SECURITY

MAGAZINE FOR SAFETY AND SECURITY

COVER: Siemens

SIEMENS

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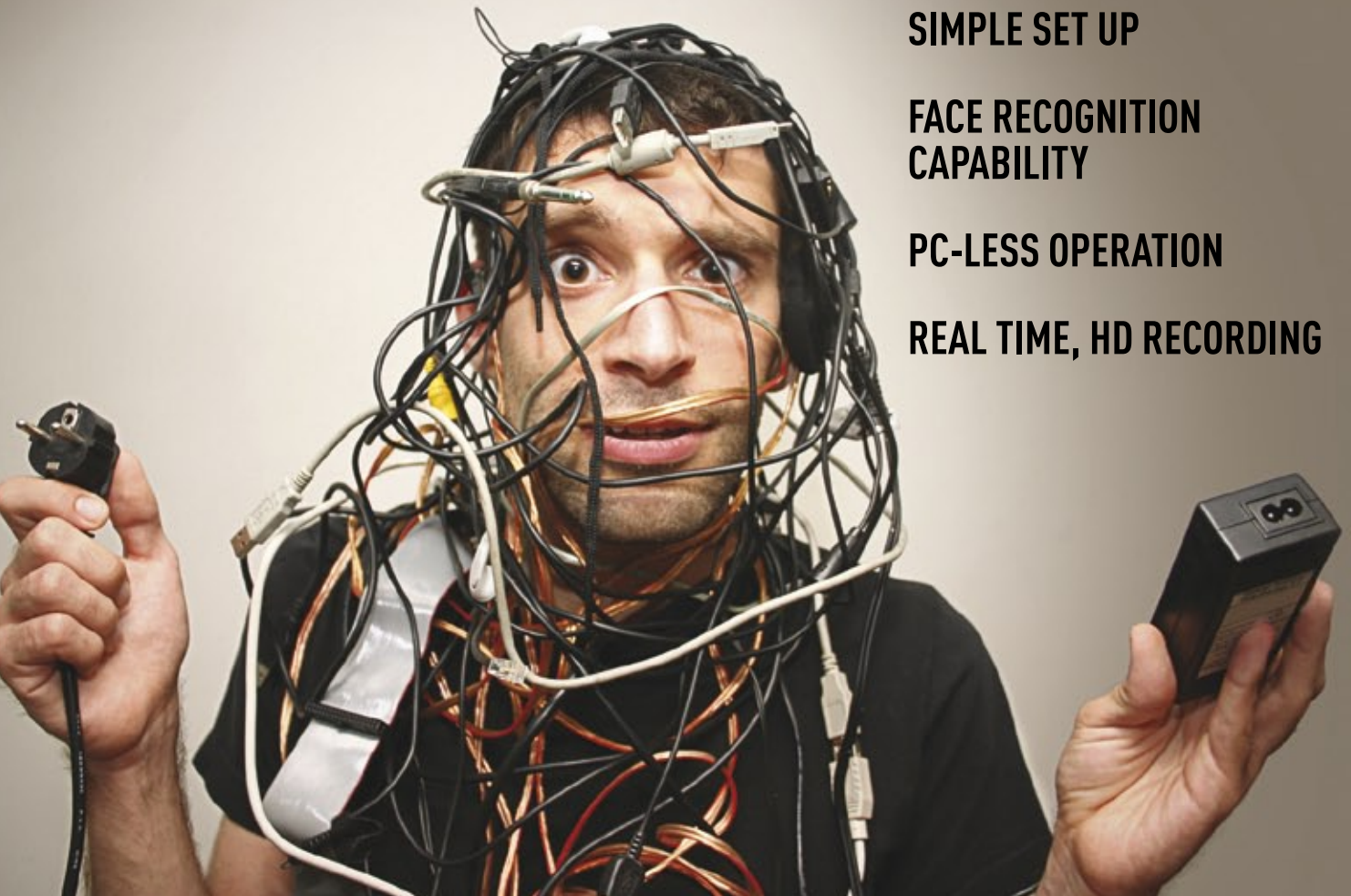
2011? A Look into the Crystal Ball

At the beginning of every new year the same question arises: What will the next year look like?

The economic environment is cause for optimism. We asked our readers on GIT-SECURITY.com about their outlook for the security business in 2011. An astonishing 44 percent think that 2011 will be a superb year for security business while another 41 percent predict that business in 2011 will slightly grow compared to 2010. While it is not time for exaggerated optimism, we see big parts of the industry recovering from the crisis in most countries of the EMEA region for the first time since 2008. We are seeing the release of new projects, budgets for investments unfrozen and an atmosphere of optimism.

What else will we see in 2011:

- The breakthrough of IP video surveillance and for cutting-edge applications with a focus on HD resolution.
- Convergence will be a big topic, but not so much the convergence of physical security and IT security, but the convergence of video surveillance and access control. Security at a glance: One management system to control everything.
- Strong growth rates for the home security market. In many countries, this market is underdeveloped and will be pushed by the entry of big players with a background in consumer electronics.
- Security as a service will need more time to develop. The business model is still underdeveloped, and customers are not ready for it.
- Full Body Scanners will be introduced at the major airports to support airport security.
- Wireless products for video surveillance, fire detection and motion detection are becoming more and more robust, are showing a good performance and are easier to install than before. Wireless products are a good alternative

for specific applications and have the potential to become blockbusters in 2011.

- Alternative ways to the market: While distributors of security equipment strengthen their own brands to compete against low-cost products, established quality vendors are looking for new sales channels.

2011 will show to what extent these predictions are accurate. But one thing is sure: For 15 companies, the year 2011 starts with good news. On page 10 we present the GIT SECURITY AWARD 2011 winners and we would like to thank our readers for participation and voting. With GIT SECURITY AWARD it seems as if there are some serial winners, but there are also surprises.

The GIT SECURITY team wishes you all the best in 2011. Have a good start and enjoy reading this issue!

Heiko Baumgartner

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Milestone: Safety for Hospital Patients and Staff

With 210,000 consultations and 185,000 treatments per year, almost 4,000 employees in 200,000 square meters of buildings, and 33,000 inpatient admissions per year, there is high activity on many levels around the clock at Sodra Alvsborgâs hospital in Boras, Sweden. Security is a critical parameter to ensure that daily processes run as effectively and problem-free as possible for both the staff and the patients. The hospital's safety measures include a security system based on Milestone X Protect IP video surveillance software, installed by Niscayah. "Just last year alone, clinical personnel activated 536 assault alarms concerning angry patients and people who were under the influence of alcohol or drugs. These are the kinds of cases where we come in as security staff and really appreciate having the video surveillance, which we also use as documentation material for the police," says Jan-Ola Hoglund, Security Manager at the hospital in Boras. www.milestonesys.com

Eurofire 2011

The 5th Eurofire conference will be convened in Paris, France, to highlight the evolution in fire safety and its impact on the construction industry. As part of the 200-year celebrations of the Parisian Fire Brigade, the BSPP will host the conference at the prestigious L'École Militaire, Paris. Fire Safety today has a significantly different role in society in comparison with the traditional aims of fire prevention – mechanisms of achieving these aims are constantly evolving. A hundred years ago whole cities burned down and thousands of people died in residential and industrial fires. The economic consequences of these losses were, however, directly borne by the victims who had no way to insure against these risks. Now insurance has changed this situation. The industrialized world has put considerable effort into reducing fire risk and now enjoys very high levels of fire safety. The conference will present, discuss and debate the fire safety technologies used to improve fire safety in buildings. It will particularly focus on the trends in Fire Safety Engineering and on Practical Applications. Registrations@intersciencecomms.co.uk

Cargo and Vehicle Screening

American Science and Engineering announced the receipt of an order for a Z Portal cargo and vehicle screening system. Law enforcement officials to scan vehicles and trucks entering a U.S.-based critical infrastructure facility for explosive threats, weapons, and contraband will use the system. "AS&E's Z Portal system is capable to meet this law enforcement agency's stringent detection requirements for explosive threats and contraband," said Anthony Fabiano, President and CEO. "The Z Portal system has a proven track record to protect critical infrastructure, military bases, and border crossings around the world – all while maximizing safety and throughput. We are very proud to assist law enforcement in their mission to protect our nation's critical infrastructure and safeguarding this U.S. facility." www.as-e.com

Seetec Enters Dutch Market

The Dutch IP security distributor Xserius will cooperate with Seetec. Seetec solutions are hardware-independent and interoperate with network cameras and video encoders of all leading manufacturers. Especially the intelligent license plate recognition (LPR) module, Video Analytics, Retail and SIP module are important to Xserius, states general director Henri Nieuwstraten. The LPR module allows automatic detection of license plates; Xserius' SIP (Video) Intercom products are already Seetec software compliant. Advanced Video Analytics brings several new security solutions to Xserius' portfolio. Alarich Pflaumbaum, key account manager for the Netherlands at Seetec since October 1st 2010: "With Xserius we have a strong distribution partner for the Dutch market, offering a wide range of products and services for the security." info@seetec.de

Genetec One of Canada's Most Admired Corporate Cultures

Genetec has been named a regional winner of the Canada's ten most Admired Corporate Cultures of 2010 Program. The company was chosen out of 276 eligible nominated organizations in 2010 and 98 finalists. Since 2005, this program has been recognizing organizations for having a culture that has helped them enhance their performance and sustain a competitive advantage. Other winning organizations in the category included Desjardins Group, National Bank Financial Group, and Pratt & Whitney Canada to name a few. Each nominated organization was evaluated based on the following criteria: vision and leadership; cultural alignment, measurement and sustainability; rewards, recognition and innovative business achievement; corporate performance; and corporate social responsibility. kbrown@genetec.com

Airport Upgrades with Indigovision's IP Video Surveillance

Cardiff Airport has replaced its surveillance capability with a new IP Video system from Indigovision. Operated by TBI Abertis Airports, Cardiff Airport is the national airport of Wales with passenger traffic reaching over 1.6 million in 2009. It is an important business and charter airport offering flights to domestic and European destinations, as well as connecting flights onwards to worldwide destinations. The airport already had over eight years experience of reliable operation from a similar system at London Luton Airport, which is also operated by TBI Abertis Airports. The system at London Luton Airport was first installed in 2002 and became what was then one of the largest IP video installations in the UK. "All surveillance images are streamed as high-quality digital video in real time at 25 frames per second across the network. By using advanced network protocols and Indigovision's multicast capabilities it is possible to view live video at multiple locations with no impact on the network bandwidth. Numerous separate viewing locations are able to view the surveillance images simultaneously," said Steve Tyler, Managing Director of Touchstone Electronics, Indigovision's partner and system integrator for the project. g.scott@indigovision.com

Basler IP Cameras Integrated With Seetec 5

Basler Vision Technologies has teamed with Seetec to integrate their IP Cameras with Seetec 5 video management software. In addition to Basler's box camera models, the software supports the company's IP Fixed Dome Cameras and is the first video management software to integrate the dome camera SD card functionality. The built-in Micro SDHC card slot in the IP Fixed Dome Cameras can be used for local file storage on an SD card with a capacity of up to 32 GB. When configured properly, the camera can act as a self-sufficient system writing all alarm images and streams to the SD card, a functionality that has already been required in a joint Basler/SeeTec railway project in Eastern Europe. marketing@seetec.de

Voice Alarm: New DIN-EN

The transition periods for two EN standards will soon be coming to an end – as the independent German testing institute VdS reminds us. As of April 1 2011, a conformity assessment procedure in accordance with the harmonized standards EN 54-16 (for the construction products of fire alarm systems and microphones) and EN 54-24 (for speakers) will be required by law for the components of voice alarm systems and is to be carried out by an organization authorized to do so. This certification must be arranged by the device's manufacturer (or the "party responsible for bringing the devices onto the market"). Only devices that achieve positive results in the conformity assessment procedure may then be utilized in voice alarm systems and marked with the CE symbol for the free movement of goods in Europe. Given that the devices are to be regarded as subsystems of fire detection and fire alarm systems, it must also be demonstrated that the components are compatible with each other. This requires testing in accordance with DIN EN 54-13 to be carried out. VdS offers to perform these tests and assessment processes. The association also offers initial tests (acceptance tests) for operators and builders as required by building law. hberger@vds.de

Roger Pike Has Honeywell's Full Member Status

Honeywell announced that Roger Pike Associates has achieved Full Member status of the Honeywell Trained Specifier Certification (TSC) program. The Full Member certification recognizes the substantial investment made by the company in training its staff on Honeywell security products to ensure optimum support and services to customers. A driving force for companies achieving this status is the business advantage derived from access to training on specialist Honeywell products such as Maxpro VMS and Pro-Watch and from co-hosting events with end-users. This is in addition to the dedicated specification tools, sales and marketing support, free unlimited access to the manufacturer's application training at Training Centers of Excellence and a library of Architect and Engineering documents in digital format that Associate Members receive. "We welcome Roger Pike Associates Ltd to the ranks of our Full Member Security Consultants and applaud the resources dedicated to achieving this designation," said Daniel Wan, UK Marketing Leader, Honeywell Security Group. "Roger Pike Associates Ltd' Full Member certification is confirmation of a commitment to delivering high quality service and support that meet and go beyond customers' expectations." www.security.honeywell.com/EMEA

