields many benefits to users such as lowering the overall cost of deployment, reducing operation costs and makes installations more efficient. Notwithstanding, Vicon understands that some customers may have budget constraints that prevent upgrading to cameras with embedded analytics. In order to make video more search-friendly, Vicon recently introduced Museum Search into its latest ViconNet VMS for faster search of video footage.

## Locate Evidence and Investigate Videos of Interest

Storing metadata generated by the camera can create a powerful search tool for the operator. Similar to creating an index or glossary in a book, the user no longer needs to manually search through all of the recorded video to find a particular incident. Museum Search is a time-saving feature that allows for ultra-fast search of recordings. This powerful forensic tool allows operators to quickly sort through large amounts of recorded video evidence to locate all the video segments that contain specific actions or events within a defined region. For example, searches can be performed for the opening of a window or door or a specific car moving in a parking lot.

With Museum Search, Vicon has converted unmanaged video data that can only be used when manually playing back the video into data that can be rapidly searched like any database. This enables operators to search through hours or days of video in seconds.

The Museum Search feature improves the capability to prevent incidents, as well as providing the means to more effectively manage and respond to them if they do occur. This enhancement to the system is the result of extracting metadata out of the video inside the camera and then storing the metadata in the VMS and providing a simple method for the operator to search through the collected metadata.

## Ultra-fast Search for Changes in Selected Areas of Recorded Video

After an incident, it's important that video can be investigated to determine what happened, and when it occurred. Searching for an exact moment in hours of recorded video can be a daunting, time consuming task. Vicon's Museum Search quickly and accurately identifies sequences with motion in specific operator-defined areas to help staff find and export relevant video in an efficient manner. Making better use of information is an important facet for Vicon. The system doesn't require the operator to write a database search query based on understanding the different types of data that are stored but rather paint areas of interest on the scene and allow the software to create the search parameters in the database.

The Museum Search feature is part of Vicon's latest release of ViconNet VMS, a high-performance, standards-based open platform solution. Robust, scalable and exceptionally flexible, ViconNet VMS delivers complete access to live and recorded security video. Supporting industry-standard compression and transmission formats, including H.264, ViconNet displays and records clear, high-resolution video while minimizing bandwidth and storage requirements.

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# Winners 2016

The Jury had nominated the finalists in each category – then you, dear readers, did vote for your favourites. Here they are once again, the three winners of each category of the GIT SECURITY AWARD 2016. We presented the corresponding products already in issue 1/16 on page 58.

## CATEGORY B – FIRE AND EXPLOSION PROTECTION, INDUSTRIAL SAFETY

Dietmar Hog (l.) and Andreas Seltmann (m.) are happy about Hekatron Remote being a winner

Anja Huchthausen received the award by Steffen Ebert (l.) and Dr. Heiko Baumgartner (r.) for Avenar detector 4000

Jens Aperdannier (l.) with the award for fire protection system Zettler Profile

## CATEGORY C – CCTV, VIDEO SECURITY

Axis-founder Martin Gren (r.) is awarded for his Q61 – dome camera for good pictures

Edwin Roobol from the German Axis office is also happy about the trophy for the Q61 camera series

Jens Wirok (r.) and Svenja Meisenheimer with the award for the hemispheric indoor camera Mobotix i25

## CATEGORY D – ACCESS CONTROL, INTRUDER ALARM AND PERIMETER PROTECTION

Oliver Brandmeier, Michael Hensel and Uwe Eisele (f.l.) had won with Kaba evolo smart App – Regina Berg-Jauernig handed over the award

Dr. Marc Zacher, Martin Uhlmann (3./4.f.l.) and Verena Fischer (l.) are happy winners for their product CX6172

Jennifer Stack received the cup for JustIN – the mobile key technology from Salto

VOTE NOW FOR THE NEXT WINNERS

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GIT SECURITY AWARD 2017

## CATEGORY E – SOLUTIONS, SAFETY AND SECURITY MANAGEMENT

Joachim Hengstler (m.) and Gerhard Haas (r.) are honoured by Dr. Katina Leondaris for Permetio/NMT

Erika Görge (3rd f.l.) and Anja Huchthausen (2nd f.l.) won an award with EffiLink for Bosch: an IP-based system platform for remote services

GIT SECURITY AWARD

# The Finalists Are Chosen

After our jury chose the best of all the products in each category, it is now on you, dear readers, to vote for the top three products that will receive a GIT SECURITY AWARD 2017.

In the following we will display all the product finalists of each category.

- **A – Safe Automation**
- **B – Fire And Explosion Protection, Industrial Safety**
- **C – CCTV, Videosecurity**
- **D – Access Control, Intruder Alarm, Perimeter Protection**
- **E – Safety And Security Management**

In order to have fair voting, companies cannot vote for their own product. Moreover you will have to vote with your company address. Private persons are not entitled to vote and a business address is essential. Select one product in each category. You will find an overview of the finalist's products on the next page.

**Vote now – voting is possible until August 31, 2016!**
**NEW this year, voting is only possible on:**

**www.security-award.com**
There you will also find again all nominated finalists.

picture similar

## Win the reader prize!

With a little luck, you will soon be the owner of a prestigious digital cam. So please vote in the GIT SECURITY AWARD. Select a favourite from each of the categories A, B, C, D and E to take part in the draw for the camera.

**Jury for safe working environments and fire protection:**
f.l. Steffen Ebert, Prof. Reinhard Ries, Jürgen Warmbier, Lars Komrowski, Dr. Heiko Baumgartner

**Jury for video security, security management and solutions:** f.l. Steffen Ebert, Thomas Kunz, Peter Krapp, Heiner Jerofsky, Jörg Crauser, Manfred Gügel, Heiko Baumgartner

**Jury for access control solutions, intruder alarms, perimeter protection:**
f.l. Steffen Ebert, Jürgen Junghanns, Dr. Peter Schäfer, Heiko Baumgartner

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## telezoom lens with
## 2 megapixels resolution for
### excellent Full HD quality across the entire
zoom range and imagine it to be smaller and smaller and smaller

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ExCeL London, Booth E500
June 21–23, 2016

## The new Fujinon lenses for 1/1.8'' and 2/3''

kremer kommunikation

With their compact size, Full HD images, large sensor formats, built-in fog filter and both analogue and serial control, the two 32x zoom lenses fit in various housings and are versatile for long-range surveillance applications even in low light and bad weather. Scan for more or visit www.fujifilm.eu/fujinon

Fujinon. To see more is to know more.

FUJINON

# Category A:
## Safe Automation

GIT SECURITY AWARD 2017 FINALIST

**Bernstein: IN65**
Position Switch

The double insulated position switch IN65 is used for position monitoring of movable parts and safety doors on machinery and systems in order to protect people, machinery, manufactured product and environment. The design is modular. Housing, actuator and switching system can be combined individually whereby production times can be reduced. Thanks to the system module consisting of different contacts and actuators as well as its standard dimensions the IN65 can be used for position monitoring in virtually any industrial application.

**Bihl + Wiedemann: AS-i 3.0 Sercos Gateway**
Fieldbus System

With the help of CIP Safety over Sercos the device can safely control Bosch Rexroth drives directly, and without a need for the previously required safety PLC, making the programming of the machine safety very simple and fast. The PLC is still controlling the drives over standard data, but the Gateway takes over the safety part, selecting safe functions in the drive and shutting it down safely when necessary. The user profits from simplified handling and reduced hardware and installation costs by integration of drive, peripheral and safety bus as well as standard Ethernet in a single device.

**Eaton: IZMX PXR**
Circuit Breaker

The Power Xpert (PXR) platform enables engineers to test and configure circuit breakers from a PC via a USB port. It is integrated into the power management company's IZMX air circuit breakers. As a result, it is easier for users to interact with the trip unit and store test data, thereby improving control and maintenance regimes. High current circuit breakers – for example those used in high power distribution systems in industry – are configured and periodically tested by end users to ensure they continue to work reliably in the case of over-currents, and therefore prevent expensive downtime.

**Moog Pieper: Illuminator-Series**
HD-Network Cameras with White-light LEDs

The Illuminator-Series includes HD network cameras that are specially designed for monitoring industrial production processes in dark lighting conditions. This is due to the use of white-light LEDs that can be dimmed and are therefore suitable for use in any monitoring situation. The Illuminator-Series makes a reliable contribution to production facility security, thanks to its IP68-protected housing, its suitability for integration into platform-independent video management and/or analysis software with the help of Onvif, its 4 different optic settings, its ability to be inspected due to the Mil standard plug connection, and the way that its remote optics are supplied with power and data through just one cable.

**Müller Industrie-Elektronik: Safety Measuring Module SMM**
SIL3-Certified Measurement System

Combined with a safe evaluation unit (µC|PLC|PC) the Safety Measuring Module SMM is a redundant, SIL3-certified measurement system for secure load, force, pressure and differential pressure measurements with SIL3-compliant evaluation. There are many application areas in all sectors where safety-related sensor signals in bridge circuit are required, such as: Marine engineering and port logistics, crane and hoisting technology, stage technology, agricultural and construction machinery, lift tables and platforms, process steam control or turbine monitoring.

## Pepperl + Fuchs: KE4
Speed-module and Monitor

The KE4 speed module and monitor from Pepperl+Fuchs enable safe, simultaneous monitoring of speed and position. The compact solution offers numerous interfaces and protocols for universal use in a range of safety architectures, including AS-Interface. Two rotary encoders or linear measuring sensors can be connected to the speed module via TTL, SSI, or sin/cos interfaces. Two safe outputs and a variety of safety functions enable it to be used in safety-critical applications. With paired encoders or with one secure encoder per axis of rotation, the module satisfies the requirements of safety level PL e.

## SSP Safety System Products: Zeus
3-Position Enabling Switch

ZEUS is a 3-Position enabling switch which can be used for overriding safety functions. Zeus offers a customized safety solution as standard because it can be configured by the customer. It is designed with a huge range of optional elements, including an In-Hand-Sensor, Activity-Sensor, 7-Segment-Display with control terminal for choosing up to 120 different functions, E-Stop, different buttons and quick disconnect and LED Lamps.

## Sick: microScan3
Safety Laser Scanner

With microScan3 a new generation of safety laser scanners from Sick begins. The microScan3 reliably protects hazardous areas, accesses, and hazardous points. The innovative safeHDDM scan technology combines a compact design and a large scanning range in one device. The housing of the microScan3 is rugged; its reliability is outstanding against dust and ambient light. Its smart connectivity saves costs with cabling due to standardized interfaces. Using the Safety Designer software the microScan3 can be intuitively configured and comfortably put into operation. The microScan3 indicates its operational status clearly via the multicolored display.

## Pilz: PSENoptII
Light Grid for Type 3 Applications

The new light grids PSENopt II are the world's type 3 light grids. They enable applications from the category performance level d (PL d). The new light grid type thereby closes the "type gap" of the revised version of IEC 61496-1. With PSENopt II it is no longer necessary to switch to type 4 when PL d is required. The level that precisely matches the safety requirement can now be implemented with the new light grids. This saves costs in the end as overdimensioning is not necessary.

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# Category B:

## Fire And Explosion Protection, Industrial Safety

### Bosch: Aviotec IP Starlight 8000
Video-based Fire Detection

The video-based fire detection Aviotec IP starlight 8000 is a new solution for reliable and early fire detection in challenging environments and can supplement applications where state-of-the-art fire detection technologies may reach their limits. It enables early detection of smoke and flames in environments where common detectors cannot offer satisfactory reaction times, as in buildings with high ceilings, storage and production halls. Aviotec IP starlight 8000 can also secure environments where no other solution exist, for example saw mills or paper factories, hangars or extremely large monitoring areas.

### Elten: Wellmaxx
Extremly Resilient Midsoles

With the Wellmaxx series, the safety shoe manufacturer Elten puts a new revolutionary sole technology on the foot protection market. In the past, the cushioning concept was used only in the athletic shoe segment. From now on, the Wellmaxx models, in which the midsole is provided with a BASF-developed particle foam with extremely resilient properties, will set new standards for the springiness and cushioning of safety shoes. Wellmaxx was developed for indoor use and is especially balanced to meet the requirements of dry workplaces in which employees permanently perform tasks while standing, walking or kneeling. Such work, especially when performed on hard floors, causes tremendous stress on backs, feet, hips and knees.

### Hekatron: Aspirating Smoke Detector ASD
Fire Warning System with Ultra-sensitive Smoke Sensors

Hekatron ASD products are among the most precise and reliable fire warning systems on the modern fire detection market. Ultra-sensitive smoke sensors respond in an instant to alert as soon as possible. The system can be effectively adapted to specific site conditions and easily integrated into existing Integral IP fire detector systems thanks to asymmetrical piping. What is more, the VdS-approved ASD PipeFlow software is the perfect planning tool. The highlight: ASD detectors (532 and 535) can be configured and analyzed straight over the FACP. Remote access (Hekatron Remote) to the aspirating smoke detector programming software is also possible.

### Denios: Secu Ex
Drum Lifter for Hazardous Areas

The majority of his life a man spends at work. Farsighted environmental protection starts with the products that accompany him in his daily work. This applies particularly to the handling of hazardous materials. The drum lifter Secu EX was specifically designed for use in hazardous areas and supports the lawful handling of hazardous materials and protects the employee at work in sensitive environments. This includes various safety features, such as a separate elevating and lowering operation or the maneuverability. Three bogies, two heights and three barrel tools turn the Secu Ex into a premium tool for virtually any handling application and all common types of barrels.

### Flir Systems: Flir K2
Thermal Camera for Thick-smoke-applications

The Flir K2 is a rugged, reliable, and exceptionally economical (€ 1195 + VAT) thermal imaging camera specially designed for firefighting applications and severe conditions. Producing thermal images at 160 x 120 pixel resolution displayed on a bright 3" screen, the K2 helps firefighters find their way through thick smoke, assess situations with confidence, and expedite decisions. It uses Flir's patented MSX technology that etches key details from the built-in visible light camera onto the thermal image, helping firefighters identify structures and surroundings without compromising temperature data, so firefighters stay better oriented during response missions.

### Honeywell Industrial Safety: Connext
Wireless Gas-detection Safety-system

Developed to advance industrial safety and compliance, Honeywell's Connext Safety Solutions is the first real-time wireless plant-wide gas detection safety system. It comprises three different solutions: Pack, Plus and Pro. Connext Pack is a turn-key, out of the box family of application-focused solutions. Connext Plus is a configurable set of monitors coupled with software and wireless mesh radio-based portable infrastructure for real-time 24/7 monitoring. Connext Pro - enterprise solution enables plant-wide coverage assimilating data from personal, portable, area, and fixed monitors into a single, shareable interface.

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## Securitas: Fw-AiD MC 8 EX
Operation-fire Service Drone

The Fw-AiD MC 8 EX is qualified for the inspection and control of technical facilities in the industrial field. The multifunctional system is provided with a variety of modular components for the assessment of the situation and for real-time transmission. The Fw-AiD MC 8 EX is regardless of the weather, resistant to aggressive fumes and is provided with 8 coaxial rotors. The system is specified as modification in the range of measurement of gases and industrial pollutants. The Fw-AiD MC 8 EX records pictures of real operations and measurements and sends them in real-time via encrypted data transfer to the Securitas drone operator. During the live-broadcast pictures and measurements could be analyzed and documented.