Sypris and Cassidian Form International Strategic Alliance

Sypris Electronics has signed a Technology Information Exchange Agreement (TIEA) with Cassidian, formerly known as EADS Defence & Security. The Agreement will enable the global leverage of mutual capabilities in several critical information assurance areas, including key management, secure communications, and cyber security. Specifically, the agreement allows the companies to expand their market reach for existing information assurance hardware and software solutions, by utilizing new domestic and international sales channels. "For years, Sypris and Cassidian have protected the most classified data and networks in the world," stated John Walsh, President of Sypris Electronics. "This agreement allows access to best-in-class technologies, which will help both organizations to launch new secure, robust, and comprehensive security solutions that will benefit the U.S. Government, International Ministries of Defense, and aerospace and defense contractors worldwide." susanne.hartwein@cassidian.com

Cassidian Gets Certification for Seccom Secure Exchange Gateway

Cassidian has completed the Network Centric Operations Industry Consortium (NCOIC) certification process with the result that the Seccom Secure Exchange Gateway (SEG) has demonstrated its conformance to the NCOIC Certification Program – Pattern "Secure Formatted Information Exchange Gateway (SFIEG) v. 1.2". Now SEG is entitled to be called "NCOIC certified Building Block" as first product worldwide. NCOIC patterns provide guidance for designing and building products that lead to interoperability. In this way, customers can assure that products procured from separate companies will work together in days, rather than months or years. The Seccom SEG is a flexible solution for secure data exchange between information domains with different security requirements. In cooperation with the Federal Office for Information Security (BSI), Cassidian has developed the SEG for use in high-grade security domains. With the application of filters, it checks and verifies the release of information from one security domain to another, thus implements and enforces a pre-defined security policy applicable for data exchange across domain boundaries. susanne.hartwein@cassidian.com

Innotec Integrates Pixim Chips

Pixim announced that Innotech Security has produced a full line of security cameras integrating Seawolf, Pixim's latest chip technology. Based on Seawolf, Innotech Security's customers now have access to cameras with 690 HTVL effective resolution as well as the industry's proven best wide dynamic range. In addition, Seawolf-based cameras require just 0.1 lux of illumination to produce usable, color images at a full 30 frames per second. Devin Benjamin, CEO of Innotech Security: "By adding cameras based on Seawolf, we will be able to continue our pattern of growth while offering our customers the latest in camera technology." The company is "the first American manufacturer to produce Seawolf cameras," explains Jeff Jones, Pixim's director of product marketing. www.pixim.com

Norbain Appoints New Managing Director

Norbain SD announced the appointment of Barry Shakespeare as new managing director. With a career that spans over 30 years in the telecommunications and computer industries, Barry brings to Norbain a wealth of experience gained within large multi-national Corporate and SME companies, including Honeywell, Case Communications, Nortel Networks and more recently the Westcon Group. Barry Shakespeare takes over from Norbain Group Chief Executive Alun John, who has also been acting as managing director pending the appointment. marketing@norbain.com

Unisys Expands Collaboration with Legic

Unisys and Legic have agreed on an expansion of their business partnership. Based on the collaboration over the last two years, Unisys will now offer Legic based solutions for personal identification to new and existing customers all over Europe and beyond. The collaboration will specifically focus on the integration of physical and logical access control and the combination of different applications on a single identification credential. With the increased availability of converged access solutions, Unisys benefits from the Legic Advant technology as a flexible platform that fulfills the requirements of multi-application capability and scalability. Unisys customers will be able to increase their security standards and user convenience at the same time. info@legic.com

Apollo Protects Strawberry Hill's Gothic Revival

Strawberry Hill, a historic house internationally recognized as Britain's finest example of Georgian Gothic revival architecture, is being protected with fire detection based on Apollo technology. The contract to supply and commission the fire detection system was awarded to the manufacturer's long-term customer, Technical Alarm Systems Limited of Southampton, as part of the first phase of a £9 million restoration project. Strawberry Hill was created by Horace Walpole, the son of Britain's first Prime Minister Sir Robert Walpole, from an original building dating back to 1698 and quickly became internationally famous. Like any other public access building, Strawberry Hill needed a modern fire detection system to protect its fabric and contents, its visitors and staff. The fire system was designed by M&E consultants Martin Thomas Associates and installed by contractor Multiserve. Technical Alarm Systems won the contract to supply and commission the fire system in competitive tender. Apollo's analogue addressable XP95 range was specified to meet the main fire protection requirements, with aspirating fire detectors used in some rooms to preserve the historic décor. XP95 isolating sounder bases were used to minimize the number of devices required and to provide staff and visitors with adequate warning in the event of an emergency. The fire system is configured around an Advanced Electronics MX4404 control panel and interfaces with other critical equipment. www.apollo-fire.com

March Retail Solution for Global Food Franchisor

March Networks announced that one of the world's largest quick service food franchisors has standardized on the manufacturer's Retail Solution for its U.S. locations in a deal valued at more than 8 million US-$. The video surveillance and loss prevention solution will boost franchisee profits by helping reduce inventory shrinkage and improve operational efficiency. All franchisees are eligible to adopt the systems, with deployments beginning in January 2011 and continuing throughout the year. With billions in annual sales, the retail organization is vigilant about combating shrinkage, which it estimates can account for as much as 10 % of a store's yearly sales depending on its location. The organization selected the solution for its ability to deter theft and reduce investigation times by integrating point-of-sale (POS) transaction data with video evidence. emaspero@marchnetworks.com

BSIA Research on Importance of Regulation

Research carried out by the British Security Industry Association (BSIA) amongst its CCTV section members has confirmed that the sector understands the vital role played by regulation. In the survey, nearly 56 % of respondents stated that they are happy with the current level of regulation and a further 33 % said that they would welcome additional measures in the future. The survey results are a key indicator of the fact that, contrary to what some commentators may believe, the industry is not against the government exercising reasonable control over the use of CCTV systems – provided that there is adequate consultation with the key parties involved. The BSIA believes that it is in everybody's interest that this technology is applied to best effect to fight crime – and the ongoing terrorist threat – within an agreed framework, which addresses privacy concerns and other issues, so the public's largely positive regard for CCTV can be maintained. www.bsia.co.uk/cctv

Banorte Selects March Networks Financial Solution

Banorte, one of Mexico's five largest national banks, has selected March Network's video management software and hybrid NVRs to upgrade its existing surveillance systems across more than 1,100 branches. The win with Banorte is valued at approximately 1.2 million US-$. For the past five years, the bank has relied on the manufacturer for security and high-quality video evidence. The financial institution will now deploy the company's systems to take advantage of integrated case management and fraud investigation tools, and prepare for future fraud prevention applications available in the Financial Solutions portfolio. In addition, the solution's video compression will enable the bank to reduce its bandwidth usage by as much as 25 %. The improved efficiency is important given Mexican government legislation that requires banks to send video surveillance images from every alarm over low-bandwidth connections to a Seproban central monitoring location in a coordinated effort to combat crime. emaspero@marchnetworks.com

Simplified Border Control

On 1 December 2010, the six-month pilot scheme Augreko (automated border control) commenced at Zurich Airport as a joint project between Kantonspolizei Zürich and Flughafen Zürich. In order to simplify, speed up and modernize border controls, the new procedure uses the passport holder's biometric data. These are stored on the electronic chip integrated into the new passport (passports 06 and 10 for Swiss citizens), known as the e-passport. The 6-month pilot scheme will form the basis for decisions about any subsequent extension to live operations at Zurich Airport. The legal basis for operating automated border controls is incorporated in the Foreign Nationals Act (FNA). Citizens of Switzerland, the EEA and the European Union who hold a valid electronic passport will gain additional benefit from this border control method. Travellers must be at least 18 years of age to use this service. Use of the Augreko gates is free of charge. They are located in the border control area for departures leaving Switzerland from Pier E, and are indicated by "E-Pass Lane".

IMS Research on Service & Maintenance

According to a report on the Americas market for security systems integration, IMS Reseach has found that integrators are increasing their RMR (Recurring Monthly Revenue) through service & maintenance contracts. The institute forecasts that service & maintenance will account for 33.4 % of the total Americas security systems integration market by 2014. Service & maintenance contracts are not only a means for security systems integrators to stabilize cash flow over a long-term period; they are also the most profitable portion of most projects. Margins for service & maintenance can be over 30 % while margins for equipment are often lower than 20 %. "The importance of a recurring revenue stream for systems integrators cannot be overlooked," comments report author and IMS Research analyst, Ewan Lamont. "Companies that are offering a value-added service contract, such as Kastle Systems and Convergint Technologies, are seeing strong growth and greater resistance to the economic downturn than those integrators that do not. Companies with high levels of RMR are also more attractive to investors and acquirers." alastair.hayfield@imsresearch.com

INTERVIEW

Video Security Direction for the Future

Sony's New Pan-European Organization and Its Focus on Video Security

At a press meeting held in Tokyo on November 1st, Sony stated that its Professional Solutions Business, which provides broadcast- and professional-use products and services, would focus on the following three priority strategic initiatives: Content creation (image production), digital cinema and visual security. One consequence of Sony's focus on security is the new video security organization in Europe. GIT SECURITY had the opportunity to talk to Bruno Winnen, Head of Video Security Europe, about the new organization and Sony's strategy and direction for the security market.

In October you reorganized your activities in the field of security. Can you explain our readers what is the change and why Sony changed the organization?

B. Winnen: In the past we had a more regionally organized structure for the whole Professional Solutions Business. This meant that we had no true pan-European strategy and we had differences in the product offering, the way to market and the marketing for the different countries. With Sony now having recognized security as a strong area of growth, we installed a pan-European organization with regional teams 100 % dedicated to video security. Now we have one European team, one strategy to the market and specialist who concentrate on video security. Within this team, Simon Nash will head the North Region including the UK, Ireland and the Nordics. Chris Vandenbrouck and his team will be responsible for the Central Region including Benelux, DACH, Poland, Czech Republic and Slovakia, while Fabien Hubsch will head the South East Region team that takes care of France, Spain, Portugal, Italy, Turkey, Greece and east Europe. Product specialists in every country will support the teams and pan-European marketing managers will be responsible for the product line-up and the positioning of the different products in the market. Our customers, specifiers, system integrators and end users will benefit from this new organization.

A new organization is one thing but will you also change your approach to the market?

B. Winnen: Yes, there will also be a change with regard to our distribution and our relationship to installers and system integrators. In the

Bruno Winnen, Business Group Head Video Security Europe

past we did not have the resources to go for a second-tier strategy. With a clear strategy and a leaner organization we will now invest even more into our partnership with the distributors and we will introduce a new partner program in the near future. We will have a very close relationship with our Integrators and installers and our aim is to help them to be successful in their business. During 2010 we had a closer look at the distribution channels within Europe and we do now concentrate on distributors that play a pro-active role in the market. The results are fifty percent less distributors in Europe but a hundred percent dedication to service and partnership.

How does your product strategy look like for the near future?

B. Winnen: In general Sony is focused to enhance its product competitiveness through platform integration and common chassis development with our semiconductor and consumer business units. We have fully renewed our lineup over 12 months and just completed 28 models of HD lineup deployment to the market. We do already have a good position when it comes to high-end products, but

we expanded our product line-up more to entry to mid range through development of cost-competitive products like the new X-series. Furthermore, we introduced 4ch/8ch plug and play turn-key HD recording solution (NSR-S series) to make the IP/HD easier for everybody in the industry. By these lineup expansion, Sony is now positioned not only high end camera manufacturer, but also affordable entry HD security solution provider.

There are more and more HD cameras on the market. What are the USP's of Sony cameras?

B. Winnen: Our R&D departments are constantly working to improve the picture quality of our cameras. As a lot of key components like CMOS image sensors are developed by Sony, it is easier for us to ensure superior picture quality. If you look at the picture quality, HD resolution is almost the new standard. But resolution is only one component of picture quality for security application. We want to combine HD pictures with great low light performance in our day/night cameras and have integrated IR illuminators in some of our cameras. We also focus on the development of better and better Wide Dynamic Range capabilities of our cameras. Normally the higher the resolution of a camera is, the more difficult it is the offer a good WDR functionality. The introduction of our „View-DR" technology dramatically enhances visibility in bright and dark areas.

What do you want to achieve in the next months?

B. Winnen: We aim to become the market leader in IP by the end of 2012 in Europe. Nothing less than that.

►CONTACT

Sony Professional Solutions Europe,
Basingstoke, United Kingdom
Tel.: +44 1256 355011 · Fax: +44 1256 811110
yu.kitamura@eu.sony.com · www.pro.sony.com

GIT SECURITY AWARD 2011

Five Times Three Winners

READER PRICE

We congratulate the winner of the reader price on a Pentax camera (fig. similar): Joerg Kubein, Fire Service City of Eberbach

„Won three times, please do not vote again for this…" – you might know this from your favourite radio or TV show. With GIT SECURITY AWARD it seems as if there are some serial winners, too; at least in category B and C. But there are also surprises. Anyway, we say congratulation, strike, bully: good product submitted, supporters and followers inspired, winner status won.

On the following pages you will find them, the three winners of each category of GIT SECURITY AWARD 2011. This is a readership award. So all these winners received the most votes, casted via print or online ballot.

But all nominated products won. We introduced them to a wide audience, to the readerships of GIT SECURITY and the German issue GIT SICHERHEIT as well as to those of the online platforms and business webs PRO-4-PRO.com, GIT-SECURITY.com and GIT-SICHERHEIT.de.

You, dear readers, had a close look at latest safety and security solutions and you voted for your favourite. Thank you!

We hope that you will join us again for next year´s "GSA" – but now we present you on the following pages five times three winners of their categories at GIT SECURITY AWARD 2011.

Category A

Safe Automation

Georg Schlegel

Self-monitoring Contact Blocks for Emergency

The patented self-monitoring safety contact blocks by Schlegel are the response to this danger that may occur as a result of negligent assembly or mechanical damage. In such a situation the self-monitoring safety contact block ensures that the emergency function is activated and the installation is switched off immediately.

WINNER
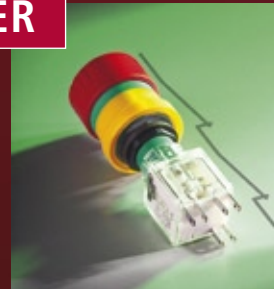
Category B

Fire Protection

WINNER

Novar by Honeywell

Voice alarm system Variodyn D

The traditional, costly and time-consuming wiring over contacts and inputs is in this new networking fire and voice alarm system replaced by a comfortable data interface between the individual disciplines. Both systems are networked over two independent interfaces permanently being monitored.

Category C

CCTV

WINNER

Axis

Q1910-E Thermal Network Camera

The Thermal Network Camera is a perfect complement to any network video system that needs to secure an area 24 hours a day, seven days a week. The cameras use thermal imaging, which allows users to detect people, objects and incidents in complete darkness and difficult conditions.

2nd PLACE

SICK AG

miniTwin Safety Light Grid

The compact blind-zone-free design and also the smallest protective field heights enables a previously unattainable level of integration into the machine design as well as completely new protection concepts.

3rd PLACE

Pepperl + Fuchs

DART

Dynamic Arc Recognition and Termination is a totally new concept for intrinsically safe electric circuits. It does not prevent the formation of a spark by drastically limiting the maximum effective power, but uses a dynamic electronic circuit, which automatically stops the flow of current, before a spark is able to ignite the atmosphere.

2nd PLACE

Securiton

SecuriFire

The fire alarm system SecuriFire offers a fully redundant system architecture for the highest system stability. The new Spider-Net-Technology stands for maximum accessibility and not only joins the centres in a circuit but also cross-links them. The result is a high-security network resistant even to multiple disruptions.

Hekatron

Ventilation-Smoke-Switch-System LRS 04 Ex

The Ventilation-Smoke-Switch-System LRS 04 Ex offers a wide range of applications like the early smoke detection and controlling of ventilation systems as well as fire dumpers and smoke dumpers in explosive areas. LRS 04 Ex is the only system which is ATEX-approved for the Ex-zones 1 and 2.

2nd PLACE

3rd PLACE

Panasonic

i-Pro SmartHD Cameras

The next generation of i-Pro cameras provides a crystal clear full HD image for significantly clearer and more detailed identifications. The i-Pro SmartHD range supports face detection technology, enabling criminals to be recognised in a much more efficient manor.

3rd PLACE

Dallmeier electronic

VideoNetBox

Owing to its compact and sophisticated design the VideoNetBox is flexible and can be mounted in almost any location. Configuration, recording, transmission and evaluation – the VNB offers full functionality within a small housing.

Category D

Locks and Access Control

WINNER

S. Siedle & Soehne

Siedle Scope

Siedle Scope is a mobile video call station and DECT telephone in one. Scope shows who is at the door – from anywhere in the house, on the terrace or in the garden and is the ideal complement to a fixed call station and the ideal retrofit unit for existing video systems.

Category E

Safety at Work and Hazardous Substance Management

WINNER

Draeger

CPS 7900 – Second Skin for Tough Assignments

The new gas-tight Dräger CPS 7900 reusable suit is resistant to flames, chemicals, warfare agents, and liquefied gasses. In addition, it displays high mechanical resistance and can be used in potentially explosive atmospheres.

2nd PLACE

Assa Abloy

Cliq-Remote

Cliq locking systems are now being extended to include a mobile programming device and a wall programming device which use the newly developed Cliq Remote technology. The hardware enables locking media to be managed automatically whenever required.
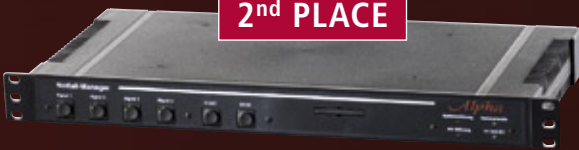
Bosch Security Systems

Alarm Platform 5000

Due to the modular nature of the system the Modular Alarm Platform 5000 allows easy modification of existing installations over time to suit changing needs. The high flexibility of the system, moreover, allows a combination of internal and external network buses.

3rd PLACE

2nd PLACE

Engineering Office Rosin

Emergency-Manager Alpha

The Emergency-Manager Alpha is able to broadcast fast, simple and precisely acoustic information by use of each sound-/voice alarm system in case of crisis situation (crazed action, fire, gas etc.) in schools or public buildings.

3rd PLACE

Zweibrueder Optoelectronics

LED Lenser M7

The LED Lenser M7 is equipped with light intelligence managed by programmable microcontrollers. These are the core piece of Smart Light Technology, an electronic light control system that provides several light programs (Professional, Easy, Defense) and different light functions.

COVER STORY

We Help Make the World a Safer Place

Future Proof, Integrated Security Solutions From Siemens

At the end of 2009 we talked to Frank C.S. Pedersen, CEO of Security Solutions, Siemens Building Technologies Division, about their new approach to security. Some 12 months on, we conduct another interview to see how far things have moved on.

GIT SECURITY: When we last spoke, open standards seemed to be very much a focus of the Siemens approach to security. Is this still the case?

F. Pedersen: More so than ever. This is certainly what customers are increasingly asking for and as this gains further momentum, it will drive the market to respond. Customers are much less prepared to accept a situation in which manufacturers of security products and solutions providers take a proprietary standards approach to connectivity across different systems. Such an approach limits options. It can lock customers into a manufacturer's service and pricing and can have significant consequences in terms of legacy issues – a complete replacement of the installed base is a not uncommon but a very costly way of dealing with inadequate compatibility if a system upgrade is required.

Flexibility is what customers are looking for – the capability to choose a security solution based on its performance, return on investment and suitability for a given application rather than being tied to a limited number of cameras, for example, simply because they are the only ones that are able to communicate with an existing system. And, of course, one which allows additional devices to be added easily, as and when the security requirements of a site change.

It is up to progressive and forward thinking companies to explore ways in which such open standard based technologies can be developed. At Siemens we have research and development facilities in 30 countries throughout the world, employing around 30,000 people, and for us ensuring that we are introducing technologies that are market driven is crucial.

So, does that mean that IT is becoming an ever more important feature in what you do?

F. Pedersen: Anybody involved in today's security marketplace cannot help but be aware of the ever increasing role of IT in the decision making process. The person ultimately responsible for security in an organisation now often operates at a corporate level and combines responsibility for both physical security (employees & assets) and also logical security (corporate information access). Only a few years ago a security officer in a building was someone who sat in the control room and was responsibile only for 'physical security', reporting either to an HR or facilities manager. As video surveillance has transferred into the digital environment with the advent of IP based systems, using the IT infrastructure, this has enabled greater integration and interoperability. This increased importance of IT with respect to security applications is driven by both technology and also business evolution. A security solution must now work in harmony with the IT environment that an organization employs. Supporting other business processes is important and IT managers/consultants now have a stronger impact in the specification process of the security disciplines.

As a business, Siemens Security Solutions has evolved and repositioned ourself to reflect this change. We are an integrated solutions provider of **software** based security systems and this is an important point to make. It is the software that is critical to opening up the capacity for different hardware elements within a security system to communicate. This software focus is a crucial change in our approach which we have been building on in recent years.

So what does that mean in terms of the solutions that you offer?

F. Pedersen: 2010 saw the launch of our Siveillance portfolio, designed to provide integrated security solutions to meet the security requirements of an organization whatever its size, and to provide support throughout the security chain. The Siveillance portfolio includes command and control and wide-area surveillance solutions, as well as security management stations, with a range of options to suit different applications.

Siveillance Command is for those whose primary task is to intervene in an emergency situation in the most appropriate way possible, such as fire brigades, police and ambulance services. With Siveillance Vantage we are targeting customers that typically have larger sites (either in terms of geographic distribution or in terms of physical size) with a variety of alarm sources, usually having small to medium intervention forces on site – airports, ports, oil and gas, water and energy, and other critical infrastructure

are typical applications. Siveillance SiteIQ, our wide-area surveillance system, automates traditional video surveillance and ensures immediate situational awareness.

Siveillance Fusion is a solution which can be used on large projects or sites but which is equally applicable to small and medium sized projects. It is for a business that wants to adopt the open systems architecture approach – for example, a customer can select from more than 100 ONVIF conformant products, and those supplied by our strategic partners.

You mentioned strategic partners. What does that mean, why is Security Solutions adopting this approach?

F. Pedersen: For example, Bosch is one of our "tier one" strategic suppliers, particularly in the area of video based products, supplying a comprehensive video portfolio focusing on imaging and recording devices. I mentioned earlier that we have focused our business on software platforms, interfacing and maintaining links to our management stations. By combining the strengths and technical competence of our product suppliers with our experience and expertise in systems integration, we can offer even more comprehensive solutions based on our Siveillance portfolio.

Returning to ONVIF, are the open standards you referred to only confined to network video equipment?

F. Pedersen: Providing a standard for integrating the various brands of network video equipment was certainly the initial objective behind ONVIF. We were the first systems integrator to become a full member of ONVIF which I think helped in that we brought a different perspective to the manufacturers since we had more direct experience and understanding of what end-users were looking for.

We are fully committed to expanding the open standards process and have a steering board position on ONVIF, in addition to a large team working on the development of the standards. We were the first member to have a security management station which fully conformed with the ONVIF standards with Siveillance Fusion. Access control is the next focus and we look forward to participating with further ONVIF Plugfests and other events through which the potential for true interoperability through open standards can be clearly demonstrated.

'Convergence' is a term that we are increasingly hearing in security. What does the term mean and how is it impacting on the solutions you provide?

F. Pedersen: Convergence applied in a security context refers to what were historically two distinct security functions – information security and physical security – and how they can be integrated. The ultimate goal is for the customer to have a seamless view of his business, with the underlying processes working together to improve productivity and to reduce costs and risk.

At Security Essen in 2010 we introduced the next step in this process. At the moment IT infrastructure is protected by various security measures to prevent data theft and building security is achieved through intrusion protection, access control, risk management systems etc. The two are effectively separate entities since the building security systems are not currently able to exchange data with IT security. Such integration would provide significant advantages in exploiting the full potential of modern security technologies.

In reality, IT security and modern physical security technologies use the same or similar resources and run on the same IP network infrastructure. Recognizing this, we developed Siveillance Netwatch which is an integrated solution which links physical and IT security for the first time.

And future developments?

F. Pedersen: I believe that customers are right in demanding systems which can deliver the real benefits afforded by open standards and convergence. We will continue to support and help to drive the work of ONVIF and to support open interfaces such as XML, OPC and Bacnet. This open approach will certainly provide the foundations on which our ongoing R&D will be based.

EVENT

International Profile and Regional Impact

Intersec 2011 in Dubai Will Feature Security and Fire Protection

Intersec 2011 is being held at the Dubai International Convention and Exhibition Centre from January 16 to 18 and is the largest and most comprehensive exhibition and conference for the security and safety industry in the Middle East. The exhibition and conference combines a strong international profile, with a huge regional impact. 19,159 visitors from 96 countries and over 710 exhibitors from 50 countries attended Intersec 2010 and for 2011 organizers expect 800 exhibitors and 22,000 trade visitors to attend. The show will be held under the patronage of His Highness Sheikh Mansoor bin Mohammed bin Rashid Al Maktoum who will open Intersec on Sunday, January 16.

Dubai to Spend €100 Million on Surveillance Systems

Intersec 2011 will take place in the middle of a market that is expected to show a double digit growth for the upcoming years. The demand for video surveillance systems in Middle Eastern countries will grow by 10 per cent in 2010, with even stronger growth forecast through to 2014, according to recent market estimates. Dubai alone is expected to spend Dhs 500 million (about €100 million) this year to install security cameras across the emirate. There are currently 25,000 security cameras in Dubai, which is policed by 16,500 police officers and another 4,000 administrative staff who oversee security in the city. Dubai is also expected to set up a modern forensics laboratory at a cost of Dhs 500 million, as it gears up to face the increasingly sophisticated threats posed by modern criminals. As glo-

bal threat perceptions rise and awareness about the need to guard against internal and external security breaches increases, governments and local authorities around the world are turning to increasingly sophisticated means to detect and prevent these threats before they can occur. This has led to an unprecedented rise in demand for parameter monitoring devices and video surveillance systems around the world - with the Middle East region among the prime movers in this regard.