## Phoenix Contact: Solarcheck RSD
PV-System

In 95 % of all PV systems, panels are serially connected in strings. This can cause life-threatening DC voltages up to 1,000 V. Safety regulations apply for protection against electrical shock when working with electrical equipment with a voltage higher than 120 V DC. Thus, the systems are to be disconnected from the power supply prior the start of work. This is a difficult matter in string systems: The disconnection at the inverter or via additional DC switches does interrupt the flow of power, but not the voltage. Occupational safety can only be guaranteed when each panel is disconnected automatically. Solarcheck RSD is a self-controlling system which automatically disconnects each PV module in case of error or when service is required.

## Siemens AG: 5SM6
AFD Unit

Siemens' AFD unit 5SM6 protects human lives and buildings reliably against fires caused by electricity. It's the first device of its kind that is established since 2012 and fulfills all relevant rules and standards worldwide, including IEC 60364-4-42. It reliably detects serial arcing faults at an early stage and closes the safety gap to protect human lives and buildings. Moreover, it is part of a complete protection concept by Siemens – one stop safety.

## Securiton: Config over Line
Special Fire Detector

The new Config over Line feature means special fire detectors can be addressed directly from the fire alarm control panel instead of on-site from a laptop, as used to be the case. This makes configuring and maintaining devices radically easier. Data exchange between the special fire detector and fire alarm control panel is achieved by means of tunneling technology, which uses the existing Securiline Extended addressable loop. As a consequence, no additional wiring is needed for the remote control facility. Virtual point-to-point connections within the addressable loop are shielded from the rest of the data traffic and link each detector individually and directly with the control panel. A free software update gets everything up and running.

## Systemsensor Europe: Faast XM
Aspiration Smoke Detection

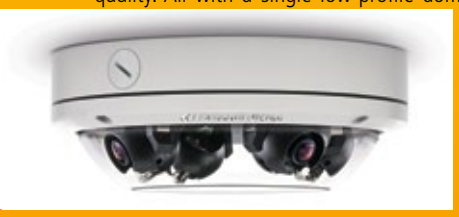
Faast XM uses unique dual source sensing technology (blue LED and IR laser) to distinguish smoke from nuisance particles and prevent false alarms in clean rooms and very dusty industrial environments. It has a sensitivity of 0.00095% obs/m. A patented particle separator based on aviation technology removes contaminants - providing up to 67% greater false alarm immunity than traditional aspirating detectors. A bidirectional ultrasonic sensor monitors the airflow and signals changes. The IP integrated communication package contains Ethernet-connectivity, email status updates and Modbus protocol. Faast XM self-adjusts to environmental conditions using acclimate mode for enhanced stability.

# Category C:

## CCTV, Videosecurity

### Arecont Vision: SurroundVideo Omni G2
Multi-Sensor-Camera

Reduce the number of cameras, slash installation and maintenance costs, and shrink VMS/NVR license fees while improving situational awareness and video quality. All with a single low-profile dome camera, the SurroundVideo Omni G2 12 or 20MP multi-sensor. Omni delivers superior coverage, constant recording, and better image quality than by using expensive PTZs and multiple fixed view cameras indoors or out. The 4 customer-settable remote focus sensors deliver full 180-270-360 or custom area coverage (even straight down) without the challenges of a fisheye lens. Omni provides non-stop megapixel video, digital zoom, and non-stop recording with WDR, True Day/Night, and advanced H264 compression. Choose from multiple lens options, 2.1–16mm.



### Avigilon: HD Pro camera series
Camera Series with Self-learning Video Analytics

The new HD Pro camera series with self-learning video analytics is available in 4K (8 MP) to 5K (16 MP) resolutions, which is one of the highest single-sensor megapixel camera with self-learning video analytics. The new series offers wide scene coverage, highly accurate object detection and the ability to zoom in for clear image detail. The image quality of the HD Pro camera series is made possible by Avigilon's H4 platform, which combines Avigilon's LightCatcherTM technology for unmatched low-light performance, H.264 compression and the latest edition of its patented High Definition Stream Management (HDSM) TM technology, HDSM 2.0.

### Axis Communications: Axis P3707-PE
Multisensor IP Camera

The Axis P3707-PE is a new multi-sensor network camera. The 8-megapixel Axis P3707-PE, with four varifocal camera heads, enables a 360° coverage or a combination of overview and zoomed-in views in four different directions. Axis P3707-PE comprises four camera heads that can be repositioned along a circular track to point in the desired viewing direction. Each camera head can be tilted and adjusted individually.

### Dahua Technology: DH-IPC-HFW81230E-Z
Ultra-HD 4K Network Camera

Dahua's Ultra-HD 4K Network Camera DH-IPC-HFW81230E-Z, is equipped with 12 megapixel resolution. Its high performance hardware supports Sony back-illuminated pixel technology, high sensitivity and low noise technology. Due to H.265 packing it saves up to 50% bandwidth and storage room. The smart 4K camera supports face detection, people counting, heat map besides the typical IVS. The 4K zoom lens has a 4-times optical zoom. Thereby the camera is able to perform auto-tracking due to its E-PTZ.

### Brickcom Corporation: GOB-300Np Star-LTE
Bullet-Network-Camera for Outdoors

Brickcom GOB-300Np Star-LTE is the professional bullet camera equipped with 4G module; which allows consumers to enjoy the full-HD quality images with high-speed transmission efficiency and also save the cost of wiring installation. GOB-300Np Star-LTE is equipped with Back-illuminated Pixel technology and 3D-DNR technology which displays a very clear image with ultra-smooth streaming quality. Besides, GOB-300Np Star-LTE incorporates with Brickcom software technology (P2P) that mobile devices can easily connect with camera to increase the surveillance system flexibility.

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**Flir Systems: FLIR FC-ID**
Thermal ID Cameras

The FC-Series ID cameras deliver very good thermal image detail with on-board edge-based video analytics in a single device. The cameras feature easy-to-create custom trip wires and regions of interest. They are also capable of automatically detecting and classifying human, vehicle and other intrusions, significantly reducing the number of false alarms. In addition, the FC-Series ID cameras are available with a wide selection of high-performance lenses, ranging from wide angle to narrow fields of view, with either VGA or QVGA resolution. Combined with a choice of 320 or 640 resolutions, the FC-Series ID cameras offer more fields of view and resolution options than any other commercial thermal security camera line.

**Hikvision Digital Technology:**
**DS-2DP1636Z-D PanoVu**
360° Panoramic-PTZ-Camera

Hikvision DS-2DP1636Z-D PanoVu camera provides 16MP 360 degree distortion-free ultra-high definition video, seamlessly integrating video from eight 1/1.9" Progressive Scan CMOS sensors in the one camera. This all-in-one design using only one Ethernet and power supply cables, further enables easy installation and simple configuration. Add to this the PanoVu's powerful Smart Tracking abilities, linking to its PTZ unit at the bottom and zooming into images at up to 36x optical, this means any detail in the panoramic scene won't be missed. It is able to capture highly detailed high resolution colour images in as little light as 0.002 Lux, meaning around the clock 360 degree monitoring is available – especially suitable for public open spaces in city centres.

**Fujifilm: FD32x12.5 und FH32x15.6**
32x Zoom Lenses

The 32x zoom lenses from Fujinon impress with full HD images across the entire zoom range with focal length ranges of f=12.5~400 mm (FD32x12.5) and f=15.6~500mm (FH32x15.6). Analogue control is supported as well as serial control via RS232C interface for operation by PC. In addition, the lenses support the widely used Pelco-D protocol and improved back focus adjustments for simple handling during set-up. Due to their compact size (20% smaller than before) they fit into a great variety of housings. Control panels on top of the lens body enable direct access - even after the installation into housing. Higher installation stability due to additional affixing holes downside comes along with built-in visible-light-cut filter.

**IPS Intelligent Video Analytics (Securiton):**
**IPS AnalyticsManager**
Web-based Video Analytics Platform

IPS AnalyticsManager is an open video analytics platform that integrates IPS Video Analytics into various video management systems. It combines a range of certified video analytics functions with simple integration and ease of use. Different integration methods are offered and all major video management system manufacturers are compatible. A zero-integration-interface, implementing IPS's integrated meta-data engine, enables 3rd party video management systems to display image overlays by simply retrieving a standard video stream from the IPS AnalyticsManager. Intelligent video analytics can be configured intuitively with just a few mouse clicks because the IPS AnalyticsManager uses state-of-the-art web tools for configuration and operation.

**Panasonic: MOR (Moving Object Removal)**
Masking Software

The need to protect people's privacy in order to protect the assets of the business becomes a big topic. Traditionally security cameras, which are used to monitor people, are not intended to protect privacy. The new software is able to mask customers and employees. This means that you can see the movement of masked objects via silhouettes and surveil specific areas at the same time. And when you want to remove the privacy restrictions due to the occurrence of some kind of trouble, the image can be viewed without the masking. The part to be monitored is captured while protecting the privacy of customers and employees.

**Sony: SNC-VM772R**
4K-IP-Security-Camera

The SNC-VM772R is a 4K IP security camera with a unique highly sensitive 1.0-type back-illuminated Exmor-R-CMOS image sensor, high-speed image processing engine and zoom lens, so that it captures detail-packed 4K/30 fps video footage with a minimum illumination of 0.06 lx. Picture settings are automatically selected to suit a wide range of operating environments, providing the best picture quality even at night. Thanks to various output modes, the SNC-VM772R can stream an overall low-resolution situational view, plus cropped original 4K resolution views of specific areas of interest in the scene, with multi tracking to chase moving subjects. The 20 megapixel sensor also enables high-quality still image recording at beyond 4K resolution.

**Tyco Security Products: exacqVision UNA NVR**
IP-Camera Series

The purpose of the exacq LC-Series Una is to make IP CCTV simple. Connect the IP cameras directly to the integrated PoE+ ports, fully featured VMS, up to 12TB storage and Client App are included with the 8/16 camera server; no external PoE switch is needed and the system is fully licensed out of the box. Plug and Play camera configuration with the Easy Connect feature. All client applications are free, local, remote, browser and App. The Una is also a security solution as there is direct integration to the Kantech EntraPass access control system and the DSC Neo Intrusion System, monitoring 3 security systems in a single client and linking video to access and/or intrusion events.

**Vivotek: SC8131**
Stereo Network Counting Camera

The SC8131 utilizes 3D depth technology and megapixel resolution to capture and analyze customer behavior, thereby providing accurate data to operations, marketing, and security users. These data points empower users to make critical decisions in their operations. By utilizing two lenses, the SC8131's 3D stereo depth technology produces very accurate analytic data. This makes it possible for users to accurately track data such as people counting, people height, and directional movement. With 98% counting accuracy, the SC8131 provides the real time analytical data with confidence to users in making important operational decisions.

# Category D:

## Access Control, Intruder Alarm, Perimeter Protection

**Abus Seccor: wAppLoxx**
Access Control System

Thanks to the new wAppLoxx system from Abus, management of access control, alarm, video surveillance and smart convenience functions can be managed with only one action: opening or locking the door - and this either locally or on the road via web and app. wAppLoxx provides the user comfort and safety in one: Whoever accesses wAppLoxx via Web or app, always uses an encrypted peer-to-peer connection for data transmission.

**Abus Security-Center: Secvest Wireless Alarm System**
Mechatronic Burglary Protection

The VdS Home certified Secvest wireless alarm system provides protection against burglary, fire, water and medical emergency. Technical basis are the renowned additional door and window locks from Abus. In addition, the alarm panel can also be activated and deactivated via app. This app also provides access to up to 6 IP cameras - either for video verification of events or "just checking" by live stream of the cameras. Secvest also offers e-mail notification and VoIP communication in the event of an alarm. Also SMS or calls via GSM module (optional) are possible. Thanks to network access and GSM module, the alarm system can transmit both analogue and digital protocols. Secvest offers a wide variety of detections for example fire, water, glass breakage, motion, perimeter monitoring, vibration, in case of an attack or medical emergencies.

**Dedrone: DroneTracker**
Civilian Drone Detection

DroneTracker is a unique system designed to detect civilian drones. It can be mounted to facades, windows and special carriers in order to identify approaching drones by means of visual and acoustic sensors, and frequency scanners. Signals, including noise, movement patterns, silhouette and frequencies are processed and evaluated with the help of intelligent software. The DroneTracker reliably picks up information within several hundred meters, and triggers an alarm to alert security staff. For large area or perimeter protection, multiple DroneTrackers can be networked. Video footage of drone intrusions provides crucial evidence of the threat.

**Deister Electronics: POC**
Making Long Range RFID Visible

The POC (= Proof of Communication) is a unique device that indicates the field strength of an UHF field at any position. POC behaves exactly like a transponder. UHF fields work with very little power – just enough to power up the simple electronics inside the transponder once the transponder is in the readers range. To measure the received energy and light up a LED on top only works with an additional battery. The electronics of the POC are designed in a way, that it measures the received energy from the UHF field and adds energy from the battery to light up the LED accordingly. What sounds easy is actually a brand new innovation, patent pending, that reduces the set up time by up to 80%.

## Dorma: Matrix Air
Very Flat Electronic Fitting

The Matrix Air is the first fitting of such small dimensions that looks like a normal mechanical fitting. This unusual design was a result of great engineering performance. The majority of the electronics is located in the handle instead of in the fitting itself as usual. Thereby, this very elegant design has won several design awards, among others the iF Gold Award. The Matrix Air fitting supports the modes offline, AoC and online operating in the parent access software, for example, Matrix (version 2.3). The commissioning of access rights will be done via notebook with USB-Wireless Stick.

## Evva: AirKey
Smartphone Key

AirKey, electronic locking system of Evva, offers flexible solutions for enterprises with distributed locations and complex hierarchies. With AirKey access authorisations can be sent via the internet around the world within seconds. All you need is a smartphone, internet access and an AirKey cylinder or AirKey wall reader. With the online administration you can flexibly manage access authorizations and define who has access to which facility at which time and during which validity period. The smartphone serves as an updater for the cylinders and as a coding station for ID media. The AirKey app, which is free of charge, as well as the unique KeyCredits (pay per use) add up to a user-friendly solution.

## Genetec: Synergis Cloud Link
Cloud Link App

Synergis Cloud Link is an intelligent PoE-enabled appliance engineered to provide flexibility to meet customer needs. It addresses user demand for non-proprietary access control solutions, providing native support of a mix of door modules and locks like HID Global, Mercury Security, Assa Abloy, Salto and Axis. Synergis Cloud Link is deployed over a network to enable real-time connectivity to doors and event reporting.

## Interflex: Interflex App
Access Management App

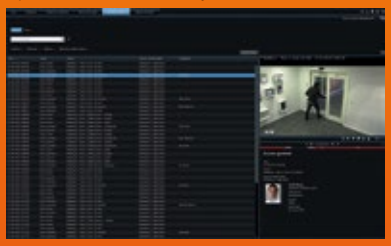
So far, the investment in an access control system was sometimes too expensive for small companies. Interflex has developed an app that allows electronic access control even for a small number of people or individual departments. Already existing RFID credentials from Legic or Mifare can be used in conjunction with this app. Permissions can automatically be transferred to doors with electronic locking systems or employee credentials via NFC and an Android smartphone. With the combination of app and hardware, up to 25 doors and 250 users can be managed cost-effectively, without the necessity of having to install a complex access control system.