"The awareness of the need to provide cutting-edge security measures to protect against ever more sophisticated threats is driving the demand for high-tech surveillance and detection systems in sensitive civilian and military installations," said Ahmed Pauwels, CEO of Epoc Messe Frankfurt, organizer of Intersec. "According to recent research, the global market for perimeter

security sensory systems will be worth Dhs 1.6 billion ($ 440 million) by 2014. This is being driven by new regulations being imposed by governments in the US, Europe and Asia regarding enhanced security measures at sensitive sites like airports, nuclear plants, power plants and other high-risk locations," Pauwels stated.

Video surveillance and detection systems have become increasingly popular as a means of threat detection in cities worldwide. Video cameras are increasingly popping up at most places with a large throughput of people. The Homeland Security and Policing division of Intersec trade fair and conference 2011 will feature the latest developments in threat management and prevention systems, monitoring and surveillance systems from leading manufacturers and security experts worldwide looking to tap into the burgeoning Middle East market.

Biometric Security Technology in the Focus of Interest

The use of biometrics as a fool proof means to verify identity in an attempt to weed out criminals with false documents is not a new phenomenon. However, a growing trend has been identified within both governments and the private sector

biometric technology globally with widespread deployment of finger/eye scanning and facial recognition devices at airports, sea ports and border posts across the region. More recently there has been an increase in those interested from within the corporate world too, not just in perimeter security and access control, but also as a means to protect access to corporate networks, PCs and classified information.

According to Stewart Hefferman, Chief Executive Officer of Omniperception, and speaker at the Commercial Security in a Changing Economy Conference, "Historically, governments led the adoption, and use, of biometric technologies. Today, this is no longer the case. Yesterday's biometric technologies have become today's biometric products and it is these products that are now commonly used in mission critical corporate environments. We continue to see an increasing demand for biometric products in the corporate sector and we cannot see this trend reversing anytime in the near future."

Mr. Hefferman will be presenting on the difficulties faced by many organisations in identifying the correct business model to support the use of biometric technology. His presentation will focus on the derived value and real benefits

tion, the UAE International FireFit Championships features leading firefighting teams from around the world that pit their skills against each other in a series of competitions over three days.

Wilbert Heijmans, Group Exhibitions Director, Epoc Messe Frankfurt said: "We are extremely glad that a team of firefighters from Kuwait are participating in the championships. As authorities around the region gear up to face safety and security threats, cooperation among the region's authorities in terms of methods and tactics is vital to increased success. Events like the championships allow firefighters to learn from each other, the skills and techniques useful in their local environments."

Apart from being a great opportunity for industry professionals to interact and meet with leading manufacturers, suppliers and international experts in their fields, the event also features the Intersec Conference. Packed with a spectrum of international speakers who will present their views on the latest technologies, methods and developments in the safety and security industry, delegates to the conference can benefit greatly from the networking and learning opportunities offered. Along with the FireFit Championships and live demonstrations running

to increasingly harness this powerful tool in order to keep home and corporate environments safe. "The growth in the biometric security market is remarkable," said Ahmed Pauwels, CEO of Epoc Messe Frankfurt. "Industry figures estimate that worldwide revenues from the biometric market will treble to US-$ 14 billion (AED 51.4 billion) by 2015," he added. "The latest in biometric security devices and machinery from the world's leading manufacturers will be on display at Intersec. Both the public and private sector in the region are increasingly interested in incorporating biometric technology as part of their overall security environment. We have seen the growth in finger scans, eye scans and facial recognition technology in airports and security-sensitive sites across the region," Pauwels stated.

Currently it is government and homeland security agencies who are the largest users of

to a company when the correct model is chosen with illustration of different business models applied to different organisations. In addition to the conference, companies such as Al Aqili Future Technologies, Avigilon, L1 Identity Solutions Bioscript, Enterprise, Locktronix, Screen Check Middle East, Suprema, Integrated Systems LLC, Virdi, ZK Software and others will present the latest solutions and technologies in the biometrics industry during Intersec.

The UAE FireFit Championships

A team of elite Kuwaiti firefighters will participate for the first time in the International FireFit Championships. The deal was struck after a meeting with the Director General of the Kuwait Fire Service Directorate, Major General Jasim Ali Al Mansouri. A very popular segment of Intersec which launched successfully during the last edi-

throughout the course of the three day trade exhibition, Intersec 2011 will be a lively event.

Mohammed Al Ahmadi, General Manager of 911 Fire Fighting and founder of the championships, said: "Participating in the Firefit Championships is a great opportunity to assess the professional readiness, tactical expertise and development of our firefighters. By pitting our skills against the best it motivates our firefighters to excel themselves and is a great morale booster."

VIDEO MANAGEMENT

Untiring Surveillance

IP Video Supports Quality Management

Kian Cord Company (KCC) is a private sector manufacturing company located about 400 km south west of Tehran in a suburb of Malayer city in the Hamedan province. The main product of KCC is tire cord fabric, which is supplied to major local and international tire manufacturers. Although KCC's 28 hectare production facilities – far from the city - may be considered as a candidate site for a comprehensive CCTV system, that was not the main reason why the KCC management was convinced to invest in an appropriate CCTV system.

"Quality as top priority!" was the inspiration for the implementation of CCTV. Besides ISO9001, ISO14001 and ISO18001 certificates for quality management, safety and environmental management, the KCC management is very busy with the continuous monitoring and supervision of the whole production process, transportation and warehousing. In addition, observation of the mandatory safety procedures and detailed investigation of events within the production process were among the other reasons that the KCC management felt the need to use a CCTV system along the process chain and production lines, rather than for security issues such as outdoor/perimeter applications.

Besides that, the remote monitoring capabilities either from the Tehran headquarters of KCC and from any other location in Iran or abroad were a kind of verification for the final decision of the KCC management team. After all, the presentation of live pictures of the production process to KCC's clients anywhere in the world was considered as a powerful marketing tool. Finally, the Vida Group, as system integrator for the total security system, was invited to present the best possible solutions to satisfy KCC's requirements.

IP as Best Solution

After a preliminary study of KCC's preconditions, an IP based CCTV system was considered to be the most appropriate. The reasons were firstly to make use of the existing IT backbone at the factory and the availability of IT experts for data transmission to different departments and to the HQ in Tehran. Secondly, an easy extensibility of the CCTV system within the plant should be possible due to the extension of the production facilities as well as for security issues. Thirdly, there should be remote system management and surveillance capability. Although these points fully justified an IP CCTV system within the plant; the realization of such an idea, however, would require an expert company not only to undertake the installation works but also to provide training, system support and maintenance. The Vida Group, which consists of several specialized companies and organizations, was nominated to manage the whole project.

Selection of Suitable Cameras

The next step was to select the appropriate cameras. They would have to be extremely reliable, to perform at 16 m height in a tough environment with high temperature and electromagnetic radiation and with no physical access while continually providing a crisp picture 24/7. Under such critical conditions, the functionality of full remote adjustment through the local area network would be essential, especially when such functions as auto tracking and motion detection are needed to disburden the local operators from full time monitoring. In order to minimize the model variation through the wide range of Panasonic cameras, the WV-NS202 PTZ camera with high dynamic range and optional 22x zoom and the WV-NF240 for those areas suitable for fixed camera installation were selected. The POE power supply of the cameras helped to minimize the wiring expenses and time schedule for the extremely complicated long cable routes. The whole CCTV LAN installation (in which both optical fiber and CAT5 cables were applied to support 62 cameras in the first step and up to 200 cameras in total) was completed by the LAN contractor within 2 weeks under Vida's supervision and with their technical support.

PC Solution Favored

Quotes were submitted together with some basic comments and recommendations. One was based on a NVR solution and the other one was a PC-based approach with Seetec software. The management of KCC decided in favor of the PC-based solution because this would minimize range costs by using standard devices. It would also be flexible when coping with future expansions and changes. In comparison, with an NVR solution, a further NVR device would be necessary in order to add a few more cameras, causing high costs. The German Seetec 5 software provides many features, such as full compatibility with all Panasonic cameras, integrated system management and hierarchical authorization, interfaces to other systems such as the fire alarm, remote monitoring of live and recorded events as well as full management of the whole system via internet. Event capturing from recorded images with data encryption and a timestamp as well as powerful output capabilities of the software like multi-screen viewing, alarm management, SMS, email functionalities, alarm levels and alarm priority management and response are also included.

System Operation

The installed system operates to the customer's utmost satisfaction, even with low bandwidth internet connection, and allows successful 24/7 monitoring. One major improvement for the KCC management is that it doesn't matter if they are in the plant, 400 km away in the Tehran office or at any other place in the world for marketing and sales activities. Wherever internet access is available, they can connect to the surveillance system at their pre-defined authorization level and easily monitor live pictures as well as pre-recorded events, change settings of the whole system and of single cameras and access reports of past events. They also receive alarm data immediately via email and mobile phone and are able to oversee important events in daily business.

► **C O N T A C T**

SeeTec AG, Philippsburg, Germany
Tel.: +49 7256 8086 0 · Fax: +49 7256 8086 15
info@seetec.de · www.seetec.de

Multi-Standard Software

Operating on the Geutebruck stand at Intersec in Dubai is the new multi-standard software. It not only allows all M-JPEG and H.264 based standard digital compression processes – including specialist video surveillance ones like MPEG4 CCTV, H264 CCTV – to be used in the same system. It also supports Onvif-compliant IP cameras and 16/9 HD-format cameras as well as analogue, digital and megapixel ones. In addition, this 'omnibrid' multi-standard video processing provides real-time signal trans-coding, which allows IP cameras without any special integral functions to be used for the manufacturer's video analysis processes. Video content analysis in the form of video motion detection (VMD), camera position authentication (CPA), activity detection (AD), object tracking (Obtrack) and automatic number plate recognition (ANPR) is being demonstrated on the new Geviscope-AS/R – a new extra-powerful analytics system for processing 24 or more channels at once. With a redundant power supply, an SSD system hard disk, a separate graphics card and the latest computer hardware, the system delivers high availability and high performance. Also new on the stand are the flexible operator units: Pilot/Center, Pilot/Joy and Pilot/Jog. Whether used separately or in combination, to suit the operator and the application, these units offer intuitive handling and excellent system control. Features include back-lighting for color-coded customized operating scenarios, as well as extra security and redundancy for managing Geviscope, Reporter or Gevistore systems. info@geutebruck.com

Intersec with Components for State-of-the-Art Control Rooms

BUSINESSPARTNER The company eyevis GmbH is exhibiting at 2011 Intersec Security Trade-show in Dubai. Partnering up with the five teams of WinGuard/Advancis, Avigilon, ACIC, RECARO, and Grupo Floria, the shared convention booth will provide guests with an insight into all the components necessary to create a state-of-the-art control room. In Dubai, eyevis will showcase three of its newest control-room-related products: the LED-backlit DLP rear projection cubes, the Narrow Bezel LCD displays, and the LED-backlit LCD displays. The LED cubes are the number 1 choice for traditional control room applications. Utilizing LED technology, they are very long lasting, provide a wonderful picture quality, and are designed to operate 24 hours a day, seven days a week without any negative image retention effects. Additionally, the low maintenance costs, myriad of sizes and resolutions for complete customization, and the 0.3 mm bezel for seamless video walls make the LED cubes one of eyevis' proudest and most popular achievements. For control room applications that have less physical space for a display wall, the Narrow Bezel LCD displays make the perfect solution. With a thin depth and a pixel-to-pixel gap of only 7.3 mm, these LCDs are designed to be built into modular display walls that take up less space than the cubes. The internal splitter allows for a simple setup that enables users to display a single picture across multiple displays without the technical hassle of an external graphics controller. Finally, the new LED-backlit LCD displays combine the long-lasting, beautiful quality of LED technology with the slim frame of an LCD display. The lower power consumption of the LEDs makes these units both cost-effective and eco-friendly, and they can be arranged in portrait or landscape mode for creative display configurations. For more information about these products and more, visit the eyevis convention booth in January 2011 at the Intersec Security Tradeshow in Dubai, or visit the website at www.eyevis.com.

INTERSEC DUBAI

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Innovative IP Products

CEM Systems will exhibit industry leading IP products at Intersec, including advanced IP card readers and controllers and the innovative CEM Power over Ethernet Plus (PoE+) access control solution. CEM IP products are available for use on the powerful CEM AC2000 security management system and incorporate the very latest in technology trends that make business sense. The renowned AC2000 has been successfully installed at sites including King Khalid University Hospital and Saadiyat Island construction site.

On display are:

- Advanced IP card readers & controllers, including CEM's S610f fingerprint reader.
- New: Low cost, yet highly secure sPass DESfire smart card reader
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►CONTACT

CEM Systems Ltd., Belfast, UK
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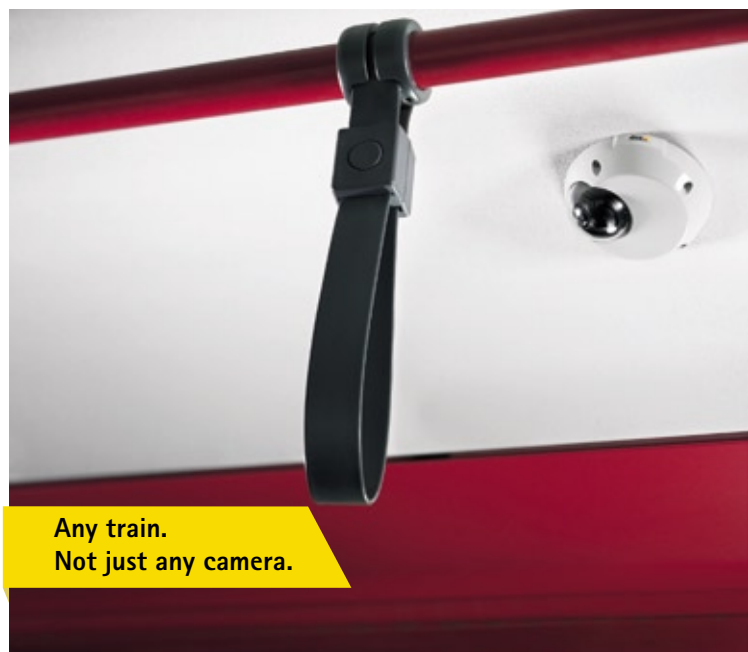
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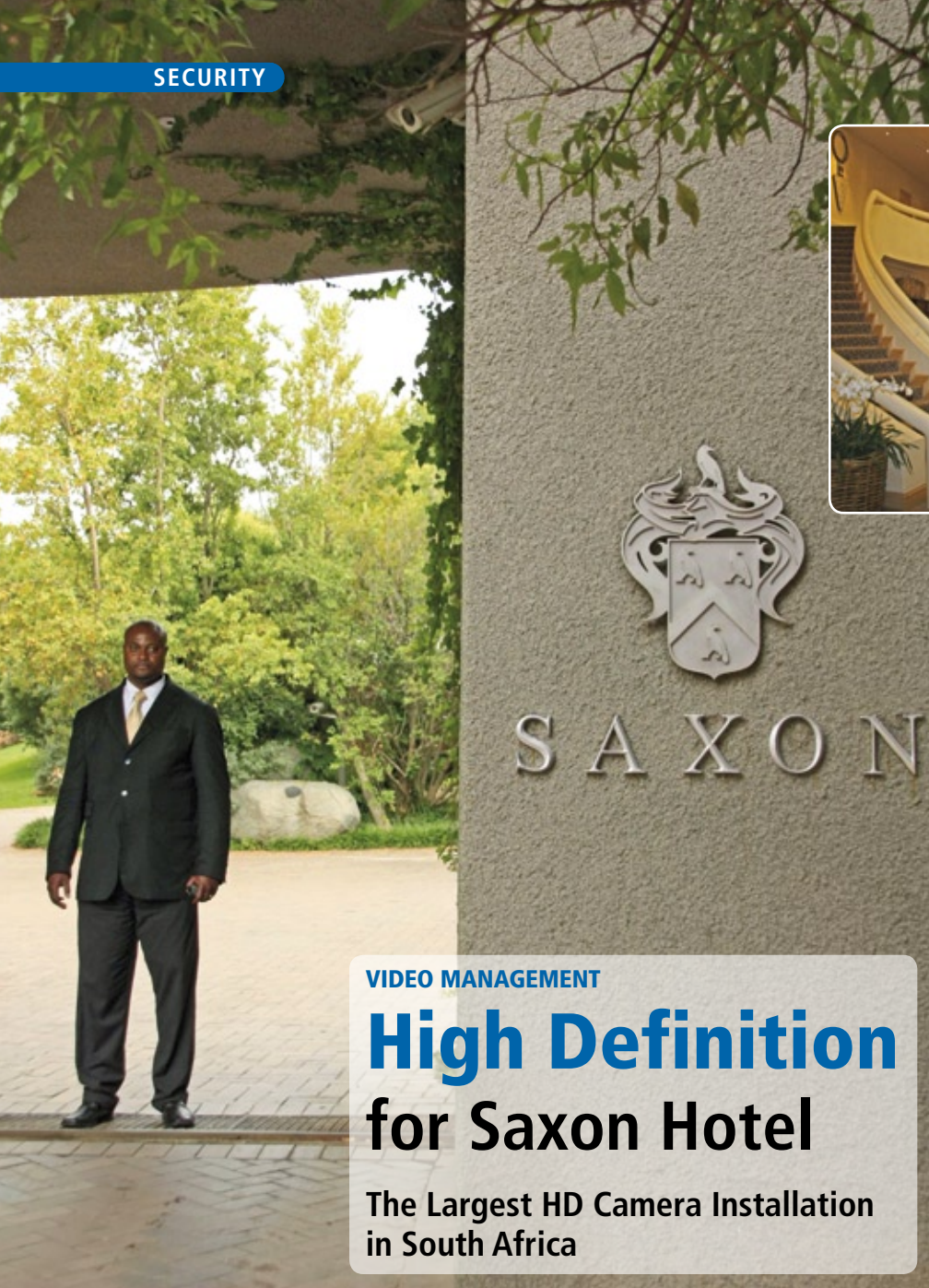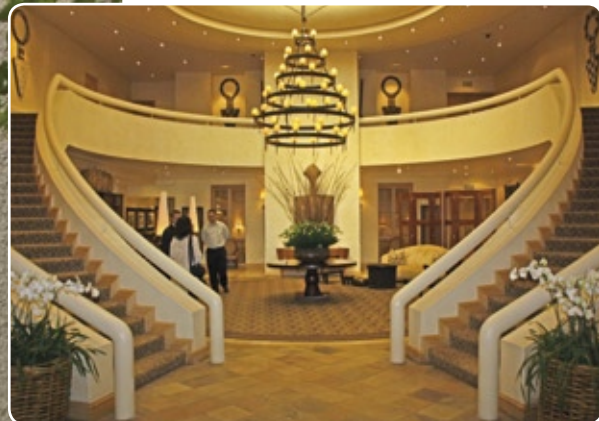
AXIS COMMUNICATION

VIDEO MANAGEMENT

High Definition for Saxon Hotel

The Largest HD Camera Installation in South Africa

Milestone Certified Partner Camsecure has installed the largest national implementation of HDTV video surveillance cameras at the award-winning Saxon Hotel in Johannesburg, South Africa. Upgrading the hotel's security technology with the newest innovations is a continuous return on investment thanks to the IP video management software.

The Saxon Boutique Hotel, Villas & Spa is an international award-winning hotel for top echelon guests such as political dignitaries, royalty, entertainers and other VIPs. Such clientele demand the utmost in security and privacy. The hotel's valuable original African art collection also requires top protection, and the surveillance sys-tem simultaneously provides constant overview of all staff shifts and activities to ensure the most effective operations. Camsecure installed Milestone XProtect Professional software in 2006 as the first stage in the hotel's security sys-tem foundation with future-proof adaptability provided by its IP open platform. Upgrades were made in 2008 and 2009 to XProtect Enterprise and additional Axis network cameras. In 2010, three new luxury villas were built after the hotel bought adjacent property. Scaling the security solution to the expanded facilities brought the opportunity to leverage the advantages of High Definition video quality by installing Axis HDTV cameras.

Expert Design for High Performance Efficiency

Francois Malan, Technical Director at Camsecure, reports: "We now have about 150 HDTV cam-eras at the Saxon and 40 legacy STD resolution cameras, running them on H.264 compression at 8fps which does not use a lot of disk space or bandwidth. In actual fact we are using less disk space with HDTV cameras on H.264 than we were using with STD resolution cameras on MJPEG. We are covering much larger areas with a single camera than ever before and recording more pixels for excellent coverage of all en-trances for identification purposes."

Malan explains that they chose five Dell pow-er edge servers with direct attached storage on a raid 5 configuration, "which is very fast per-formance, so we don't lose any footage. The trick is to have fast disks on your primary recording server. We are using SAS drives with 15,000 rpm – twice the speed of the standard SATA drives at 7,200 rpm. Also, we use a Windows 64 bit operating system which the Milestone software supports (opposed to the standard 32 bit OS). This gives us more available memory which helps with the read/write buffering process on the disks. We also group on servers the cameras that have lots of movement with cameras that have less movement to balance out the perform-ance, a practical consideration in the design. The Milestone software also does the archiving process to the attached storage very efficiently and therefore does not impact on the CPU pro-cessing or disk speeds – this is very important when recording HDTV, also since we are record-ing for 3 months which produces a lot of video archives."

Plans are to also use the Axis cameras own built-in motion detection in order to cut down on the processing power required by the recording servers, so the servers will barely be doing any processing work, just writing footage to disk.

"This actually works very well with the Milestone software as you then record from the camera only on event. You just set up the event in XProtect and you can still have a live stream for viewing the video. At the moment the highest CPU usage is around 20 %, which goes up some when the client does playback on a large amount of cameras at once," he says. "But Milestone has some clever settings in the Smart Client software which really make a dif-ference when viewing in the control room and remotely."

Malan remarks that there are a lot of other factors that also impact HDTV surveillance de-

Modern cameras are covering much larger areas with a single camera than ever before.
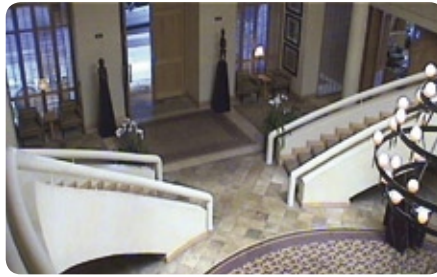
All entrances are secured: HD cameras deliver more pixels for excellent coverage using less system bandwidth.

HD Cameras deliver brilliant pictures from the hotel interior.

sign, such as switches and network infrastructure. For example, the amount of clients and screens to be used, or the number of cameras displayed per screen will influence the system performance.

IP Means Integration and Control

Before moving to the IP system, the Saxon had various systems that required different skills to run. This made managing the hotel and all its services a complex task. With the IP infrastructure, one person is able to manage the hotel from a single PC. The duty manager, for example, works with a tablet PC that provides full, wireless access to all systems at a touch. Sinisha Kokot, the Saxon's CIO, says the IP system has been designed to give guests the best experience possible, and make providing excellent service easier

for staff. To this end, the hotel carefully chose its service provider with the view to implementing open systems and platforms that could be fully integrated into the IP infrastructure.

Meeting the Highest Security Demands

Many of the Saxon Hotel's high profile guests also travel with their own security personnel. Often these professionals will do pre-visit inspections of the hotel to review their VIP's specific protection requirements. "Within the security industry, including foreign and police agencies, they know how state-of-the-art our operation is and that it is one of the best possibly available. They are therefore very comfortable with our security measures," asserts Shaun Swanepoel, Security Manager at the Saxon Hotel. "We run our security preventively and proactively – that's

what it's about." "The open platform network video approach with Milestone at the core allows the expansions over time to cover new property, but also to use new types of cameras that become available. Taking advantage of the latest technologies keeps the business competitive and on the cutting edge to continue providing the best security and service levels for their important guests," concludes Malan.

►CONTACT

Milestone Systems A/S, Broendby, Denmark
Tel.: +45 88 300330· Fax: +45 88 300301
sales@milestonesys.com · www.milestonesys.com
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The new alarm handling mode prevents any important events from going unnoticed

Advanced Archive Function

VIDEO MANAGEMENT

New Generation
Video Surveillance System

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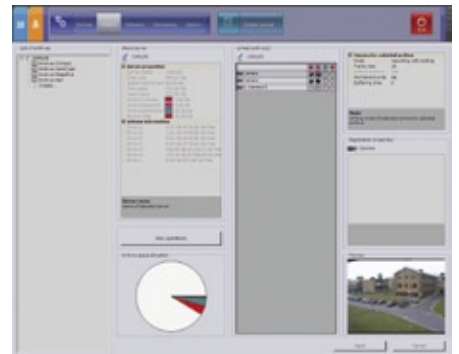

Setting the display layout

AxxonSoft is launching the first Product of this new generation – Axxon Smart Pro. This Professional video monitoring system for small to medium facilities incorporates a number of innovative developments of AxxonSoft for the first time. Combining the ease of operation with powerful tools for analytics and automation, Axxon Smart Pro sets a new functionality standard for this Product category.

Axxon Smart Pro adds superior convenience and functionality to all areas related to the operation of surveillance systems. System configuration is facilitated by the automatic search and recognition of connected IP cameras. The user can immediately configure additional functionality of the cameras – microphones, speakers, plug-in sensors, etc. Axxon Smart Pro also supports the built-in video detectors in the cameras and can receive two video streams from each camera, which Promotes the efficient use of computing resources of the video servers and client workstations. In addition to the built-in camera detectors, the user can always access the powerful video analytics of Axxon Smart 2.0. The video detectors are configured in an interactive mode, which allows the user to select the optimal settings for different situations.