## Kaba: Kaba EACM
Time and Access Management in SAP Systems

Kaba's EACM solution for SAP users is integrated directly into the SAP ERP application. As well as efficient access organisation, it also provides time registration that is integrated into the SAP system. The module 'Kaba EACM Access' enables customers to control access to buildings, areas and rooms directly from the SAP ERP application and combines the company, personnel, authorisation and access management within the SAP HCM OM module. The new module, 'Kaba EACM Time', creates a completely automated T&A process from the registration of working time through to accounting. Employees' attendance and absence times are registered quickly and easily at the Kaba multifunction terminals.

## Milestone Systems: XProtect Access Control Module
Module for Access Control Systems

Milestone XProtect Access is an XProtect Add-on product that enables physical security through integration of access control and intrusion systems for video. It provides operators unified access to all primary and most common functions in the integrated access control system as an integral part of XProtect Smart Client. The video enabled control of the access control system empowers operators to effectively monitor access events, manually assist passages and conduct investigations on specific access points or cardholders, while enriching the value of reports and evidence material.



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**Nedap: AEOS**
Encryption for End-to-End Security

Nedap developed AEOS end-to-end security in which principles of encryption and strong authentication for IT security are applied to achieve secure communication between and storage in all elements of the access control system. The solution combines storage of DESFire keys and digital certificates in a Secure Access Module inside its door controllers. By storing DESFire keys in the SAM, card readers fulfil no role in decryption of data and secure communication between card and controller is guaranteed. By storing digital certificates in the same SAM strong authentication is achieved ensuring secure communication between controller and server. This way, the solution offers high levels of protection against physical and digital threats.

**Salto Systems: XS4 2.0**
IP Based Door Controller

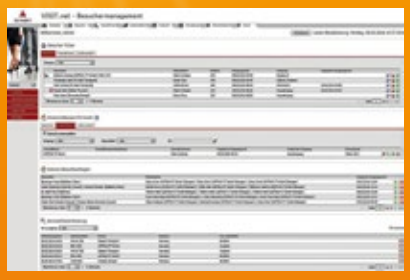
The features of the IP based XS4 2.0 Door controller include 4 relay outputs, 6 inputs and 2 tampers, an anti-passback mode made available by connecting 2 wall readers set up as one door, door monitoring and tamper monitoring via contacts input (intrusion alarm and door left opened alarm), and two wall reader connections. All data transfer between the controller and the wall reader, plus the controller and the server, is encrypted. There is also an auxiliary controller version that does not require an IP address. This model can be set up as auxiliary controller connected to an XS4 online controller, or can work as offline controller thereby reducing installation cost while leveraging all the advantages of the Salto Virtual Network (SVN).

# Category E:
## Safety And Security Management

**Dahua Technology: DSS7016D**
Integriertes Physical-Security-Management-System

Dahua DSS7016D is an embedded physical security management center which integrates management software, storage and hardware all together. It adopts the self-development hardware platform and supports 16 hard disk drives. At the same time, it is able to extent its ISCSI storage capacity up to 300TB. It supports more than 2000 channels, unlimited account management and 8000 online users. With 700M transfer capability and 700M local storage capability it is able to distribute 20 servers and 5-level cascade as well as processing 1000-channel alarms per second. It also fully enhances the system performance and has user-friendly GUI.

**Astrum IT: Visit.net**
Truck and Visitor Management



The webbased visitor and truck management system Visit.net manages visitors and vehicles across locations on the premises, taking into account all relevant data. Through combination possibilities with process-supporting hardware and software items, the system can be tailored to the individual processes and enterprise security requirements. The system is modular, so to the basic module various other modules can be added. Such as License Plate Recognition, safety instruction, sanctions list check, parking management or self-registration. The system is able to support multiple clients. So, larger locations can be systematically divided into clients or client groups.

**Digivod: Digivod Video Management Software**
Video Management Software with GPS

Digivod video based PSIM (Physical Security Information Management) wants to offer more than just video surveillance. Video cameras are sensors amongst others (fences, doors, alarm systems and many more) that are put into context of space (GIS map) and time. Incidents can be placed on the GIS map and viewed on all cameras in the affected radius. Mobile patrols are tracked by GPS and receive and exchange incident information with the control room. Digivod PSIM is offered with the same intuitive user interface known from Digivod video management software.

**Dr. Hahn: Hahn Türband 4 Inductio**
Energy and Signal Conductor

The Hahn Türband 4 Inductio is an energy and signal conducting element for electronically secured steel and aluminum frame doors, distinguished by the roll look, a three-piece screw-on hinge. A new path for bidirectional transmission of signals, which is certified in accordance with VdS Class C and is intended for connecting a central alarm system with consumers at the door without a cable bridge. The Hahn Türband 4 Inductio makes it easier for door manufacturers and installers of safety installations to route cables along doors and connect access control systems and alarm systems.

## Geutebruck: G-SIM
Security Management System

Geutebruck's G-SIM wants to provide perfect overview – with a very fast image processing. As a boost in "old" systems or for new investments, it provides third-party integration, custom interfaces and cross-system audits. G-SIMs adaptability to external systems is extremely high. Whether images, dynamic maps, status details or process data: The representation can be individually optimized, the operation is intuitive. Processes can be displayed in linked scenes, live or stored. In case of an alarm, predefined scenes are activated and customer specific workflows are started. Smooth live videos facilitate all kind of analysis. Reports are individually configurable and comprehensive – from security to process control.

## Honeywell Building Solutions: Honeywell Command and Control Suite
Integrated Building Automation and Security

Honeywell Command and Control Suite is designed to enhance enterprise integration by harmonizing complex systems and processes. It features map-based visualization and navigation, along with integrated workflows and system-wide integration from a single, intuitive touchscreen interface. Using progressive disclosure, users can access an enterprise-wide view and also easily zoom into specific areas to quickly understand and react to issues and opportunities as they arise. The Incident Workflow is a supplement to the Command Wall and guides users through step by step scripted responses to security incidents and other emergencies, helping further reduce risk and improving accuracy in mitigating issues.

## Milestone Systems: Husky M50 Advanced
Smart Network Video Recorder

Milestone Husky 50A is a smart NVR selected, fine-tuned, and validated by Milestone, which includes pre-loaded XProtect advanced software and device licenses. The advantage is that the Milestone partners can use this as a building block for rapid deployment in integrated video solutions. The device is designed for large scale, high security deployments with centralized management and for use across multiple sites. The appliance is versatile and scalable supporting up to 120 cameras on one unit, and allowing for flexible recording options, thus maximizing recording time and storage optimization. Milestone Husky 50A has a guaranteed performance and reliability from Milestone, 3-year hardware warranty is included.

## Prysm Software: AppVideo
Universal Video Management

AppVideo is calling its solution a Universal Video Management (UVM). It integrates cameras, DVRs, NVRs, VMS and VCA of different manufacturers in a single GUI. The GUI might be designed absolutely free. It provides user-, rights- or event-specific video display. The video display is embedded to map and 2D- or even 3D- objects. The map-magnifier allows synchronized display of detail and overview for maximum situational awareness.

## Tyco Retail Solution: Sensormatic Synergy
Theft Detectors

Tyco Retail Solutions Synergy Series is a next generation portfolio of intelligent and modular acousto-magnetic (AM)/RFID detection system. With Synergy's network-ready, interconnected devices, retailers can take their loss prevention program to the next level. It helps maximize retailers' electronic article surveillance (EAS) investments by providing a clear migration path to RFID technology and by gathering shopper, inventory and EAS intelligence to drive better store performance. Synergy seamlessly integrates different technologies including AM, RFID, Video and Traffic, which feed critical data to Tyco's TrueVUE reporting platform. Its data intelligence capabilities offer a building block to future Internet of Things applications.

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SAFETY SYSTEMS

# History Preserved and Protected

## Kentec and Hochiki Protect Iconic South Coast Lido

Built between 1937 and 1938 to designs by leading architect Richard Jones, Saltdean Lido was hailed as one of the most striking examples of Art Deco design. With its tea terrace, sun deck and café perched on the flat roof and distinctive curved wings at either end, it became the only lido to be featured in the Design Museum in London. An imaginative £5 million renovation scheme that's breathing new life into the iconic Grade II listed landmark at Saltdean, Brighton, has Kentec fire control panels at the heart of a new safety system.

In 2010 plans were announced to partially demolish the complex and to build flats there instead. Following a three-and-a-half year fight by a local community group, Brighton and Hove Council approved proposals to grant them a 60-year lease to restore and operate the pool. When completed, the newly restored site, with the bulk of its £5 million plus cost coming from the Heritage Lottery Fund, will include a heated swimming pool, a children's pool, a gym, a café/restaurant, meeting room space for community groups and businesses and a library.

### Looped

Local specialists AM Fire and Security were commissioned by Brighton and Hove Council's Leisure Department to design and install a suitable fire system to cover all escape routes at the Lido. The fire safety system solution is designed around a single-loop Kentec Syncro AS analog addressable fire control panel. The panel is connected with various Hochiki photoelectric smoke/heat detection devices and uses an ESP open communications protocol. A Kentec Syncro View repeater panel, installed at a second entrance, gives the building's occupants access to the fire safety system. The system is future-proofed as the control panels are easy to expand and network, to become part of a much larger system.

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SIEMENS

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# Do you care about false alarms?

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Sprinklers are the number one tool for fire protection when properly installed, consistently maintained and draws from an adequate water supply

EXTINGUISHING SYSTEMS

# Here Comes the Rain Again

## New Fire Protection Guidelines for Sprinkler Systems

### Sprinklers Protect Warehouses

Fire is the leading cause of commercial property damage. To protect its client companies, FM Global, one of the world's largest commercial and industrial property insurers, has a team of scientists, engineers and technicians that continuously develops fire prevention systems in its "Research Campus." Over the past three years the team worked on a new in-rack sprinkler design option for warehouses.

Companies that have developed a good fire prevention system have the opportunity to increase their market share, while those leaving themselves exposed to the danger of fire will often close for long periods of time – or will never re-open after a major fire outbreak. But the risk of possible insolvency from fire can be reduced because it has been proven that devastating fire loss is preventable with the proper fire protection in place. As any firefighter can tell, sprinklers are the number one tool for fire protection when properly installed, consistently maintained and draws from an adequate water supply. The factors are important: If any of these elements are missing, the sprinklers have a strong chance of not functioning properly.

### Misunderstandings About Sprinklers

Protecting companies from fire does not seem complicated but there are still owners who don't want to install sprinklers. Why? Because of some misunderstandings. Everyone can recall a movie scene in which all the sprinklers in a building operate at once, soaking everything and everyone inside. If this was reality, the financial damage for the owner would be huge. In fact, about half of all fires are controlled by three sprinklers or less. Another myth is the cost. Typically, a savings of about 40 percent is achieved when sprinklers are incorporated into a new building's design and installed during its construction, as opposed to being retrofitted in an existing facility. At this early point, a sprinkler system can be installed for as low as one to two percent of a new building's cost.

To become more resilient to fire risks, a team of scientists, engineers and technicians continuously develops fire prevention systems in the FM Global "Research Campus" in West Glocester, Rhode Island (USA). The campus is the center for property loss prevention, scientific research and product testing. The research results always help clients reduce property risk and help establish new industry methods and standards. This 6.5 square kilometer complex has the world's largest fire hall: The Fire Technology Laboratory (10,000 m²) can replicate warehouse fires up to 18 m high. Responding to the growing tendency of businesses using ever larger warehouses, the ceiling in the facility can be moved to emulate these growing spaces. The lab's scale enables the researchers to understand what causes structural failure, how fast fire spreads and what sprinkler protection is needed.

### Alternative Solution Reduces Costs

While the Fire Technology Laboratory is the centerpiece of the Research Campus, a company's warehouse is its treasure house. Here, for example, are stored: raw materials, goods ready for dispatch and spare parts for production machines. A fire in this building without a sprinkler system can mean a huge financial damage for the company concerned. For better protection the researchers worked on a new in-rack sprinkler design option for warehouses. The development follows nearly three years of comprehensive research by

To become more resilient to fire risks a team of scientists, engineers and technicians continuously develops fire prevention systems in the FM Global "Research Campus"

FM Global consisting of extensive and advanced open-source computer fire modeling, water flow tests and large-scale fire tests.

The alterve solution enables facility owners to use fewer sprinklers. This has the advantage that the racks in the high-rack warehouses can be used more efficiently. Furthermore, the new in-rack sprinkler design option for warehouses can minimize the clients' cost. For example, in a 500,000-square foot (46,450-square meter) warehouse with an 80-foot (24-meter) ceiling height, the cost of installing sprinklers, pumps and water tanks could fall from approximately US$4.3 million to as little as US$2.6 million. In addition to cost savings, the alternative design also is more environmentally friendly. It would allow companies to protect their highest-hazard commodities, such as expanded plastic, using less than half the water volume previously needed. Furthermore, in the event of a fire, warehouse owners would likely sustain less water and smoke damage, because the fire would be controlled or suppressed more quickly.

As mentioned before: Fire is the leading cause of commercial property damage but there are effective fire protection systems that are being constantly improved. The results: Entrepreneurs need fewer sprinklers while the costs, required water volume, smoke and water damage are reduced. There is no reason for not using a fire prevention system for protecting the company.

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Innovations made by JOB
#7: E-Bulb

DEVICE NOW COMES WITH FIRE BRIGADE SERVICE.

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The 57km (35 mile) ‚Gotthard Base Tunnel' is actually two tunnels with ventilation shafts and linking cross-tunnels

FIRE PROTECTION

# Switzerland Rocks

## Fire safety for the Gotthard Base Tunnel

The Gotthard Base Tunnel (GBT) is the centerpiece of the new transalpine railway link in and through Switzerland. This tunnel of superlatives is not only the world's longest railway tunnel, it is also a prestige project that showcases Swiss engineering at its best. The extraordinary circumstances of this project required ingenious technical modifications and adjustments.

It was the right kind of challenge for Marco Pradera, project lead at Siemens. The tunnel expert shares his experiences from working underground at Switzerland's most fascinating construction site. He loves the vast expanses of Finland as much as he does the Swiss Alps and it doesn't matter to him whether he covers the long distances and the many hundreds of meters in altitude in his marathon-tested running shoes, on cross-country skis or on a mountain bike. That is one side of Pradera. The other side is an electrical engineer for the Siemens Building Technologies Division where he works on fire safety in tunnels. Not just in any tunnel but the showpiece of state-of-the-art tunnel engineering: the Gotthard Base Tunnel, the longest and deepest railway tunnel in the world. Scheduled to open in late 2016, it is at the heart of Switzerland's NRLA (New Railway Link through the Alps) project. The tunnel runs for an impressive 57 kilometers (35 miles) from the north portal in Erstfeld in Canton Uri south to Bodio in Canton Tessin. Over 28 million tons of rock have been removed since the first blast 17 years ago to create the two single-track main tubes and the safety, ventilation and cross tunnels – a truly remarkable feat of Swiss engineering.

### "The Coolest Construction Site in Switzerland"

The numbers alone illustrate the huge difference to the existing Gotthard Tunnel. Riding a train today bound for the southern Alps, you notice very clearly how the trains makes a tortuous climb on a winding track and through helical tunnels to cross the Alps at an elevation of 900 meters above sea level. There are "only 1,100 meters of mountain above you – a relatively modest weight compared to the new GBT". Its maximum elevation is 550 meters above sea level; it makes only minor climbs and it does not have any tight curves. However, it leaves 2,300 meters of rock above your head. This takes some getting used to. But it is worth it because the trip from Zurich to Lugano will take only two hours (45 minutes less than before), and Milan will be just three hours away. These figures have been received with a great deal of enthusiasm – not only by the Swiss public, which loves rail travel, but also by the technicians and engineers who got to work on what Marco Pradera, overall project lead for fire safety solutions in the tunnel, calls "the coolest construction site in Switzerland".

### Safely Barreling through the Tunnel at 250 km/h

Pradera's first contact with the Gotthard Base Tunnel project was via telephone. "At first I thought they were calling me because of the Gotthard Road Tunnel", he remembers. He had been a project lead there as well, in charge of fire monitoring in the tunnel, the ventilation stations, the two road maintenance depots and the buildings for the police and fire department. It was obvious that Pradera had done a great job on that earlier project because he was picked to work on the GBT. This has not been an easy project – not only because of the technical challenges but also because many different companies are working simultaneously on a variety of sub-projects. Unexpected surprises popped up as early as during the detailed calculation phase, not to mention the actual implementation on site. Pradera does not seem to be fazed: "I like projects like that. You need to work with the customer to find the best solution and it always works out in the end. Run-of-the-mill projects aren't really my thing".

It goes without saying that safety is paramount in a tunnel where in the near future more than

Marco Pradera specializes in tunnel fire safety for Siemens Building Technologies division

200 trains a day will barrel through the tubes at speeds up to 250 km/h. The tubes are connected every 300 meters by crosscuts that allow train passengers to escape to the other tube in case of a fire. "The biggest danger isn't fire, it's suffocation", explains Pradera. Each tube has two emergency-stop stations 600 meters in length which allows the evacuation of up to 1,000 passengers. To prevent disasters from ever happening, the tunnel is equipped with a myriad of sensors, monitoring devices and controllers which are connected to the control centers at the north and south portal via thousands of kilometers of optical fiber cables.

## Fire Detectors in Cages

Fire detection in the four emergency-stop stations is handled by three different detection systems, which control the air dampers directly if an evacuation becomes necessary. The controllers check and record the monitoring data every few milliseconds to ensure the history can be traced and the trigger parameters optimized. The installation of the Fibrolaser fire detection technology from Siemens required special modifications. Typically, Fibrolaser cables are mounted at a distance of 5cm from the wall because this ensures optimum transmission of temperature readings. For technical reasons, however, they were mounted directly against the concrete wall in the GBT. In addition, Fibrolaser sensors on the floor watch for initial signs of danger. "A stuck wheel on the train, for example, or leaking fluid can catch fire", adds Pradera. Armored cables were used for the floor installations to ensure protection against water spray and mechanical stress. For ceiling installations, cables without metal were used to avoid interference from the 15 kV overhead lines.

In addition to Fibrolaser, the Gotthard Base Tunnel is equipped with thermal imaging cameras and smoke detectors which continuously measure the temperature and check the air for smoke particles. They were enclosed in cages to protect them against the harsh environmental conditions in the tunnel – another custom design for the GBT. Everything is built for trains which can achieve speeds up to 270 km/h, with a little extra room to spare.

## No Access without a Stress EKG

Working in the tunnel is anything but child's play. Each person has to pass a heat test and stress EKG required by the Swiss Accident Insurance Agency (SUVA), followed by safety training: People without training are not permitted access and only those who pass the test are allowed on site. They are required to wear reflective safety clothing, a helmet, heavy-duty mountain boots and a heavy backpack that weighs 15 kg at all times. The backpack contains life-saving gear – a face mask, balloon and oxygen cylinder – which ensures 50 minutes of survival in a smoke-filled environment. This kit alone weighs three kilos and costs over 1000 Swiss francs, but nothing is too expensive when it comes to saving lives. Other items in the backpack include a radio, notebook PC, lamp, ear and wind protection, a folder with writing materials as well as enough food and drink for an entire day at 40 °C, because the nearest supply station is too far away. A train takes the technicians into the mountain in the morning; in the evening, they return on another train.

Even though Pradera and his colleagues were well prepared, it doesn't come as a surprise that a few unexpected things happened. "We have a lot of experience with road tunnels in our division, although not quite as much with railway tunnels. In a road tunnel, you simply put everything you need in the car, and if you forget something you jump in the car and get it. In a railway tunnel, you have to carry everything yourself and are dependent on the departure times of the train", explains Pradera. "We hit our heads on the overhead lines more than once when working on the cameras, but that's what helmets are for".

## In the Home Stretch

The overhead lines have been connected since October 2015. During the day, an elaborate test phase was being carried out in two shifts that continued until February 2016. Time slots for service tasks, for example cleaning the cameras or optimizing the parameters, have to be requested 28 days ahead of time, and the actual work has to be performed during the night. "That's why long-term planning is so important. Fortunately, I now have remote access, which allows me to take care of a lot of things. Still, I'm glad that testing has now shifted to the nighttime hours and we're able to work during the day again", says Pradera.

He is very proud to be a part of this project, he adds, even though he was always happy to "get away from the noise and dust in the evening". Access is difficult, the air is bad and working below ground is extremely strenuous. Swimming in Lake Urner and having a cold beer from Stiär Biär, the local brewery, helps Pradera cool off in the summer. When regular rail service begins in December 2016 after thousands of test runs, the Siemens Gotthard Base Tunnel expert will finally be able to take it a bit easier. Asked whether he plans on ever taking a train through the tunnel, Pradera says: "Never say never. But if I have a choice, I prefer to go over the mountain instead of through it. Not for safety reasons, but simply because you see a lot more".

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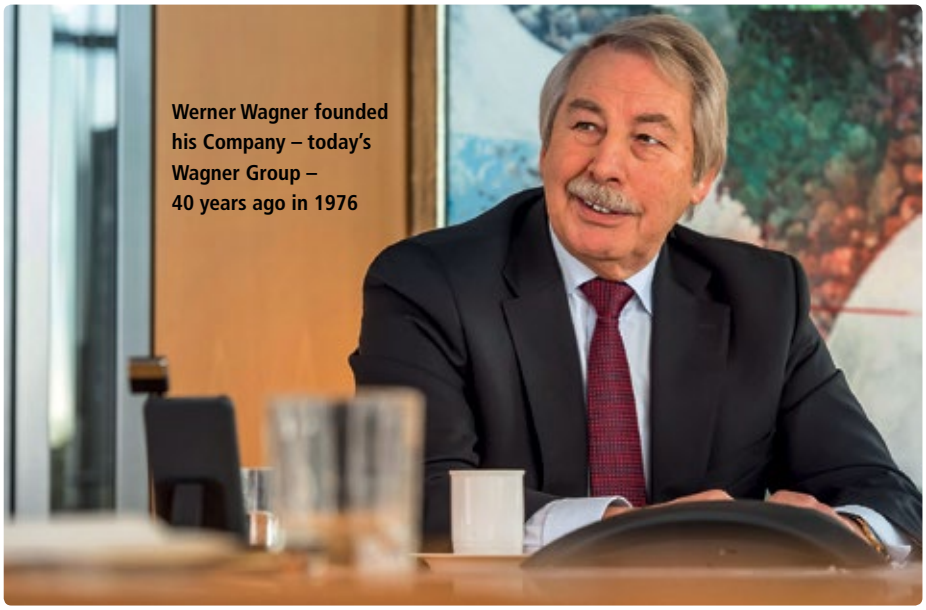
FIRE PROTECTION

# All Fired up

## The Wagner Group celebrates 40 years of innovative fire protection solutions

Their systems protect data centers and enormous logistics halls, museums and trains. In May, the fire protection technology provider Wagner Group will be celebrating its 40-year existence together with its employees. A success story which began in a basement near Hanover and is now being continued all over the world.



Werner Wagner founded his Company – today's Wagner Group – 40 years ago in 1976

When company head Werner Wagner, a communications engineer, founded the company in 1976, his initial focus was on intruder detection technology. Today the name Wagner has become inseparably associated with innovative fire protection solutions. Based in Langenhagen (close to Hanover airport), the Wagner Group holds over 700 patents. Its fire protection systems can be found in museums and libraries, high-bay and deep-freeze warehouses and hazardous material storage facilities as well as in hospitals, vaults and wind turbines. And the company continues to expand.

### Growing Faster than the Market

"Our strength is our expertise at solving problems," says Werner Wagner, who was recently named family entrepreneur of the year. "We don't provide products, we provide solutions. We have comprehensive fire prevention concepts for our customers." This corporate philosophy has a positive influence on the company: "In business year 2015/2016, we increased our sales by roughly 10 percent, reaching Euro 85 million," says Werner Wagner. „This is much faster than the market. And we could certainly grow much more quickly, but we don't want to." The company already makes 30 percent of its turnover outside Germany: in Europe and Asia and, since 2015, in the USA and Canada as well where Wagner is tapping into a gigantic new market.

### Cutting-edge Technology

The company's success is primarily based on two cutting-edge technologies: very early smoke detection with Titanus air sampling smoke detectors, which detect fires at a very early stage and are highly resistant to false alarms, and the OxyReduct system for active fire prevention. This oxygen reduction system is a pioneer in preventative fire protection. It reduces the oxygen content in areas holding large numbers of valuables in a densely packed space (such as warehouses, archives and data centers) so that a fire cannot develop or spread. A third focus is FirExting gas extinguishing technology. It uses special inert gases such as nitrogen to ensure effective, residue-free extinguishing. Technical systems remain functional and important works of art, films or documents remain undamaged.

One of the latest inventions from the company's headquarters in Germany is the innovative Titanus Multi Sens sampling smoke detector which has a unique capability: it recognizes what is burning. It has a patented analysis process with which it can learn and automatically evaluate specific types of fire as well as types of false alarms (cigarette smoke, theater fog, etc.). This is something customers have been looking for to protect their production facilities, theaters or rail vehicles.

"Nowadays, fire protection isn't just about protecting people. It's essential to protect the processes as well, since interruptions in operations are expensive and can even put companies out of business. We offer innovative fire protection concepts which increase customers' process reliability and protect data, goods, assets and operating procedures – including personal safety and the environment, of course," is how Torsten Wagner summarizes the concept. The 49-year-old is a communications engineer like his father and is in charge of the technology and logistics departments as second managing director.

### 500 employees around the world

The employees also benefit from Wagner's success story and the continuity of the family-owned company. Decision-making paths are short, so everyone is welcome to take part in shaping the company every day. As a result, the staff is continuously growing: The 500th employee is expected within the next few weeks – a further milestone on the 40-year path.

The Wagner Group develops its products in-house, employing hardware and software engineers, process technicians and physicists as well as application engineers from the fields of electrical and mechanical engineering to do so. In order to ensure that enough specialists find their way to the company, Wagner works closely with universities and provides internships, Master's thesis work and scholarships. "We train electronics engineers for IT and telecommunications technology at our sites in Berlin and Munich," says Torsten Wagner. "In order to be successful, we need dedicated employees who are prepared for life-long learning. This is the only way we will be able to keep offering our customers impressive fire protection concepts in the future."

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## New VMS Release Includes Free Training

Mobotix has released an enhanced version of its intuitive Video Management Software platform, the Mx Management Center for Windows and Mac. The latest version has been optimized to provide a full range of functions required for efficient and professional video surveillance management. The latest MxMC has no system limits and can handle hundreds of cameras and users, live images and recordings up to many terabytes per camera; the number of recording servers is also unlimited. The professional VMS and powerful video analysis are included in the software package and are free of charge without any license fees. The package even includes a complete user rights management suite. The power playback technology provides direct file-server access with 60x high-speed rewind and fast forward search capability of the recordings. The product supports optimized remote access of live images and playback of recordings over limited bandwidth connections, and is still able to retrieve related image details in full resolution. In order to become familiar with the new features of MxMC, Mobotix is offering a number of free-of-charge training sessions worldwide. **www.mobotix.com**

## Enhanced Analytics and Global Surveillance

Bosch Security Systems has just released Version 6.5 of their video management system, providing facial and license-plate recognition. The ‚Live and Playback Site' functionality enables users to connect video streams from up to 10,000 sites around the world into a single user interface. The product complements camera-based video analytics with server-based analytics from Ganetec's Bintelan Analytics Platform, adding powerful intelligence for applications requiring database matching and industry-specific functionalities such as transportation analytics, the detection of dangerous goods, speed control or traffic jam detection. **boschsecurity.com**

## Video Appliance to Record up to 100 HD Channels

The Smavia IPS 10000 is based on high-performance server hardware with a multi-core CPU and allows the recording of up to 100 HD video channels in real-time. The integrated RAID 6 storage system already provides a high storage capacity, but can be expanded by an external JBOD system, such as the Smavia Enterprise JBOD, by a further 60TB. This makes it highly suitable for large video installations such as in stadiums, shopping malls, casinos or convention centers. The pre-installed Smavia recording server is designed as an open platform, so besides Dallmeier cameras and together with the appropriate licenses, 3rd-party IP cameras can also be recorded with motion detection and configured using the ONVIF protocol. The appliance is factory-fitted with a Semsy Flat license and therefore equipped for integration into the storage system of a Semsy III video management system. Mobile access to the video images is also possible via the company's Mobile Video Center (DMVC) smartphone app, available both for iOS and Android operating systems. **www.dallmeier.com**

## Access Control Range at IFSEC

Paxton, a European manufacturer of IP access control systems and door control units, will be showing their product palette at this year's IFSEC in London. The company's strategy of innovation and product diversity will be demonstrated with their Net2 access control and net10 intelligent building systems. The international team of experts on hand will provide visitors with advice on the whole range of individual and networked products, a discussion held perhaps in their inviting café on the stand. Adam Stroud, Paxton CEO, will take part in a number of panel debates in the Smart Theater on 21/22 June, covering subjects such as the future of intelligent building technology, solutions for the IoT, the markets for Smart Home technology and the future of access control. **www.paxton.co.uk**

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ACCESS CONTROL

# Five To One

## Video Surveillance and Access Control Secure Boucheries Nivernaises

The Boucheries Nivernaises is a chain of butchers located across Paris. Founded in the 1950s by Jean Bissonnet, the group now has five sites, including the prestigious shop on the Faubourg Saint-Honoré. The company deliver across France and even supply meat to the French President, François Hollande.

### Requirements

The growth and expansion of Nivernaises has meant an increased need for security at all of the butcher's premises. The main security concerns they faced were theft and damage to equipment, but more importantly they wanted to protect their employees and guarantee a comfortable and safe working environment.

Bernard Bissonnet, Managing Director of the group says: "We have grown significantly, have many more qualified staff and rigorous procedures, but must continue to provide quality products, delivered on time. This is what our customers expect and what our reputation is based on."