Support for up to 256 IP cameras

IP camera support in Axxon Smart Pro is provided through the Drivers Pack Module specially developed by AxxonSoft and regularly updated to support new IP devices. Currently, the module supports up to 256 models of IP cameras and IP video servers. The latest version of the Drivers Pack is available for free download on the AxxonSoft website and can be installed directly into a working system. Thus, Driver's Pack allows adding support for new IP devices without having to wait for the release of new versions of Axxon Smart and without reinstalling the entire system. Key innovation of the Product is the interactive alarm Processing mode. This mode Provides the operator with a convenient tool for handling of alarm events in real time and in the video archive, as well as minimizes the risk of

missing such events. In addition, this mode Provides the ability to collect statistics to assess the quality of the operator's work.

Advanced Archive Function

The video archive of Axxon Smart Pro is also built on a completely new principle. First of all, it Provides the ability to create the required quantity of individual archive files for different types of records. This allows, for example, creating a separate archive with longer retention time for recordings of alarm events and an archive for continuous recording with shorter retention time. Adaptive management of the archives Promotes rational use of the disk space. The second innovation associated with the video archive is the AxxonFS Proprietary file system, specially designed for video storage. AxxonFS system maximizes the read/write speed (which is apProaching the physical access speed limit of the hard drive), prevents the accumulation of fragmented files over time, and extends the service life of hard drives.

Zooming and PTZ Easily Managed

The user interface deserves a special mention. It Provides the ability to create on-screen a variety of standard and custom video camera layouts, and to easily manage zooming and PTZ functions. All features of the interface are organized in a manner that Provides the user with maximum convenience and control efficiency and the ability to quickly access the most frequently used functions. Ultimately, this assures that operation of the system can be learned easily and quickly. Axxon Smart Pro is a constantly evolving Product. The intelligent search of archival video recordings based on defined parameters, such as movement in a zone, crossing of a line, direction and speed of moving objects, etc., currently under development at AxxonSoft, will be incorporated in the next release. This will not require pre-configuration of the video detectors; rather the search will be conducted on the parameters specified by the user at the time of the search request.

Headstart in Europe

Although the official launch of the product was December 1st, system integrators in Germany have already equipped the first projects with the latest version of Axxon Smart Pro. According to Torsten Anstaedt, Managing Director EMEA, Axxon Smart Pro is the most innovative video management software product in the EMEA market from user-friendliness through to the integrated video analysis.

►CONTACT

Torsten Anstädt
AxxonSoft GmbH, Wiesbaden, Germany
Tel.: +49 611 1575140 · Fax: + 49 611 1575141
torsten.anstaedt@axxonsoft.com
www.axxonsoft.com

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More Security
through Integration

With Their Complex Security Technology, Airports Need Centralized Management Systems

Great importance has always been attributed to flight safety, however, after 9/11 the requirements of airport operators and airlines have significantly been raised. Also, recent developments such as the discovery of suspect packages in cargo areas have proven that the danger of terrorism is still very prevalent. In order to ensure the safety of passengers, in-flight crews and members of the ground staff, airport operators do not only need complex security technology but also an integrated and intelligent threat management system.

In addition, in most countries operators have to comply with specific legal regulations. As an example, the German air safety law obligates airport operators to "… ensure that airport grounds, buildings, areas and facilities are constructed and designed in such a way that the necessary structural and technical security and the appropriate implementation of the personnel security and protection measures, as well as the control of the areas not accessible to the general public, are maintained." Even the airlines are obligated to implement comprehensive security measures. Although the law only specifically refers to the necessity for a comprehensive video surveillance and effective access control system, fire protection and evacuation technologies also play an important role at airports. High fire loads such as cable networks, comprehensive technical facilities and equipment, non-visible baggage as well as the nonchalance of passengers, visitors or employees all lead to continuous fire hazards; of course bomb scares can also necessitate an airport evacuation at any time.

Linked Together: Fire Protection and Evacuation

Today, fire protection and evacuation are so closely linked that the advantages of integrating them into a common, centralized control center are evident. For this reason, the airport in Bratislava (Slovakia) has several networked fire detection control units made by Bosch and connected to a Praesideo Public Address System via the Building Integration System (BIS). This enables the fire detector's alarm to trigger, either immediately or after alarm verification, automatic announcements into the jeopardized area. If video surveillance is also integrated into this type of control center, security can be increased dramatically. Potential fire hazards and blocked emergency exists can then be recognized at an early stage. In this way, the operations controllers have the opportunity to manage an evacuation in a way that best fits the current overall situation. This "real-time ability" through integration of video surveillance can, in case of emergency, save lives and avoids long-term operational shutdowns.

Creates a Security Plus: The Combination of Access Control and Video

Further synergies are created by the integration of video surveillance with access control as well as intrusion detection systems. Modern access control systems based on chip cards allow an efficient management of access authorizations, but without any additional control instruments they are generally powerless against abuse. That's why at airports these types of systems are generally used in conjunction with isolating devices and biometric features. Beyond this,

all critical access points should be additionally monitored with video cameras.

This enables the operator to receive card data as well as video images simultaneously on his or her monitor whenever an unauthorized access attempt is discovered. For certainty of identification, the picture from the identification camera can also be shown next to an archived photograph of the employee. In cases of a match, the operating personnel will be able to release the door manually; in other instances access will be denied and the security personnel will be alarmed. If no employee isolating device is installed, even the moving through of additional people can be reliably prevented.

An additional area of use of the integrated video surveillance is alarm verification. If an alarm is set-off at a door, for example because the door has been left open too long or because the incorrect access data has been entered, then an image of the corresponding location is immediately displayed on the user's screen; the image can simultaneously be recorded with a connected hybrid/network recorder. Additionally, archive videos – that have been allocated to each alarm – can be superimposed. In this fashion, even intrusion detection can be efficiently supported by video cameras that transmit their images directly to the airport's security headquarters.

More Security and Efficient Operation

The integration of all security-technical systems into an overriding management system is appropriate in order to significantly increase the level of security in an airport. It opens the possibility to automatically correlate alarms and other information from the individual subsystems and, if required, to very quickly take targeted measures as well as to be able to react to dangerous situations or incidents. Additionally, central management is primarily responsible for ensuring that such a complex installation can be operated

both efficiently and economically. After all, on a daily basis thousands of notifications and alarms from all security areas and technological facilities need to be managed and coordinated. In a centralized hazard management system, all incoming notifications from connected subsystems are summarized, visualized and processed on a uniform user interface. In this way, for example, Building Integration System (BIS) from Bosch supports the centralized administration of:

- Fire detection
- Tank shutdown systems
- Intrusion detection
- Video surveillance systems (CCTV)
- Access control systems
- Surveillance of the exterior grounds
- Management of delivery doors, gates, parking garages and parking areas
- Dynamic allocation of alarm and image
- Emergency exit control
- Intercom system
- Public Address system
- Video management and employee video verification
- Employee database and access authorization
- Elevator control

The Building Integration System offers the operator a complete overview of all subsystems,

all centralized areas and even the status of individual detectors. Thereby it is ensured that the proper reaction to notification and alarms occurs and these are acknowledged. In addition, the operator can define escalation procedures, for example if a user does not immediately respond to an alarm.

The central management systems are simplified through the increasing use of classic network technology such as Ethernet and IP, so that a common and, in addition, cost-efficient technical platform is available to all areas of security technology. Information transmitted by video cameras, fire and smoke detector or door controls can be combined via uniform protocols such as TCP/IP and standardized interfaces like OPC. This even allows for the integration of third party subsystems in building and security technologies.

Jörg Ulrich
Key Account Manager Fraport at
Bosch Security Systems

►CONTACT

Bosch Security Systems, Grasbrunn, Germany
Tel.: +49 89 6290 1647 · Fax: +49 89 6290 281647
emea.securitysystems@bosch.com
www.boschsecurity.com

AIRPORT SECURITY

Hands Up!

A Close Look At People Screening Products – Part 1

Courtesy of Manchester Airport / Rapiscan

Hardly any subject to do with security has raised so much public discussion and controversy in the past few years as the introduction of so-called 'body scanners'. In the first of a two-part article we look at these systems through the eyes of the operators and users. Their use is spreading quite quickly and what passengers feel about them will be dealt with in the next part. Here we address some of the issues that most concern the users.

It is obviously in the interests of the agencies responsible for security at airports and other passenger transit locations worldwide to ensure good passenger flow while still maintaining as near 100 % security effectiveness as possible. Although some of these initial trials in Europe actually resulted in slower passenger processing, whole body scanners do promise to speed up the security procedure by removing the need for any hands-on frisking. This challenge has undoubtedly been made easier by the latest developments in total body screening devices.

Raise and Rays

While some countries have already wholeheartedly adopted these machines some years ago, in others operation is taking place under restricted trial but nevertheless real, everyday conditions to prove their effectiveness and reliability, and to identify areas that need regulation and/or im-

provement. Two different technologies are currently being used.

X-ray scanners provided by, amongst others, the American manufacturer Rapiscan uses a backscatter-technique. Although extremely low doses of radiation are used, they still provide reliable detection of organic and inorganic materials. The Ait84 manufactured by Tek84 uses dual-mode transmission and backscatter to provide dual images in one shot without using any additional dose versus a backscatter only system.

An alternate technology, first trialed in airports as long ago as 2002 by Qinetiq, is also available from Smiths Detection, L3 and others. It is now under evaluation and generates millimeter waves at RF (a frequency between that of infra-red light and microwaves). It is somewhat quicker in producing results – it takes less than 10 seconds to obtain a multidirectional view – resulting in a potential throughput of up to 400 people per hour. But although the scan time of millimeter wave systems with 3 seconds is significantly shorter than the 6 seconds needed for backscatter systems, it takes almost 15 additional seconds for persons to enter the scanner, pose (lift arms) and exit. Hence the total time of a person in the scanner is about 20 seconds including scan for both technologies in an airport setting. This is three passengers per minute or about 200 per hour for both backscatter and millimeter wave. Again, extremely low transmission levels are sufficient to deliver clear images and are no danger to the human body.

There is also a passive version of this type of sensitive scanner, like the Gen2 provided by
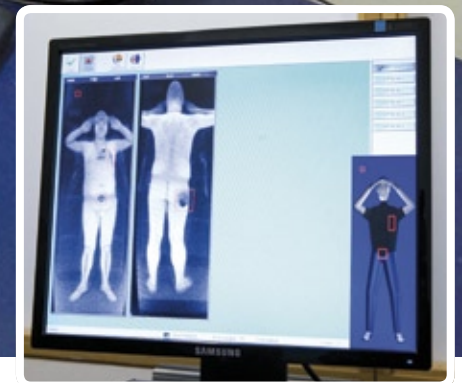
Brijot Imaging, that emits absolutely nothing but instead simply receives the natural radiation of waves shorter than 1 mm that are emitted by the human body. Smiths Detection also provide an explosives and narcotics detector based on ion mobility spectrometry that quickly analyzes minute particles of such substances that are carried on the person's hair and clothes. Again a walk-through system, it is capable of handling up to 6 people per minute.

EU Rules, OK?

The use of such total body scanners was the subject of discussion amongst a sub-committee of the European Parliament during November 2010. A few recommendations have already emerged from the talks that will help to make the way legally clear for uniform introduction and management of such systems throughout Europe. For example, there must be no danger to health, and both personal privacy and data privacy must be fully respected. The "Use of Body Scanners – 10 Questions and Answers" document issued in July 2010 by the EU Agency for Fundamental Rights has demonstrated that EU legislators must now pave a way through the legal, moral and political minefields before widespread introduction happens.

What's the procedure?

On the one-hand, security staff get a natural workout as they are constantly on the move, but any manual pat-down procedure is both time and

labor-intensive, so eliminating this – or at least reducing the frequency – can only be beneficial. Depending upon the specific system, it is not always necessary to remove jackets and/or shoes. The traveler stands in the body scanner and raises their hands above their head for a few seconds. In some systems they also need to turn 90 degrees for full detection. The operator is given an image showing any suspect items such as liquids, powders, gels, ceramics as well as all standard solid and liquid explosives, weapons and narcotics. Even money will be highlighted on the operator's screen. The analyst then indicates where the passenger should be patted down. Although this aspect lies wholly within the judgment of the security service operating the machine, it may be prudent to have the analyst – the person viewing the screen – in a separate room away from the scanner itself so that no association can be made between the person being scanned and the displayed image. In this way, personal privacy is respected but scanning is still effective.

Who uses them?

Airports are the obvious users of such mass scanning systems. Many hundred such body scanners are now in use around the world, although they have no general approval for use within the European Union so countries are carrying out trials under their own jurisdiction.

Paris, Amsterdam, Manchester, London Heathrow, Zurich and four Italian airports have all tested body scanners from various manufacturers during 2010. Hamburg airport in Germany began a trial at the end of September 2010, initially for a six month period, after the responsible government department for protection against radiation had declared the machines not harmful to human health. The airport at Cologne/Bonn has also recently taken part in a trial.

While the European Union is generally promoting their use, the results of these tests have sometimes given cause for concern to airport security authorities over their widespread introduction. The teething troubles have included a lower speed of passenger throughput than expected, folds in clothing causing false alarms, misunderstandings between operators and passengers and also the fact that not just metal items should be removed from pockets but also other items such as paper handkerchiefs, banknotes and boarding cards.

Ongoing improvements in automatic detection algorithms as well as passenger familiarity with the procedure promise to remedy the situation soon.

When sorting the purchase decision priorities it will be important to consider the manpower necessary to operate the system, power consumption, the footprint of the system (possibly including a separate room for the analyst watching the monitor) as well as the scanning time and therefore the hourly throughput. All of these may have a significant effect on long-term operational costs. False alarm rates of up to 70% that were seen in the first trials can limit the throughput rates to about 60 to 90 passengers per hour.

Engineers are now working on the introduction of object recognition, similar to that successfully used in CCTV systems, which will make an analyst unnecessary. Power consumption has also been reduced compared to early versions.

In general, any border crossings, whether land-land or land-sea, can benefit from such scanners in order to discourage and hopefully prevent terrorist acts. Other current users and potential future markets include both private high-security installations – such as refineries and chemical plants, jewel mines and product development centers – as well as government sites – prisons, law courts, police and armed forces compounds.

In the second part of this article we will look at body scanners through the eyes of those being scanned – their opinions, reservations and, indeed, their fears.

▶ CONTACT

Whole Body Imaging Manufacturers:

AS&E
"Smartcheck"
Tel.: +1 978 262 8700
www.as-e.com

Brijot Imaging Systems Inc.
"GEN2"
Tel.: +1 407 641 4370
www.brijot.com
info@brijot.com

L3 Security & Detection Systems.
"Provision"
Tel.: +1 781 939 3800
www.sds.l-3com.com

Qinetiq
"Borderwatch" and "SPO-20"
Tel.: +44 8700 100942
www.qinetiq.com

Rapiscan
"Secure 1000" and "Wavescan 200"
Tel.: +44 870 7774301
www.rapiscansystems.com

Smiths Heimann GmbH
"eqo" and "B-Scan"
Tel.: +49 611 94120
www.smithsdetection.com
germany.info@smithsdetection.com

Tek84
"Ait84"
Amit Verma (Director of Government Affairs)
Tel.: +1 858 676 5382 Ext. 103
www.tek84.com
amit.verma@tek84.com

# Product Overview Presentations
People Screening Products

AS&E "Smartcheck"

The patented system from AS&E uses the X-ray back-scatter technique to determine the different absorption rates of organic and inorganic materials. Hidden objects such as plastic or liquid explosives, guns, drugs and tools are clearly visible to the operator as light or dark shading. A neutral image option protects the privacy of those screened and, depending on configuration, the system can be run by one or two operators.

Brijot Imaging Systems Inc. "GEN2"

Passive millimeter wave technology is employed in this self-contained screening device to detect explosives and weapons, amongst other interesting items made from solids, liquids or gels. The image provided to the operator highlights suspect areas but shows no body detail. It is not possible to recognize a person or even their gender from the real-time display that takes between 4 and 12 frames per second.
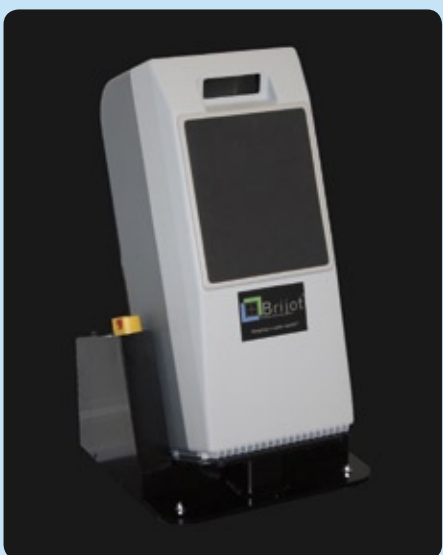
L3 Security & Detection Systems. "Provision"

The L3 Provision system uses low-level active millimeter waves to produce a 3D black and white silhouette showing operators where suspect materials are concealed. The total view is available within 2 to 10 seconds, permitting a flow of between 200 and 400 people per hour. The system can be set up to blur faces and other areas of the body image, ensuring that recognition is impossible and privacy is maintained. The ProVision people screening system has been approved by the US Transportation Security Administration for use at checkpoints in US airports.

Rapiscan "Secure 1000" and "Wavescan 200"

Currently the most widely used system worldwide, the low-dose x-ray Secure 1000 takes less than 7 seconds to complete its scan. Optional networking enables a remote image analyst to be up to 100 m away. The company's passive millimeter-wave alternative called Wavescan 200 ensures high personnel throughput with assistance from an inbuilt detection engine running on full-motion video. No anatomical detail is displayed.

Smiths Heimann "eqo" and "B-Scan"

The flat-panel millimeter wave technology eqo system takes up minimal floor space and provides real-time images to detect concealed objects, helped by an automatic detection algorithm that speeds up the security check. The B-Scan walk-in portal uses an x-ray dose lower than that of typical backscatter units to form a high-resolution head-to-toe image, including shoes, in less than 7 seconds.

Tek84 "Ait84"

Also scanning people's shoes while still being worn, the dual-mode Ait84 uses a combination of both backscatter and transmission x-ray techniques to improve detection but without increasing the dose. Of particular interest is that the system can also scan turbans and burqas in situ, thereby removing the need for a more intrusive manual pat-down search. The compact system is economic with floor-space requirements.

Qinetiq "Borderwatch" and "SPO-20"

First trialed in 2003 in Athens and consistently improved since then, the millimeter-wave based Borderwatch system is used, amongst others, by the British immigration service and Eurotunnel. The small, mobile SPO-20 system is passive, works in real time and will alert if it detects substances at a range of up to 20 meters, making it ideal for high flow situations.

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AIRPORT SECURITY

What Have We Learned?

The US 100 % Air Cargo Scanning Deadline Has Now Past

The 2007 US law called for 50 % of air cargo on passenger aircraft to be screened by February 2009, and 100% by August 2010. The Act defines screening as "a physical examination, or non-intrusive method of assessing whether cargo poses a threat to national security," it specifies methods that "include x-ray systems, explosives trace detection, explosive detection canine teams certified by the TSA, or physical search together with manifest verification".

This meant that those shipping air cargo to the United States were faced with the need to x-ray every individual box, parcel, container or pallet. The key difference between the new requirements for the screening of air cargo and the pre-existing air passenger screenings is that the US government did not offer to either do the work or to pay for it. The air freight industry was expected to cover the cost. The 100 % screening of air cargo on domestic passenger flights within the US has now been achieved. This result clearly demonstrates that enhanced security screening is both possible and achievable; even when it is industry funded. However, it has been reported that 20 % of air cargo that comes to the US from overseas each year is physically checked for explosive devices. Given recent events, the screening of international air cargo is likely to be the subject of much discussion by industry and regulators.

What Can We Learn from the US Domestic Experience?

Firstly, it took months of regulator outreach and education to create both an understanding of what was required and an appreciation of the technology, tools and procedures available to the freight industry. Secondly, it was important that the regulator – in this case the US TSA – specified, tested and approved the equipment designed to meet the standards required for the screening of cargo from a single package, a pallet and right up to a densely packed cargo container. Thirdly, it demonstrated the importance of appreciating and understanding the complete supply-chain within the complex air cargo industry. Thorough training and a wide range of technologies need to be deployed at exactly the right points in this chain in order to move to the 100 per cent security screening of air-cargo on passenger aircraft.

The new law also created the opportunity for air cargo carriers to become 'certified' if they can prove that the required screening of their shipments is done before the cargo leaves their facilities. This means that those carriers who invest in efficient screening equipment have the opportunity to create real business advantage above those who do not. The air cargo industry will want to avoid any disruption to the speed of their shipments and they should therefore explore the proven technologies deployed in the US that are able to securely scan cargo by the container load. By minimising or negating the need to break cargo down for scanning air freight carriers can save both cost and time as security is enhanced to meet the new regulatory requirements.

X-ray Screening

Rapiscan is one of a select few security technology providers to have had multiple systems placed on the TSA's Qualified Technology List for Air Cargo Screening. All the systems use advanced, high performance transmission x-ray technology, which allows for outstanding detection of organic and inorganic threats, such as narcotics, weapons, liquid threats, explosives and other items. Rapiscan is the only technology vendor to offer a TSA approved 1 MeV high energy X-ray screening solution for the inspection of large and densely packed air cargo pallets and ULD containers.

Proven Dual View Imaging:
Rapiscan's dual view imaging technology has been approved for use by both the TSA and UK Department for Transport (DfT). Dual view imaging offers a significant advantage operationally because it gives the operator an additional view through which to detect threats and to gather important information regarding the size and density of the items being scanned – which is particularly important in air cargo, where the materials being scanned can vary dramatically, from container to container.

Advanced Threat Detection Software:
The advanced threat detection software uses the breadth of information gathered during the x-ray scan to help the operator identify all potential areas of interest in an air cargo container.

Outstanding Value:
Latest systems offer air cargo companies the best overall combination of reliability, price competitiveness and detection capability available. Well before the TSA regulations were in place, solutions were chosen by air cargo carriers, airlines and freight forwards around the world.

All air cargo technologies comply with applicable international safety standards and regulations. The fully-integrated, all-inclusive solutions are already in use by major carriers such as Fed-Ex, UPS and DHL. Rapiscan applies the broadest array of technologies to meet individual customer needs, and supports its systems with a global service network. The result for a customer is the ability to meet or exceed the TSA requirements as a certified cargo carrier without slowing down the service they provide to the customer.

FIRE DETECTION

Ready for the Olympics

Sports Park Protected by Advanced Fire Detection Technology

Surrey Sports Park, a new £36 million sports facility built to international standards, has been equipped with an Apollo-based fire detection system. Designed by internationally renowned architects Faulkner Browns, Surrey Sports Park has already been selected as a training venue for the Paralympic and Olympic Games and is part of the University of Surrey. The sports park opened on 19th April 2010 and is already attracting first class sports interest. It is now the official training ground for the Harlequins rugby team and has been designated as the London and South East Centre for Squash and Racketball.

Fire Bright Solutions Limited, based in Cheshire, won the contract to supply and install the BAFE certified fire detection system for Surrey Sports Park. The high specification, multi-purpose sports venue presented a complex set of challenges from a fire safety perspective; demanding the expertise of the Fire Bright team to fulfil the strict BAFE design requirements.

Surrey Sports Park contains both wet and dry sports facilities, including a 50m swimming pool, a health and fitness centre for cardio and weight training and three multi-purpose sports halls. In addition, there are six international standard, glass-backed squash courts (including two show courts with seating for 160 spectators), an indoor climbing centre and exercise studios.

As well as the main sports facilities, Surrey Sports Park offers consultation and treatment rooms, team meeting rooms and dedicated changing facilities for the wet and dry indoor sports, as well as changing facilities for outdoor sports which include football, rugby, cricket, tennis and hockey. With regard to post-exercise facilities, Surrey Sports Park is the first sports centre to incorporate a Starbucks Café and also has

the Bench Bar, which serves meals and can be hired out for private functions.

Fire Detection Requirements

Given the complex nature of the new sports complex, the client required a fire detection system that was reliable in a diverse range of environmental conditions. Surrey Sports Park also has ambitions to become a leading centre for disability sport in the UK, so meeting the requirements of the Disability Discrimination Act (DDA) was a critical part of the brief. In addition, the construction programme was run to very tight deadlines. Fire Bright Solutions therefore had to work closely with other contractors on the site to co-ordinate access and working times so that the project could be completed on time and to budget.

Fire Solution

Fire Bright Solutions recommended a fire detection system based on Apollo analogue addressable technology and designed around a Morley ZXe four-loop control panel. A combination of XP95 optical and heat detectors was specified to meet the main fire protection requirements, with Apollo Discovery multisensors being used in the changing room areas to reduce false alarm incidents caused by transient levels of steam from the showers.

Angela Atkin, System Designer for Fire Bright Solutions, said: "Apollo's analogue addressable technology gave us the product choice and flexibility to meet the client's requirements on this demanding project. Its open protocol also enabled us to select specialist products like self-aligning beam detectors and carbon monoxide detectors where necessary to meet localised conditions, such as high open spaces and confined spaces like the beer cellars." The audio visual alarm requirements for Surrey Sports Park were met using a mixture of Apollo integrated base sounders and integrated sounder beacons, so that detection and warning functions could be combined at a single point, with wall-mounted sounder and beacon equivalents used where

necessary. Apollo interfaces were used to enable the fire detection system to link with other essential plant and equipment as part of the cause and effect strategy for the complex.

Evacuation Procedures

A phased evacuation was agreed upon through a series of strategy meetings between Fire Bright, the client, the building control officer, architect, main contractor and local fire officers. The evacuation sequence has two phases: one for the wet area (which is defined as the swimming pool and its associated changing rooms and plant rooms) and one for the dry area (the rest of the complex).