The possibility of a breach in security led Nivernaises to contact EFDI Installers, a subsidiary of the Quallience group. Having reviewed the requirements and specification, EFDI, in collaboration with ADI global distribution, suggested an integrated security system.

### Solution

The integrated solution included Paxton's Net2 access control, Axis 360° fisheye cameras and CRYSTAL a centralised Video Management System (VMS) from Nuuo Inc.

Net2 is a user-friendly, flexible networked access control system, designed to make the management of any site straightforward. Easy to use and feature rich, it moves beyond the basics of controlling the flow of people in a building, offering benefits such as building control and system integration.

**Maintaining high quality and customer satisfaction is also dependent upon a safe and secure working environment**

Net2 plus is Paxton's most advanced door control unit, employing the use of PoE technology to plug straight into an existing network with no need for additional wiring making installation quick.

The use of Crystal, (an open, distributed, centralised VMS from Nuuo Inc) ensured central management of the system on a single platform. Crystal collects the video, metadata and alarm activity whilst ensuring instant reaction and playback in order to interpret and act quickly.

The Nuuo-Paxton integration allows the video management system to receive the user's credentials every time they present their Net2 access token. This information is then displayed as an overlay on the video captured from the 360° fisheye cameras, and stored in the database. This enables the Nivernaises security manager to retrieve any video simply by entering a date or a user number into the system.

### Result

Installing Net2 has meant that Nivernaises can centralise the administration and control all of their five sites from one central PC. With some of the butchers located in the busy city centre, the integration of Net2 with a VMS has meant that those overseeing security within the business can now monitor the street in case of any disturbances or potential threats to security, particularly when the store is closed.

Antoine Guy, Regional Sales Manager of NUUO says: "Security is often over-looked or seen as an additional cost to a company. It is worth remembering the positive impact it has to the sustainability, quality and growth of a company. It is an investment with a very clear return."

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## Cameras and DVRs Deliver 1080p Full HD Over Coax

The cameras and DVRs in the Wise Net HD+ range introduced by Hanwha Techwin Europe are designed to appeal to end-users who want to capture and record Full HD 1080p images but are not yet ready to migrate from analog to an IP network based video surveillance solution. Incorporating AHD technology that can deliver superb quality HD images over existing coax cabling, the seven camera models and three DVRs in the range can support the transmission of HD images (and audio) without any latency or image loss, at distances up to 500m over standard coax. The DVRs can also support existing analog cameras and extend the life of legacy systems. **www.samsung-security.eu**

## With a Flick of the Wrist

Embedding Assa Abloy's Seos technology in NXP Smart MX Secure Elements will enable wearable devices to be used to open electronic locks at commercial buildings, hotels and workplaces. A strategic collaboration between the two companies enables wearables manufacturers to use Seos-ready NXP chips to provide users with convenient functionality such as building and parking access, PC login, authentication to IT systems and cloud applications, secure print job collection, time and attendance recording or point of sale and automated cashless vending system authority. The partnership creates a turnkey solution enabling wearables to provide access to enterprise, buildings and homes with a simple ‚tap'. **www.assaabloy.com**

## New Console at IFSEC

Control room furniture manufacturer Winsted Europe and Middle East will be returning to IFSEC on stand D1565 and launching their new console, the Impulse. It features two surfaces that adjust in height independently of each other. Aesthetically designed in a contouring curve, the console's two work surfaces can be adjusted from 30" to 46" at the touch of a button. Both work surfaces have two electric-lift legs and can support 235kgs, allowing users to switch between sitting and standing to meet their DDA (Disability Discrimination Act) and DSE (Display Screen Equipment) obligations. Consoles can be used as stand-alone workstations, or combined to create a custom configuration. **winsted.co.uk**

## Mobile Network Camera for Transport

Panasonic has launched two rugged mobile network cameras for vehicles that are able to withstand harsh outdoor environments (including high pressure washers), severe shock and vibration, and designed for monitoring journeys on trains, buses and haulage. Each is IP6K9K and IP66 rated to ensure maximum durability. The Full HD WV-SBV131M and HD WV-SBV111M cameras produce high quality pictures even in low light conditions by using the High Light Compensation (HLC) and Adaptive Black Stretch (ABS) functions to correct dark areas and suppress the saturation of bright lights, such as car headlights. It means the cameras can maintain color mode for longer and achieve crisp, clear, in-focus images under all light conditions. **www.panasonic.co.uk**

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ALLEGION

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Simons Voss technologies

ACCESS CONTROL

# Secure and Open

## STid's Approach to Protect People, Goods and Data by Securing Identity and Access

RFID in security has become more than just the technical term that refers to all the latest contactless radiofrequency identification technologies. Guy Pluvinage was ahead of his time in understanding the importance of this up-and-coming technology, when he established STid in 1996. The company's mission is to design, manufacture and market readers and tags to be used for security and industrial track & trace solutions. These two fields have extremely demanding requirements and we had the opportunity to interview Vincent Dupart, Managing Director of STid, about how STid's teams stand out from the competition and what they have developed.

**GIT SECURITY: Could you introduce your company?**

**Vincent Dupart:** STid is a French company with a worldwide reach that specializes in contactless Radio Frequency Identification technologies such as RFID, NFC and Bluetooth Smart. We have been inventing and providing solutions for more than 20 years. Our products are RFID readers and tags for the most demanding security and industrial asset tracking markets. We are now the French market leader in "high-security" access control solutions and are today expanding overseas, with subsidiaries in Mexico, the UK and Australia, as well as teams in Europe and North America that are growing. A key factor for success is to be close to our clients and partners, to provide them with support in choosing their access control system and in managing their technological migration issues.

**The offering in this field is big. How do you distinguish yourselves from other vendors?**

**Vincent Dupart:** As RFID pioneers, with 20 years of experience under our belt, we manage the entire RFID equipment design and manufacturing process. Innovation is a key part of our DNA, with a constant focus on technological research and the creation of added value for all parties in the value chain. We support and train companies, industries and governments in the protection of people, their sensitive data and assets.

Our solutions are developed using open, non-proprietary technologies. Our customers choose STid freely, not because they are forced to in any way. We offer all the tools that Chief Security Officers (CSOs) need to work independently in managing their security. The difference between us and our competitors is more than just our products – it's a question of corporate culture and philosophy.

We also offer the most secure access control readers on the market – as certified by an independent body, the French Network and Information Security Agency (ANSSI). We were the first manufacturer to receive the ANSSI First Level Security Certification.

All our activities are based on a close relationship of trust with the clients we have been working with for 20 years, which is how we fulfill our mission – promoting trust and ease of use in the digital world.

**Could you explain your innovation strategy in more details?**

**Vincent Dupart:** We draw on this long expertise in designing smart, innovative products using cutting-edge technologies. The market has provided recognition of STid's technological prowess. Examples include the Innovation Trophy awarded to our Architect range at the Expoprotection trade fair or the award that our Architect Blue range of RFID/NFC/Bluetooth readers won at the Security Meeting event last March. In 2015, we structured our innovation policy by creating a dedicated innovation team. It is our way of staying in touch with the market and new technologies, always with the aim of offering the highest levels of security, while making access control systems easy to use.

Architect Blue range of RFID/NFC/Bluetooth readers

In concrete terms, we innovate to increase the added value provided by our products. Today's access control readers are smart, upgradeable and multi-technology. Smartphones can now be used for these functions.

**Which challenges and future trends do you see in the access control market?**

**Vincent Dupart:** In our connected society, ensuring security in the access to corporate data and information has become a priority. But beyond economic issues, security is an issue for all, as recent tragic events have shown. Protecting people, by ensuing that their identity and access rights are secure, is now an absolute necessity. With increasing mobility in businesses, a technological revolution is underway, with interconnected resources. Access control is changing, with new uses and new equipment affected. Smartphones offer new ways of interacting with access control readers. Our Architect Blue and STid Mobile ID offerings already anticipated these trends.

**Access control solutions need to be secure and user-friendly at the same time. How do you manage to get this done?**

**Vincent Dupart:** In this context, STid is reinventing access control, to make it more intuitive for users, alongside the use of badges. To achieve large-scale roll-out of mobile solutions, the applications must be fun and user-friendly. For example, with STid Mobile ID, your smartphone can now be used to open the door to your office simply by tapping the phone or by using a hands-free function – and the smartphone is still in your pocket the whole time! With part of the security solution now in the smartphone, the technology and security aspects need to be very well managed. Mobile solutions need to demonstrate protection levels, based on recognized encryption methods that comply with government requirements. Confidence in the solution is a key factor for success. And again, depending on the level of security and independence the client is looking for, the solution may require tools for storing sensitive data on the user's premises and not in a proprietary cloud system. We are the only company able to offer that today.

**Could you describe how STid Mobile ID works in few words?**

**Vincent Dupart:** STid Mobile ID has been developed with RFID, NFC and Bluetooth Smart technologies, bringing the access badge onto mobile terminals such as smartphones. It can work alongside, extend or replace traditional access badges. This virtual badge offers a range of intuitive and user-friendly methods that can be tailored to use in any situation – proximity or hands-free mode, "tap tap", remote control, touch and more. With the Online application, a virtual badge can be sent instantly and securely to a remote user (visitor, new staff member) with an Android phone or iPhone. The Offline application can be used to create virtual badges, in the same way as conventional badges. The Online version will enable access rights to be managed in real-time by remotely sending access authorizations to a smartphone.

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## Traffic Control Center Visualization

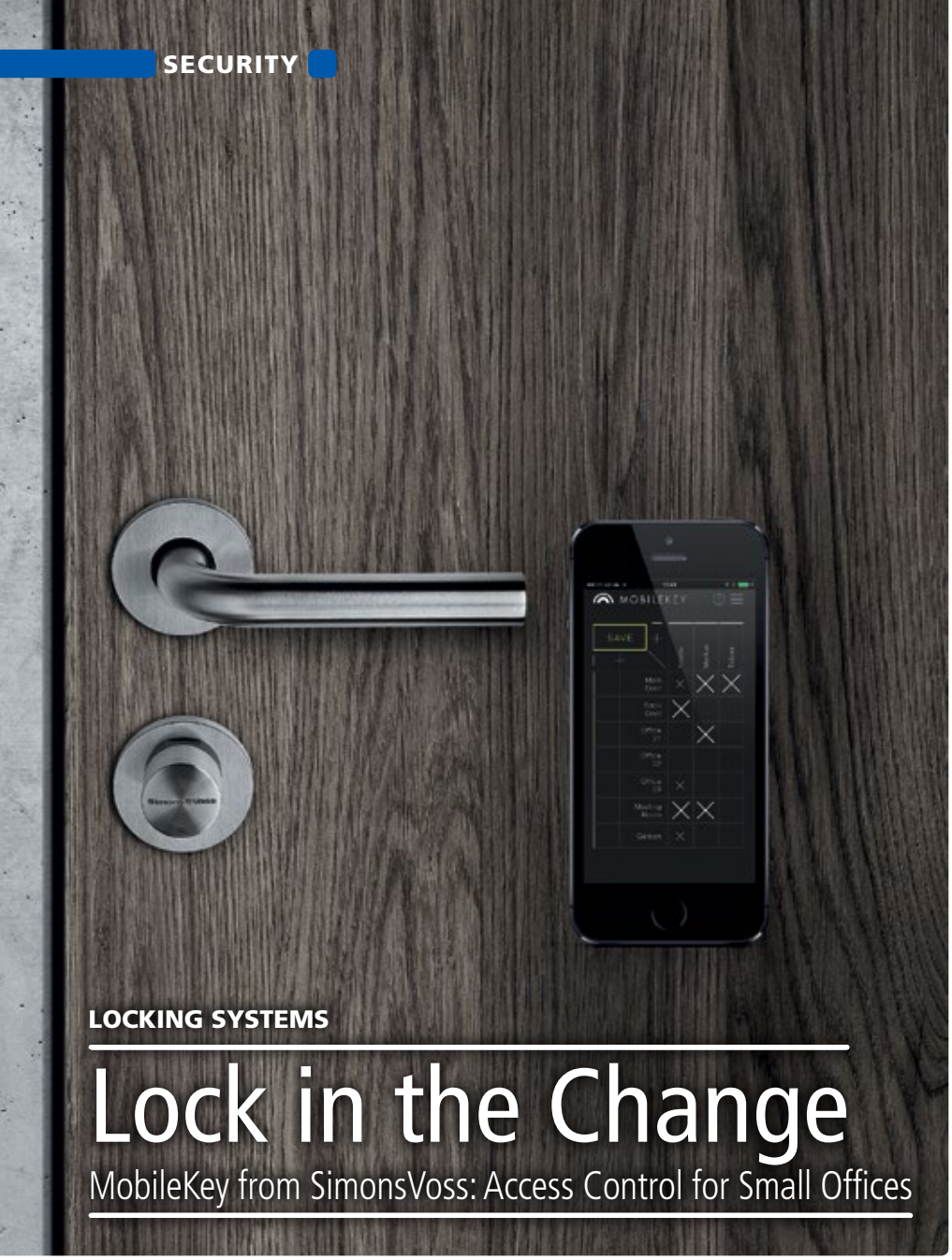
The Norwegian Public Roads Administration operates and maintains national and county roads and has five regional units and Traffic Control Centers distributed across the country. Vehicle flows and traffic issues in the West are now being controlled with the help of a giant video wall installed by eyevis. The project was completed for the PRA in Leikanger with partner GCCD. It uses 24 70-inch EC-70-LHD-CP-1000 rear projection cubes with cluster-LED technology, the netPIX split-controller and eyeCON software. LED-lit DLP rear-projection cubes provide Full HD resolution (1920×1080 pixels) in 16:9 aspect ratio and are especially designed for 24/7 operation. **www.eyevis.de**

## Break Through Detector

Wallguard has been developed for the protection of sensitive buildings that could be breached by means of attempts to break through walls. It provides additional detection which is nevertheless reliable against nuisance alarms caused by environmental factors. The system operates by means of a sensor cable that can be mounted on walls or submersed into the reinforced concrete during building construction. It is cost effective and easy to install. The Wallguard detection principle is based on vibration analysis and able to properly filter out disturbance that could be caused by nearby heavy truck movement or thunder. Typical applications would be for bank vaults, logistics depots, data centers and remote warehouses. **www.sicurit.net**

## Data Acquisition Solution Simplifies Industrial IoT

Moxa's newly launched Things Pro Suite is an integrated solution for distributed data acquisition and device management that can immensely simplify industrial IoT deployments. Built on an open Debian Linux platform, the suite enables the integration of Modbus communications and device management, data acquisition and processing as well as wireless networking in a few simple steps. It provides a simple, integrated data acquisition and device management solution to speed up the development of these devices, thus shortening the time to market. Things Pro Suite is currently available with Moxa UC-8100-CG series computers. **www.moxa.com**



LOCKING SYSTEMS

# Lock in the Change

## MobileKey from SimonsVoss: Access Control for Small Offices

While there is something quaint about having a massive brass key in your hand that will open a tall, creaking church door, the everyday keys that we all use for house doors, garages and sheds have no such appeal. Locking and unlocking cars with electronic remote control keys, however, has long been standard practice, so it is perhaps surprising that the convenience of these fobs has not generally been extended to normal doors until now. SimonsVoss has introduced the MobileKey system that redresses the situation.

The German electronic lock manufacturer SimonsVoss, a brand of Allegion, recently advanced into the largely neglected small office/home office (SOHO) market with its secure digital access solution: the MobileKey access system. This not only provides smaller systems for the many office spaces in private homes, but is also of the right dimensions for installation in doctors' and lawyers' practices, architects' studios, consultancies, advertising agencies and other commercial enterprises.

The product line is suitable for systems of up to 20 doors and 100 users. The web-based system makes it simple for users to benefit from the advantages of intelligent, electronic locking in a small system with few doors and offices because of its easy-to-operate features.

### Secure, Digital

Like large systems, the elegantly designed 3060 locking system consists of digital cylinders in doors opened and closed by transponders, using either a PIN code keypad or a smartphone. Authorization allocation, time schedules, logging or remote opening can be managed using the web application on any terminal device. The simple app also allows the end user to create accounts and generate locking plans, transmitting data to the SimonsVoss server, where the information is added. The locking plan is then sent back to the app and uploaded onto a compact programming device. This takes the familiar form of a USB flash drive, with which users program their cylinders and transponders.

SimonsVoss operates its own web service to calculate data, hosted by an audited Munich-based data center This ensures that processes are far more secure than mere local storage on a personal computer, thanks to end-to-end encryption.

### Quick Installation

The system is designed for easy installation, allowing MobileKey to be put into operation in just a few steps. This even applies to replacing existing mechanical door cylinders with electronic ones, since no cabling or special tools are required, thanks to radio technology. There's no need even for a drill. The electronic cylinders are equipped with several intelligent functions and are virtually maintenance-free due to their extremely low energy consumption. Integrated sensors in the cylinder monitor the status of a door and record every change. Open, locked, dead bolt drawn in or extended, locked once or twice, open too long – all essential information is reported in real time.

Creating a custom-configured locking plan is as easy as setting up an email account. The user simply registers at my-mobilekey.com on any web-enabled terminal device and activates their account. The locking plan is now created using the set-up agent. The individual doors, garage doors, barriers and other access points are given appropriate identifiers. Access authorizations and restriction can be allocated to individual persons using time zones. Users are then able to control who has access to different rooms and for how long, and event logging lets you see who accessed which rooms and when.

The whole locking system is ready for use as soon as the system has been custom-configured

with the free app. Instead of mechanical keys, users can choose between a digital transponder, a PIN code keypad or opening and closing their doors using their smartphone. There are also digital SmartRelays that can be used to operate devices such as lights, heating and other electrical appliances as well as electrically operated doors, gates and barriers.

The SOHO user can make changes as they wish, adding or removing keys and locks at any time. If a transponder is lost, it can be instantly disabled at the click of a mouse. A replacement is configured just as quickly and is then instantly ready for use.

## Startups

Apart from different types of digital cylinders, SimonsVoss also provides two starter sets: Mobile Starter Set 1 contains three transponders and the USB programming device, while Mobile Starter Set 2 also includes a PIN code keypad.

An online addition to the MobileKey system will also be available in March 2016. This online version will connect networked locking components directly with the server via a SmartBridge, with system equipment and authorization changes implemented practically in real time. This version will additionally enable doors to be opened remotely, allowing users to open the door for colleagues, delivery staff or other valid persons from a distance. So having to get key copies cut has now become a thing of the past. Even the old, brass church key can be hung up on the wall for decoration.

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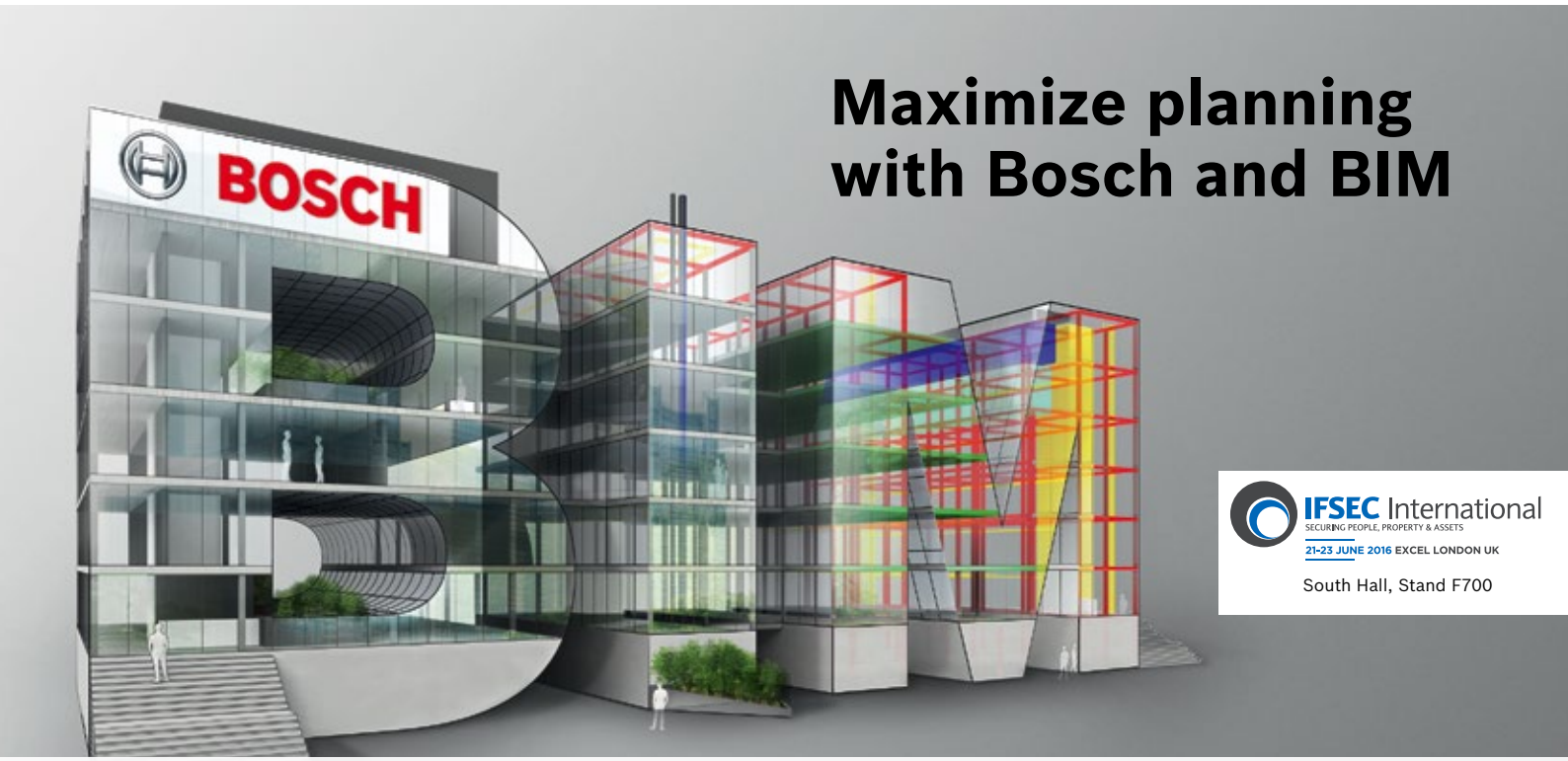


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VIDEO SURVEILLANCE

# Peer to Pier

## WiseNet Cameras Increase Safety at Adventure Island

Adventure Island, Southend-on-Sea's famous seafront fun park, has a mission statement to provide high quality entertainment for all the family within a safe and secure environment. The attraction has now invested in an IP network video surveillance system sourced from Hanwha Techwin.

**Samsung WiseNetIII 5 megapixel 360-degree cameras deliver a birds-eye view on Adventure Island**

Adventure Island is a nine acre, free entry fun park offering more than 40 rides and attractions for all the family with a number of restaurants. It has been listed on Trip Advisor as No. 3 in the UK's top attractions for 2015 as well as 11th in Europe, and was also voted the 4th friendliest park in the world at the 2015 Amusement Today's annual Golden Ticket Awards.

### Health and Safety

Greg Allen, Systems Administrator for the Stockvale Group of Companies which owns and operates Adventure Island (as well as the Sea-Life Adventure Aquarium, and a number of radio stations), says "Strict compliance with our Health and Safety policies is always at the top of the list of our priorities."

Initially employed as a ride operator, Greg has performed a number of roles during the twelve years that he has worked at Adventure Island. He therefore knows more than most about the challenges facing a fun park that is free to enter. "We are proud of our safety record and are determined to maintain it," said Greg. "With this in mind, the decision was made to invest in the latest video

**Greg Allen, Systems Administrator for the Stockvale Group of Companies which owns and operates Adventure Island**

surveillance technology in order to ensure that we could monitor the movement of people throughout the park in real-time, and in particular keep a very close eye on what is happening at each of the rides.

"Our old analog CCTV cameras were still operational, but we realized that we needed to install high definition cameras that could offer higher frame rates and image quality in order to capture the best possible images." Southend-on-Sea based Blake Fire and Security, which has been maintaining Adventure Island's fire and intruder systems as well as the analog CCTV systems for a number of years, were invited to submit system design proposals for the new video surveillance system.

## Birds-eye View

"When carrying out a detailed survey of the site, we took into consideration our client's operational and security requirements," said Richard Crane, CCTV Manager for Blake Fire and Security. "We concluded that by utilizing Full HD 360 degree technology in certain locations, we could limit the total number of cameras required to 40. We considered a number of manufacturers that offer 360 degree cameras but in terms of price and performance we recommended that they be sourced from Hanwha Techwin Europe, along with the other required cameras and the recording device."

Ten Samsung SNF-8010 Wise NetIII 5 megapixel 360-degree cameras have been deployed, with most installed immediately above some of the more thrill seeking rides. The IK10/IP66-rated, vandal resistant and weatherproof SNF-8010 has a digital PTZ feature that allows users to electronically pan, tilt and zoom in on specific areas for a more detailed view, whilst at the same time continuing to monitor the whole 360-degree view. Twenty-five SND-5084 1.3 megapixel day/night domes and five SNO-6084R bullet cameras equipped with IR illuminators have also been installed, with images captured by all forty cameras recorded onto a 64 channel Samsung SRN-4000 NVR.

"Both the manufacturer and the integrator have worked well together to provide us with a high-performance solution that we are able to benefit from in many different ways," said Greg Allen. "We are able to use the recorded video as a training aid for Health and Safety matters. We are also using both the live and recorded images for loss prevention purposes and to detect any anti-social behavior.

## Fiber Network

"Taking the size of the site and the number of cameras required to ensure that there are no blind spots into consideration, we decided to install a dedicated fiber network to support the cameras. This has allowed us to take full advantage of the high quality images captured by the cameras, some of which are located up to 100 meters from our control room. We are able to simultaneously view live and recorded images at full frame rates without any latency or loss of image quality." In the future, Adventure Island is intending to trial a people counting application that can be run on the open platform Wise NetIII cameras in order to gain a greater understanding of people that visit the park.

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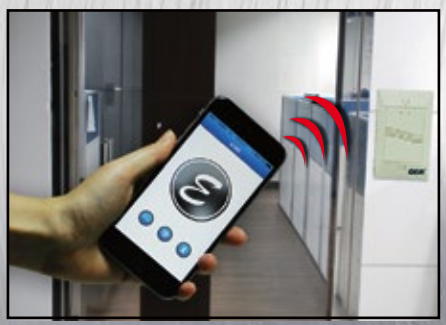
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VIDEO SURVEILLANCE

# A Glance into the Future

## 4K Surveillance Equipment Creeps up the Market

This article examines the migration to HD surveillance over the past seven years to develop a plausible scenario for successive migration to 4K surveillance over the next seven years.

### Taking a closer look

Before addressing upcoming market trends, it is important to take a closer look at both the development of HD and 4k surveillance equipment separately. In 2007, HD equipment had a minimum share on the surveillance market. It took about six years until it reached the 20% mark (2013), and it reached its peak of 50% market share only last year. Similarly, 4k equipment had its market introduction in 2014 and therefore only started its life-cycle, but the development is already comparable. How can we estimate the market development of 4k? What are prospects, obstacles and further factors?

Figure 1 outlines exactly such tendencies. To be more precise, those entries for 2016 and forward are projections, shown in italics, whereas entries through 2015 are estimates. The label 'Price' means that it qualitatively reflects the cost of higher-resolution cameras relative to the then-dominant lower resolution formats. 'Market Share' is the fraction taken from the lower-resolution formats. 'LST Availability' indicates when specific cameras and DVRs with that Local Site Transport ('LST') have become available. Also, the light green boxes indicate when prototypes are being demonstrated, whereas the dark green boxes indicate when cameras and DVRs are sold via distribution (Fig. 1).

### Insights on Figure 1

By comparing the two boxes of Figure 1, it is obvious that both are nearly identical, reflecting an expectation that the market migration to 4K will be similar to the migration to HD.

Initially, the higher resolution is adopted only for those applications where the higher resolution is worth significant additional cost. As the technologies that enable the higher resolution reach maturity, the price comes down, and greater segments of the market migrate to the higher-resolution surveillance.

The HD and 4K scenarios shown in Figure 1 differ in one significant aspect, however: Two kinds of 4K cameras – Ethernet and EX-SDI – are available at the beginning of 4K, whereas only one kind of HD camera was available at the beginning of HD.

The technical challenges to mainstream adoption of 4K surveillance are significant. One way to appreciate the scope of the challenges is to consider the key constituents of a high-resolution video channel in detail.

### Further Considerations

Figure 2 shows the components lying in the electronic video surveillance pathway from a camera's field of view to forensic evidence available via the cloud (Fig. 2).

The critical semiconductor components, shaded gray in Figure 2, command an ever-increasing share of camera and DVR end-product value. Meanwhile, each of the technical elements shown in Figure 2 must be as reliable, as convenient, and (nearly) as affordable as their lower-resolution counterpart in order for the industry to sustain our customers' migration to the next higher resolution.

The scope of the obstacles to 4K migration becomes clear by considering the non-LST elements one by one:

### Camera

In order to move to a 4K resolution surveillance, the camera itself must improve certain features, such as Lens, Image Sensor Chip and Image Signal Processor (ISP) Chip.

When it comes to Lenses, higher resolution demands a smaller blur spot (equivalently, a higher modulation transfer function) in order to resolve the smaller pixels. Furthermore the individual sensor pixel area gets reduced by more than a factor of four in order to double the number of pixels in each X and Y dimension. For a given sensor diagonal size (1/3" and 1/4" being predominant in surveillance), forming the individual lens elements demand ever greater levels of precision. Lens manufacturers advance steadily up the learning curve at each successively higher resolution, enabling continual mainstream migration until the physical limit is reached. The physical lower bound to blur spot radius is the diffraction limit of light. Ultimately, lens performance is a delicate balance amongst blur spot radius, sensor diagonal size, depth of field, and sensitivity.

Similarly, higher resolution demands smaller pixels for image sensor chips. Pixels do not scale in silicon the way that digital logic scales as the pixels shrink geometrically, their ability to collect light decreases worse than linearly in the number of pixels, because the (fixed-size, not-light-sensitive) read-out circuits take up a larger fraction of the pixel area at smaller resolutions. Hence, scaling resolution needs the image sensor to achieve greater sensitivity from diminishing physical area per pixel. Luckily, sensor manufacturers advance steadily up the learning curve at each successively higher resolution, enabling mainstream migration.

Concerning Image Signal Processor (ISP) Chips, higher resolution demands more pixel-bits processed every second. So Moore's Law scaling directly benefits ISP chips, such that at each resolution, eventually ISP chips have enough processing capability to sustain a mainstream migration to higher-resolution video.

### DVR

If Video Codec Chips improve their resolution capability it is crucial that more pixel-bits are processed per second. So Moore's Law scaling, driven by all digital processing applications, directly benefits codec chips. At each resolution, eventually codec chips have enough processing capability so as to sustain a mainstream migration to higher-resolution video.

For local-site storage solutions it is important to have more storage per second of archived video, at a given frame rate and recording quality, because the forensic evidence of higher resolution

**HD ( 720p / 1080p ) Equipment**

| | Price | Market Share | LST Availability: Ethernet | SDI | Analogue |
|---|---|---|---|---|---|
| 2007 | $$$$ | 0,1% | | | |
| 2009 | $$$ | 1% | | | |
| 2011 | $$ | 10% | | | |
| 2013 | $ | 20% | | | |
| 2015 | $ | 50% | | | |

**4K ( 4 MP / 6 MP / 8 MP ) Equipment**

| | Price | Market Share | LST Availability: Ethernet | SDI | Analogue |
|---|---|---|---|---|---|
| 2014 | $$$$ | 0,1% | | | |
| 2016 | $$$ | *1%* | | | |
| 2018 | *$$* | *10%* | | | |
| 2020 | *$* | *20%* | | | |
| 2022 | *$* | *50%* | | | *?* |

**Higher-Resolution Surveillance Migration Scenarios**

demands it. Local-site storage solutions benefit directly from the economies of scale driving storage improvements for myriad I.T. applications. At each resolution, eventually local-site storage is cost effective and thereby sustains a mainstream migration to higher-resolution video.

### I.T.

LAN and Internet Access with higher resolution place more demands on LAN and internet interfaces. LANs and Internet interfaces benefit directly from the economies of scale driving storage improvements for myriad I.T. applications. At each resolution, eventually LANs and Internet interfaces become cost effective and thereby sustain a mainstream migration to higher-resolution video.

### Local-site Transport (LST)

LST is an under-recognized technical challenge area. Existing LSTs impose severe limits on the ability to scale to higher resolutions: Conventional digital LSTs increase clock rate to stream higher-resolution video. If the receiver ever fails to discern just one bit among the billions sent every second, mission-compromising image artifacts may become visible. To ensure that all bits get through the cable, high-resolution digital LSTs including EX-SDI and Ethernet compress content; that is, these digital LSTs remove bits from the transmitted evidence in order to accommodate bit-rate-limited LST. Unfortunately, even the most advanced compression technology degrades video quality. Furthermore, Ethernet imposes a strict distance limitation which is not overcome by even the most advanced compression technology.

Moreover, compression adds complexity (logic gates (hardware) and lines of code (firmware)) to all digital high-resolution video LSTs, thereby reducing reliability while simultaneously increasing design costs and manufacturing costs. Advanced compression technologies generally carry more hardware, more software, and therefore greater costs.

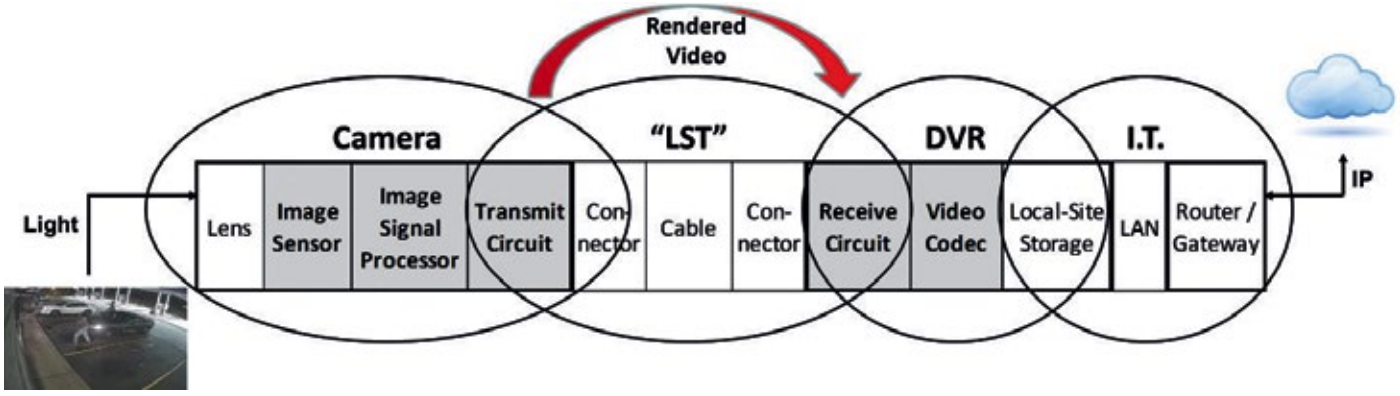
Conventional analogue LST demands an increased carrier frequency to accommodate higher resolutions. It appears impossible for conventional cables to sustain signals at frequencies high enough for unimpaired conventional analogue LST of 8 MP video. Therefore, it may be impossible to scale analogue LSTs to 4K resolution. Although the analogue HD share of the 2 MP surveillance market has grown from 0% in 2009 to over 80% today, there is no known „next enhancement" that will enable conventional analogue LSTs to achieve higher resolutions.

### Personal Opinion and Outlook

The earliest HD adopters had reason to presume that "IP camera" and "HD camera" are synonymous. At CPSE 2015, 4K IP cameras were exhibited alongside 4K EX-SDI cameras in neighboring stands, so buyers of highest-resolution digital 4K cameras already see a choice of LSTs. 4K EX-SDI delivers better fidelity, in my opinion, over longer distances than the Cat-5 spec. Moreover, 4K EX-SDI equipment appears likely to be more affordable than Ethernet 4K LST equipment. I expect buyers to choose both kinds of 4K equipment in 2016, and this greater choice suggests that the migration to 4K will be faster than the prior migration to HD. ■

**Todd E. Rockoff, Ph.D., is General Manager of Rockoff Security P/L, a provider of semiconductor products for video surveillance equipment.**

Dr. Rockoff founded HDcctv Alliance in 2009 and continues to serve as its Executive Director. Prior to the Alliance, Dr. Rockoff was VP Global Sales at EverFocus ODM, VP of Sales – Asia at Pixim, Director of Sales at Foveon, and Founder/CEO of Intensys, a Silicon Valley semiconductor company.




**Video Channel Architecture, moving evidence from Light to the Cloud, highlighting Local Site Transport („LST")**

Everyone talks about it, everyone knows it: The requirements for video surveillance are continually on the rise. Ever more cameras, higher resolutions and longer retention times are increasing the demand for storage systems. When you need a new storage system, it is important to first be clear about your specific requirements. Put another way: You must define your needs in terms of reliability, capacity, cost and performance. Of course these requirements are interdependent, making the decision that much more difficult. This article provides an overview of common storage systems and their pros and cons. To help you make the right decision.

VIDEO SURVEILLANCE

# Storage – What Is the Right Choice for You?

## Reliability = Availability

Reliability is a great virtue. For video systems as well. In this case, it can even be defined: Reliability means availability. How much you need depends on the application. The following question may be able to help you assess your needs: How critical is it if individual sequences of images are missing in the recording? What would happen if one in ten incidents were not documented? Or one in a hundred? Of course, everyone would prefer absolute reliability and thus 100% availability. Technically speaking, this level is almost impossible to realize. And of course, more security costs more money. The level of availability is therefore always a compromise between requirements and the available budget.

But even here the situation is not black or white – the possibilities are vast! See for yourself:

## The Basis: RAID

RAID stands for Redundant Array of Independent Disks. It is a method of storing data on multiple individual disks that are combined into a single logical unit. A RAID controller controls the write and read operations, so that the entire system achieves a higher level of reliability or a higher data throughput than the individual physical storage medium itself. RAID is therefore more than just data backup. When one hard disk fails, system functionality remains intact (exception: RAID 0). After replacing the failed disk, the original state of the storage system is restored by a rebuild.

## RAID – What is that Exactly?

Depending on the objective, different RAID configurations, also called levels, are used. In all, there are about a dozen different combinations of configurations. Four types are used most often:

### RAID 0 or striping

- High data throughput: Data is distributed across multiple disks with the aim to achieve a high data transfer rate. The bottleneck in storage access is the mechanical limitation of the hard disk (the speed of read/write unit). By controlling multiple disks in parallel, it is like their speeds are „added together".
- No data security: On the contrary, because when one disk fails, not only is all the data on that disk lost, the data on the other disks are at risk as well due to the fact that the information is distributed across them. If one disk fails, all data records are affected whose fragments were stored on this disk – in most cases this means the entire array of disks. Recovering the data records that were not affected is only possible using time consuming methods.
- Not a realistic option for video security: Due to the lack of reliability, RAID 0 is not recommended for use in video surveillance systems.

### RAID 1 or mirroring

- Duplication of data: All data is mirrored, that is, it is stored twice.
- Maximum reliability: This method provides a very high level of reliability as well as high performance.
- High costs: Doubling the number of hard drives is usually quite expensive
- The net capacity is cut in half: Only half of the total capacity of all physically present hard drives is available for storing data.
- Special area of use: The method is particularly useful when the entire dataset must be removed for external use without interrupting system operation, for example for use as evidence.

### RAID 5 and RAID 6 – the standards

- Reliability: User data and parity data (generated during data storage) are stored across all disks. Using the parity data, all data can be completely recovered, even if one disk fails (RAID 5). In a RAID 6 configuration, it is even possible for two hard drives to fail simultaneously, as in this case the parity data has itself been backed up by a duplicate.
- Continuous data access: Once a defective disk is replaced, the system automatically starts with the rebuild (recovery process) of the parity data so that once this procedure is complete

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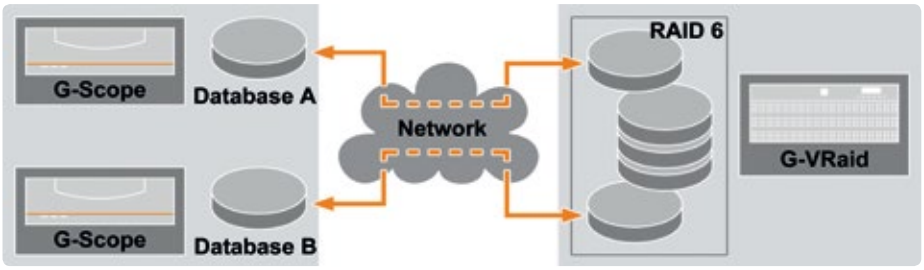
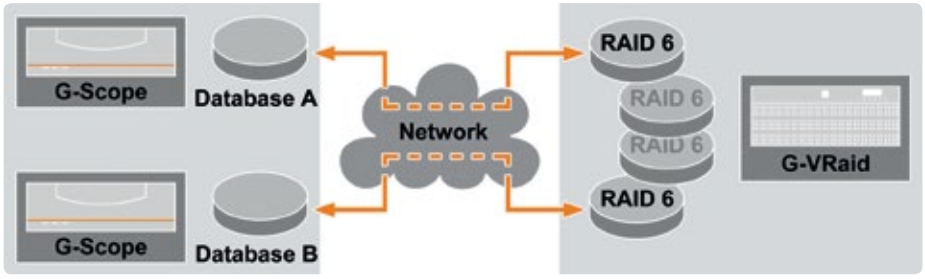



◀ All recorders share a volume group with RAID 6. The maximum data throughput is shared between the devices. The access speed for each recorder is limited



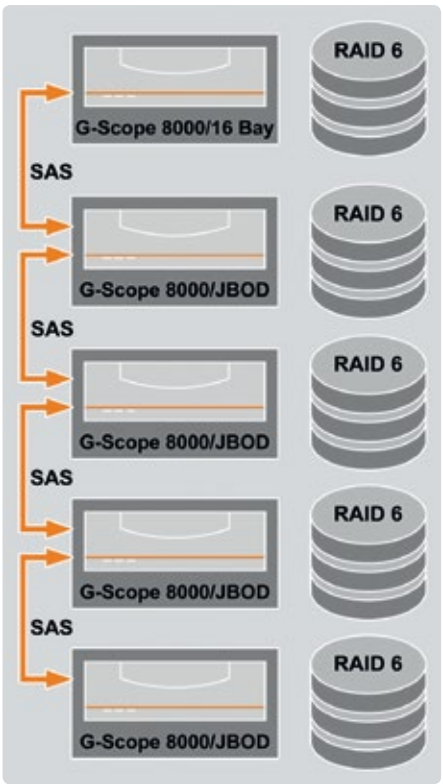

**Management of the RAID system is simplified. The performance of the individual units increases. Writing, reading and access are faster. When a hard drive fails within a volume group, only one recorder is affected. ▶**

the original level of reliability is again provided. During this period, it is still possible to access all user data.

- Limited costs: The net usable capacity for storing the user data depends on the selected RAID level: In RAID 5 it is n-1, for RAID 6 it is n-2, where n is the total number of disks. In a RAID system with a total of 16 hard drives, 2 disks are used to ensure RAID Level 6, leaving 14 hard drives to store the user data.
- Balance: Users for whom reliability, data throughput and cost efficiency are equally important often use RAID 5 or RAID 6.

Our advice: Since the performance of RAID systems depend on the proper interaction of hard disks, it is advisable to only use identical hard disk drives. Identical means: Same manufacturer, same capacity, same type number and, if possible, the same firmware version.

Another thing: In RAID systems we exclusively use so-called „enterprise" HDDs that are certified for this use. They usually are characterized by a longer service life and reliability than "desktop" drives.




**◀ A G-Scope/8000 with integrated RAID system can be expanded using JBODs to a database size of 256 TB**

## Which RAID level should be used for video security?

Although RAID is a complex topic, this question can be answered simply: The trend is moving toward RAID level 6, in particular as hard drives continue to increase in capacity.

With double parity, RAID 6 provides protection against the simultaneous failure of two drives. This means that even when the system is performing a rebuild, the RAID array is still protected against the failure of another hard drive. The intense read and write operations during the rebuild in particular place increased demands on the drives. In addition, hard drive sizes continue to grow unabated, meaning the recovery process takes longer as well. The risk that a drive fails during a rebuild thus increases with the hard drive capacity. RAID 6 ensures the reliability of the system even during rebuilds – and at the price of only one additional disk!

An alternative is RAID 5 with an integrated "hot spare" disk: A reserve disc that is incorporated in the system but remains inoperative until one active disk fails. Only then is it activated by the RAID controller and the rebuild process starts immediately. The advantage: The "hot spare" disk hardly ages for as long as it is not in operation. The disadvantage: During the rebuild there is no security against failure of an additional disk. However, the rebuild time is reduced. This makes sense if a system cannot be easily accessed by the system administrator, and as a result it can take some time until a defective disk can be replaced. In principle, "hot spare" can also be integrated into a RAID 6 system.

Our advice: Be sure to enable Controller Messaging! Ensure that your administrator takes the message seriously and keep spare disks ready on site. The administrator can thus react quickly and minimize the risk of data loss.

### The overall concept: Central or local

It is and remains a matter of priority: Do you need maximum storage capacity of hard disks, optimum data throughput or maximum reliability? Not just the RAID level within a system counts – the selection of the storage concept and the connection with the data-generating devices also have their influence. In general, a distinction is made between network attached (central) and directly attached (local) storage. These are the differences:

## iSCSI Storage – central storage over longer distances

iSCSI (Internet Small Computer System Interface) is a standard for storage networks based on IP technology, and it is used for centralized management of storage within a LAN. It is used in particular when multiple devices generate data that are stored on a shared storage system. It can be used to save space, for improved administration or to combine the (individually small) storage requirements of multiple units into a larger array. Assuming RAID 6 is used by default, the following variants exist:

For maximum storage capacity, all available disks (n) are combined to form a large storage system, a "volume group". The net capacity (RAID 6 = n-2 – see above) is then divided into individual

partitions (Virtual Disks). Each partition contains a corresponding portion of the available storage capacity. The data generating computers (in our application DVRs or NVRs, i.e. recorders) now use "logical", "virtual" locations instead of local storage media. A potential bottleneck is the centralized storage management, which receives and distributes the data from all recorders – at a limited data throughput. The advantage, however, is that the RAID 6 reliability "costs" only 2 hard disks for the total capacity of all recorders (Fig. 1).

For even more data security, multiple volume groups within a RAID system are each configured with a RAID 6 system. Each volume group is a separate partition (Virtual Disk). Each recorder uses a separate volume group for its data. Each volume group is controlled separately. Benefits are even greater reliability and more efficient management by the RAID controller with a correspondingly higher data throughput per recorder. However, this concept „costs" significantly more hard drives – namely exactly twice the number of volume groups – that are not available for user data (Fig. 2).

## SAS Storage – the direct link

SAS (Serial Attached SCSI) is a storage system directly attached to the computer (also known as: Direct Attached Storage (DAS) or Server Attached Storage). There is a dedicated, direct cable connection between the computer and storage unit via a SCSI cable. The distance between the two is limited to a few meters. The overall performance of the RAID system is 100% available for the connected recorder, but only for this recorder. Each additional recorder needs its own storage system. The advantage is very high data throughput and therefore optimum disk access. This approach is recommended if the storage requirements for an individual recorder are high, for example when the images from a large number of high-resolution cameras need to be stored over a long period of time.

**Our advice:**
Use recorders with an integrated RAID system such as the G-Scope/8000 and expand the storage up to the capacity you need using SAS-connected JBODs (Just a Bunch Of Discs). They are cost-effective expansion units, which are controlled by the RAID controller of the recorder.

## Summary

A storage system is used to improve performance in at least one major aspect compared to operation of one or more individual hard drives. Depending on the configuration, a RAID system offers the following advantages:

- Improved reliability of data storage
- Guaranteed high availability
- Improved data throughput rate

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more info at **www.PRO-4-PRO.com/security**

# Security Products

## Bosch Highlights Integration and Intelligence at IFSEC

Bosch Security Systems will present its technology on stand F700 at IFSEC International from 21-23 June. A broad portfolio of video surveillance, intrusion detection, communications and fire solutions will be on show. The company's starlight cameras with front and backlight compensation, higher frames rates and a wide choice of resolutions deliver high quality video surveillance, even in extremely low light conditions. All IP 6000, 7000 and 8000 cameras will have video analytics at the edge as standard. Bosch Video Management System 6.5 adds powerful intelligence for applications requiring database matching to seamless, end-to-end integration with selected third-party cameras, hardware and software solutions. The power efficient Paviro public address and voice evacuation system is now EN54-certified. Aviotec video-based fire detection is a new solution for reliable, early fire detection in environments such as dusty and humid areas, saw mills, paper factories or hangars. With the Commercial Series of motion detectors, Bosch expands its portfolio of wall-mount intrusion detectors that provide excellent catch performance and minimize false alarms. **www.boschsecurity.com**

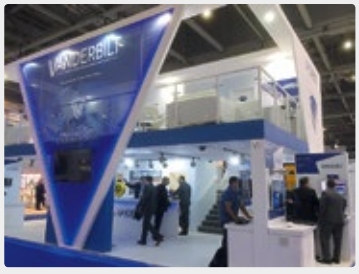
## Door Furniture Design Award

The digital Smart Intego Smart Handle for doors combines intelligent access control functions with an elegant, highly ergonomic design. It can be mounted quickly and easily without drilling holes through the door leaf or making any other structural alterations. The door hardware uses RFID to communicate with ID media within the SimonsVoss 3060 Digital Locking and Control System, controlling access for up to 64,000 users, restricted in terms of time and location. Battery replacement intervals are significantly more than ten years apart. Both the Smart Handle and the Locking Cylinder won ‚gold' in the building and elements design category of the German Design Award in Frankfurt in February 2016. **www.smartintego.com**

## Upgrade for Security Management System

Geutebruck's G-SIM security management system is now even more scalable in the newly available version 5.1. Effective immediately, there are four versions: G-SIM Express, Standard, Professional and Enterprise. They provide customers with carefully tailored packages that they can use to design the perfect scope of functionality, based specifically on their needs. The new release also provides another optimization feature: manipulation-proof exported files. Users can now lock files so that other users cannot export them again. **www.geutebrueck.com**

## Three Security Product Ranges On Show



Since its acquisition of Security Products from Siemens a year ago, a rationalized supply chain management and logistics infrastructure has been initiated at Vanderbilt, already improving product availability. At IFSEC 2016, the company will demonstrate the latest developments across all three of its product ranges – access control, intruder detection and CCTV – including a preview of Aliro 2, the company's latest access control solution suitable for small to medium sized commercial applications, supporting up to 512 doors, 10,000 users and 100,000 access cards. Also being shown, the Magic motion detector range, which offers reliable detection of intruders and high false alarm immunity. Briefings will be provided on request to visitors to stand G1250. **www.vanderbiltindustries.com**

The DF5200HD-IR-ANPR is an ideal basis for precise and rapid 24-hour number plate recognition, regardless of environmental conditions or changing lighting conditions during day and night. It is a camera with integrated IR illumination that provides images optimized for the automatic recognition of vehicle number plates on a Sedor ANPR server device.

**The DF5200HD-IR-ANPR is specifically designed for the task of number plate recognition**

VIDEO SURVEILLANCE

# Spectrum Selection

## A Specialized Camera for Number Plate Recognition

Equipped with advanced sensor and encoder technology and a special optical filter, the camera provides high-resolution and monochrome video footage. It features high infrared sensitivity and permanently supplies infrared images with excellent contrast. The intentional restriction to the infrared range permits the elimination of disturbing daylight and ambient conditions. In addition, the camera makes good use of the intense IR reflection of modern number plates. This enables recordings with brilliant clarity and high detail resolution, ideal for precise number plate recognition in a 24/7 operation.

The high infrared sensitivity of the camera is supported by the integrated homogeneous IR illumination, based on semi-covert 850 nm high power LEDs, and provides an illumination range of up to 18m. The camera is equipped with special presets that allow quick and easy adjustment of the settings to different capture ranges. Individual adjustments of the camera settings are not usually required.

This model is also fitted with RAM memory that is used by the Edge Storage function to store the video stream in case of a network failure. When the network is restored, the Smart Backfill function ensures fast transmission to a SMAVIA recording system. This stores the incoming video stream at high speed and then seamlessly continues the recording of the live stream.

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www.dallmeier.com · www.panomera.com

# Security Products

more info at **www.PRO-4-PRO.com/security**

### Coaxial Converter Eases Switch to IP

Panasonic has introduced a coaxial converter that allows integrators to replace analog camera systems with network cameras using the existing coaxial LAN cable infrastructure. The system uses a camera side unit (WJ-PC200) and receiver side unit (WJ-PR201/WJ-PR204) to reduce the set up cost and space required for the installation of an IP camera network. The WJ-PC200 is a third smaller than the model it replaces, meaning it's often possible to install it within an existing external camera housing. The WJ-PR201/204 is half the size of the previous receiver unit. Cameras can be installed remotely over much greater distances than is usually achievable using LAN cables, up to two kilometers away. **www.panasonic.co.uk**

### Turnkey Analytics Solution

VCA, a little known but highly successful OEM analytics solutions provider, is launching Bridge, an appliance that instantly adds video analytics capability to new or existing IP video surveillance systems. The highly acclaimed video analytics engine has already been successfully deployed worldwide in over 350,000 video channels, but very few involved in the procurement of IP cameras will be aware of the company name as its technology was only available under other manufacturers' names until recently. The product has been designed to provide an affordable, accurate and effective analytics solution for a wide range of environments. It is able to support multiple 1080p or VGA channels and has an internal 500GB surveillance grade HDD that enables the storage and review of pre and post event video clips. **www.vcatechnology.com**

PERIMETER PROTECTION

# Sought and Found

## Wego Project Provides Comprehensive Security Concepts for ebm-Papst

The ebm-Papst Group, a supplier of ventilation, air-conditioning and refrigeration technology, is an international company with almost 12,000 employees, 18 production sites and 57 global sales offices. At the beginning of 2015, the company was looking for a comprehensive security solution for its three plants in Niederstetten, Mulfingen and Hollenbach in the south-western part of Germany.

More than one kilometer of fencing meets up with Turnsec pedestrian turnstiles

Among other requirements, the concept should fulfill the requirements of the customs service that have to be met by companies considered as ‚known shippers'. Furthermore, the option of of electronic fence detection should be provided. The whole installation should consist of perimeter security, access control and video technology components. But in spite of putting up barriers to entry, more than 3,100 employees and other authorized personnel should nevertheless have easy access to the factory premises. An important factor to be considered when securing the vehicle access routes was the very high level of traffic because of 24/7 shift operation at the sites.

During tendering, ebm-Papst was looking for an allround supplier who could offer all these components simultaneously. Working together with its client Interflex Datensysteme, the full-service provider Perimeter Protection Germany (PPG) was able to assert itself against competitive proposals. PPG offers everything from one source, from certified individual products to complete security solutions and comprehensive after-sales service. After the extensive initial evaluation was completed, PPG eliminated any remaining difficulties during technical discussions and also those arising during construction, and provided a convincing and efficient solution.

### Surrounded

The installation consists of several Turnsec turnstiles, boom barriers, swing gates and sliding gates and more than one kilometer of fencing with terracing. Alfons Trapp, PPG sales representative said, "The project was an interesting challenge that we were able to complete successfully, thanks to our extensive portfolio and expertise. We would like to give special thanks to the competent staff of ebm-Papst for their pleasant and constructive cooperation." After the successful pilot project at the first site in Niederstetten which was completed in September 2015, the other two sites could be finished by the end of 2015, as planned.

### CONTACT

**Perimeter Protection Germany**
Salzkotten, Germany
Tel.: +49 5258 5007 0
info@elkosta.com
www.elkosta.com

The security requirements of the Customs office also had to be complied with

PERIMETER PROTECTION

# Peace of Mind

## Flir Thermal Cameras Monitor a 14 km Perimeter

If you are looking for luxury, exclusivity and security around the area of Johannesburg and Midrand, South Africa, then Waterfall Estates is the place to be. Next to providing its residents the ultimate luxury lifestyle, the Estate is intended first and foremost to give them a sense of security.

The Waterfall Estate was completed in May 2015 and the exquisite residential and business area offers uniquely South African architecture, indigenous landscaping and state-of-the-art security provided by advanced thermal security cameras from Flir Systems. Nick Crow of Century Property Developments elaborates, „The intention is to commission high specification security systems such as this across all Century Estates. One thing that sets our developments apart from others is the high level of security that we offer. Our mission is to keep our residents secure, which is something we're proud to say we're achieving thanks to state-of-the-art security installations like this".

### At the Edge

To ensure the security of its residents, the developers focused on securing a number of access gatehouses as well as a substantial perimeter around the estate. Integration company 4C Technology was asked to design a reliable security monitoring solution for the 14 km perimeter as well as for the eight entry/exit gatehouses. According to Paul Frewen, CEO of 4C Technology, the 14 km perimeter presented many challenges, the most critical being the Jukskei River that runs through the estate. Securing the river ingress and exit from the estate was especially challenging and required special measures.

4C opted for 98 perimeter cameras, a combination of 68 Flir thermal imaging cameras and 30 analog cameras with infrared lighting. These cameras were used to monitor the perimeter, while visual cameras and access control serve as additional means of verification at the entries and exits. All the perimeter cameras are equipped with advanced video analytics and are linked back to a central command control room where operators are able to view events and take the appropriate course of action. All the recording and analytics are done on the edge i.e. at the camera, so that only relevant information needs to be transmitted to the command center in order not to overload the IP network. South African Flir distributor Timeless Technologies, supplied the thermal cameras and video analytics.

Tinus Diedericks, CEO at Timeless Technologies, comments on the selection of thermal imaging cameras for Waterfall Estates. "Protecting a perimeter of this size presented a significant challenge. The developer considered several options, including visible-light CCTV cameras, but that would have meant placing a camera every 70 meters. That is why they opted for thermal imaging cameras." Thermal cameras have a much longer detection range than visual cameras and they don't need additional lighting and the associated installation works to operate. Thermal cameras provide an image based on heat coming off the environment, and thus allow you to see intruders at night, during the day and in bad weather conditions such as thunderstorms.

Securing the 14 km perimeter around Waterfall Estates was a challenge which the Flir thermal imaging cameras were up to

Thanks to the smaller number of cameras required and the absence of additional lighting equipment, thermal imaging cameras proved to be the most sensible and most cost-effective choice for perimeter security and intrusion detection. Paul Frewen, MD of 4C Technology, commented, "The installation of the thermal cameras was the most effective means to detect possible intrusions and enable the control room operators to make correct and speedy decisions to prevent any breach of security."

### Come Rain or Shine

4C Technology opted for Flir's FC-Series S and SR- Series cameras, providing good image detail and quality for optimal intrusion detection in challenging imaging environments. "At the time of selection, these cameras provided reliable perimeter protection solution. They also trialled other cameras, but these were the best performers. The product's massive installed base and 10-year warranty also proved that this was the right camera for the job," says Tinus Diedericks. Various lenses were chosen to meet the particular characteristics of the perimeter outline. A wide-angle lens was chosen to monitor the entry and exit to Waterfall Estates via the Juksei River, so the entire width of the entry area was covered.

"This was not a case of upgrading from visual CCTV to thermal imaging," says Anel Steyn, National Marketing Brand Manager at Timeless Technologies. "This underpins the importance of quality that the developers attach to this project. As for ourselves, Waterfall Estates has already served as a valuable reference for other perimeter security projects that we have deployed across South Africa."

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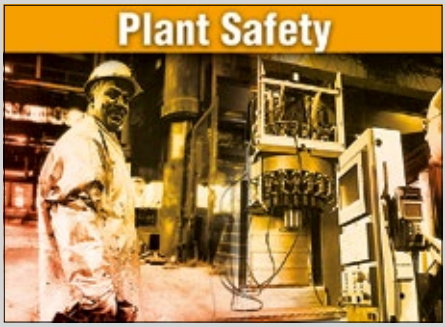


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