The dry area evacuation sequence follows two stages. If a single fire detector is activated, a pre-alarm stage activates a buzzer and visual indicator on the control panel and a pulse sounder in reception. There is an option for other staff areas to receive the pulse sounder indication as well, should this be deemed desirable in future. The pre-alarm will also send a signal to security via the building management system, as well as releasing magnetic door holders and the door access system.

If the system is not reset within five minutes, or should a second fire detector or a single manual call point be activated in the dry area, the fire system will proceed to raise a full alert by activating all sounders and beacons continuously. Sounders in the wet area will be pulsed as a stand-by signal and shut-down sequences for critical plant and equipment will also be initiated. The wet area evacuation follows the same pattern, with sounders in the dry area being pulsed as a stand-by signal if there is a full alert in the wet area.

SECURITY FOR PUBLIC TRANSPORTATION

Transport Surveillance
Is Rapidly Changing

An Interview with Axis Manager Patrik Anderson about Video for Public Transportation

Axis Communications has been very succesful with public transportation projects and offers products specifically designed for this sector. Patrik Anderson, Director of Business Development, Transportation for Axis Communications, talks to GIT SECURITY to reveal how public transport surveillance is changing, and what security managers can do in order to future proof their systems.

What is the first thing that comes to mind when you hear "Public Transportation Security"?

P. Anderson: I would actually say that it is three things: Protecting passengers, personnel and assets. Caring for passengers' safety during their complete travel; from the very start of the journey until the final stop and exit out of the public transport system. Protecting the personnel during their complete work shift, during day and at night. For the assets; regardless of location at stations, depots, along the infrastructure and rolling stock.

What are the main reasons for needing to install surveillance?

P. Anderson: Public transport systems today, both in urban locations as well as nationwide, cover very big security domains. The number of locations, vehicles and length of infrastructure are diverse and disperse. The multitudes of security related events that occur originate not only from the volume of passengers but are also a mirror of society's issues & problems. Surveillance systems serve as the instrumental tool for security operators to be able to assess the situation at hand and make a decision remotely on what to do for each specific case. The ability to connect the right response to the right incident is the role of the surveillance system at its essence. There is a big difference between handling violence or vandalism at a station, managing a response to pick pocketing or other disorderly behavior on board a bus or metro and intercepting metal theft taking place on the rail infrastructure or detecting and preventing graf-fiti before it takes places at the depot. Surveillance systems are great at capturing these types of events, being the prolonged eyes.

What are the challenges in creating a safe and secure transportation environment?

P. Anderson: The vast number of people using public transport makes it more difficult to monitor than say, airports. Add to this the high number of entrances and exits on trains, tubes, buses, depots and stations, and designing an installation becomes tricky. For example, there are some 9 million people using the Moscow metro daily. Within it there are 173 stations spread out across twelve lines with a total length of 801 km of track and 4428 rail coaches in use on an average day. Now that's a lot of ground to cover!

In what way can IP-based surveillance solutions help to improve the security in public transit systems?

P. Anderson: IP can greatly improve surveillance capabilities by using open interfaces which are based on open standards and protocols. Even

the camera architecture is, in Axis' case, an open platform on which to execute embedded & intelligent software which analyzes the video stream and aids security operators with whatever is going on in their environment. When using traditional analog cameras, transport staff is able to investigate incidents which occur. However, when using IP surveillance to its true potential, staff can better detect and receive alerts for incidents in the very early stages of their development to help predict further activity. This is effectively like switching from reactive surveillance, where staff can respond to a situation they see occurring, to active surveillance, whereby staff can predict a situation and act to prevent it totally or minimize its full potential.

What might the future hold for transportation surveillance?

P. Anderson: In the near future we're going to be seeing a lot more IP based solutions. This will make it possible to easily connect various security systems to one another into larger systems and enable real time gathering and sharing of video information. We'll also start to see more solutions that are based on built in-camera intelligence (video analytics) as this technology matures. For example, automatic alerts when an object is blocking or crossing a railroad or rail track, or a motion detection sensor which alerts authorized personnel to the existence of trespassers on tracks, at stations and level crossings of the infrastructure. The proliferation of HDTV video quality will continue which allows for easy identification, facilitates investigations and compared to analog footage can be used more readily as valid evidence in a court of law. Furthermore, the high image resolution of HDTV video streams enables surveillance system designers

Axis transportation solutions

Axis Communications has a broad product portfolio specifically for the public transport sector. It offers IP surveillance solutions for use onboard vehicles, at stations & depots and along the infrastructure. All cameras hold the necessary transportation certificates and are rugged so to withstand the demanding conditions and environment they are placed in. They adhere to formal public transport sector regulations.

The network cameras in the Axis M31-R Series, which are designed specifically for being onboard vehicles, have a flat and discreet design with no sharp edges for passenger safety. They have an IP67 rating with an integrated dehumidifier and operate across a broad temperature range. They include intelligence such as active tampering alarms for detecting attempts such as blocking or spray-painting,-and video motion detection.

Axis also has a wide range of outdoor and vandal resistant offerings for stations, depots and infrastructure. For detection at night, in tunnels and low light conditions, Axis offers thermal imaging in the Axis Q19 Series.

Proven Large-scale Projects

Some references where Axis transportation solutions is being used:
- Stockholm metro and buses (Sweden): More than 15,000 cameras
- Sydney's new suburban trains (Australia): 7,000 cameras
- Madrid buses (Spain): 6,000 cameras
- SBB commuter trains in Zürich (Switzerland): 5,000 cameras
- Moscow metro, stations and subway trains (Russia): 3,000 cameras and video encoders

to use fewer cameras to cover the same surveillance domain compared to analog cameras. The face of transport surveillance is rapidly changing and an IP based system is the best way to ensure your surveillance system is future proof.

►CONTACT

Patrik Anderson
Axis Communications AB, Lund, Sweden
Tel.: +46 46 272 1800 · Fax: +46 46 13 61 30
www.axis.com

Traffic Jams Downtown Heavy Traffic Uptown

Kiev Intersections under Control with Video Management

Kiev is a large city with a population of around three million people. Like any metropolis, the regulation of traffic flows in the urban center is an important task. Its solution has been entrusted to a system powered by AxxonSoft's Intellect Software. To reduce congestion on the roads, the city administration enforced a range of special measures and limitations, including those concerning cargo transportation. However in spite of the fact that trucks without special permission were banned from entering the city center, many drivers violated that ban. Stopping every truck for document inspection could result in massive traffic jams. In order to solve this problem, city officials decided on deployment if an intelligent video surveillance system for traffic monitoring.

Choice of Solution: High Recognition Accuracy and Image Quality Despite Low-Speed Channels

With regard to the installation of the traffic video monitoring system, the following objectives were laid out: recognition of automobile types heading for the city center, identification of license plate numbers for all trucks and verification of whether trucks entering the city center have appropriate permission. If there is no permission, then an alarm message should pop up on the monitor. In choosing a system which would become the basis for future solutions, many factors were reviewed. The system should recognize number plates with great probability, possess a distributed architecture and capacity for expansion, be able to operate through low- speed data transfer channels, provide high image quality when frame size is limited, and finally have the capability of working with radar guns and collecting statistical information about the types of vehicles in the center.

Consequently, it was planned to integrate the video surveillance system with a traffic control system; therefore the ability to integrate was also an important factor. The Intellect platform completely satisfied all of the listed requirements. The necessary video analysis functions were achieved through the help of included modules for license plate recognition and traffic control. Integration with hardware for detecting speed – radar guns – was also completed by the Radar module. The installation of the system at two intersections was done by two firms – Ista Group and Infotex. The company Gabitus-Plus also acted as a system integrator. Besides, time-line was extremely important in factoring the decision. Intellect could be rolled out and configured quickly, thus allowed for the efficient inspection of its functionality and timely presentation to the Kiev State Traffic Police Authorities.

In order to verify the system's functionality and obtain statistical data about traffic in the center of Kiev, two intersections – at Bozhenko and Federova streets and at Tolstoy and Zhilyanskii streets - were chosen first. A sign was installed, banning trucks along Federov and Tolstoy streets into the city center. In the future, more than 100 intersections, entrances to the city, and bridges over the Dnipr are to be equipped with the same system, with the option of future functionality developments. Under this plan, collected and processed information must be transferred to various departments – the State Traffic Police Authorities, the city administration, and the KievDorService communal enterprise, which is engaged in installing automated systems for traffic control and parking facilities, the construction of parking lots, and the attracting investment for developing road infrastructure. The introduction of this system is one of the steps in an exhaustive program for the Kiev city planned development.

Solution: Rationality in Everything

The installed system had to be able to control traffic flow in one direction – into the center of the city along all traffic lanes – two or three accordingly for two streets. Work on installing the cameras was to be carried out without halting traffic. It must be mentioned that the rules regarding installing license plate recognition cameras differ greatly from those concerning traffic control cameras. In the first instance, there weren't any acceptable fixtures in the streets (pedestrian bridges, viaducts, pipelines, etc.), where the cameras could be firmly fastened over the roadways. Therefore, a compromise was made to place cameras on Federov Street on one beam at a height of 5.5-6m off the ground, above the trolleybus cables. On Tolstoy Street, the cameras were installed on a post at a height of 8m off the ground. With this, it was possible not to go beyond the angles of deviation for ANPR cameras from the traffic lane axis and still provide a sufficient (around 30 m wide) coverage for the cameras controlling traffic flows.

JVC TK-C920EA cameras were chosen for the license plate recognition as they feature a wide range of configurations. The most important attribute for achieving the aim of recognition was the adjustable opening time of the electronic camera shutter. In conjunction with the Computar varifocal lenses, this provided a clear image of vehicles both during the day and at night.

Servers running AxxonSoft software were positioned in small rented offices in the near proximity – one server for every intersection. This allowed the project to save money on protecting the servers from weather conditions. Video signals from the cameras were converted and transferred to the servers through twisted pair

Kiev's streets monitored by the city administration

wire on Federov Street and through an optical cable on Tolstoy street.

"Algorithms for recognizing license plate numbers and tracking traffic flows dominated the processing power of the 2.4 GHz Intel Core 2 Duo processors. Under these settings, the video recording and displaying tasks at the rate of 100 fps from all four cameras went simply unnoticed. This once again confirmed the high rationality behind the Intellect video system," noted Igor Voidevich, the leading specialist for Gabitus-Plus.

The main difficulty for transferring information from remote workplaces were unstable Internet channels with bandwidth less than 1 Mb/s. However, in spite of this, at the office of the Kiev-DorService company and during the presentation of the system to the Kiev State Traffic Police the system managed to display video at about 1.5-2 fps for each camera, as well as provide full detailed information about traffic and recognized license plate numbers from both streets. This allowed the officials to real-time effectively evaluate the environment on both streets.

754 Registered Violations in One Month of Operation

The installed system powered by AxxonSoft solutions received high marks by the city administration. First deputy director of the Kiev city administration Denis Bass commented at the system's presentation that "for one month of operations and only at the intersection of Federov and Bozhenko streets, 754 vehicles violating the ban on entrance into the city center were registered by the video system. Besides, whereas traffic police officers are currently needed to attend to traffic jams, with the introduction of this new system, computers will take over control over the roads. The largest European cities have operated in a similar fashion for a long time now."

As of now, many of the capabilities of the module for controlling traffic flows included in the Intellect platform are not being used. Among these are the identification of traffic law violations e.g. speeding, control over rules governing lane traffic, and the assessment of traffic flow and density patterns. However, in the future,

the system and its range of objectives will be expanded, thus the capabilities of the installed module will be completely utilized.

"We are not planning on waiting another year to launch the system. Video surveillance systems have already been installed in the central parts of the city – at Kreshatike, on Hmelnitskoi and Zhilyanckii streets, and on Pobedii Prospect. This system is extremely important for the city, because such solutions enable us to eliminate 20 % of the traffic jams without reconstructing road junctions," emphasized Denis Bass.

Incidentally, a serious road accident was recorded already at the time of installing the system components and configuring the cameras for control over traffic flows at the intersection of Tolstoy and Zhilyanskii streets. It occurred due to a traffic violation by a taxi driver who ignored the sign indicating "movement only straight ahead and to the right" and tried to make a left turn. Unfortunately, similar events constantly occur in large cities. Therefore, one can be confident, that the widespread application of the system using all its capabilities will be very much in demand in Kiev.

Associates

The Kiev company, Gabitus-Plus, an AxxonSoft partner in Ukraine, has wide-ranging and rich experience in installing the most advanced security systems and offers only verified solutions to its customers. The main activities of the company include project design, installation, servicing, and support of digital video surveillance systems, audio and video registration equipment, access control systems, and remote video control systems. Its most prominent projects have included Raiffaizen Bank Aval, the Krivorozhskii state mining and smelting plant Krivorozhstal, the Velika Kishenya retail chain and the Epicenter joint enterprise.user at the time of the search request.

▶ **C O N T A C T**

Torsten Anstädt
AxxonSoft GmbH, Wiesbaden, Germany
Tel.: +49 611 1575140 · Fax: + 49 611 1575141
torsten.anstaedt@axxonsoft.com
www.axxonsoft.com
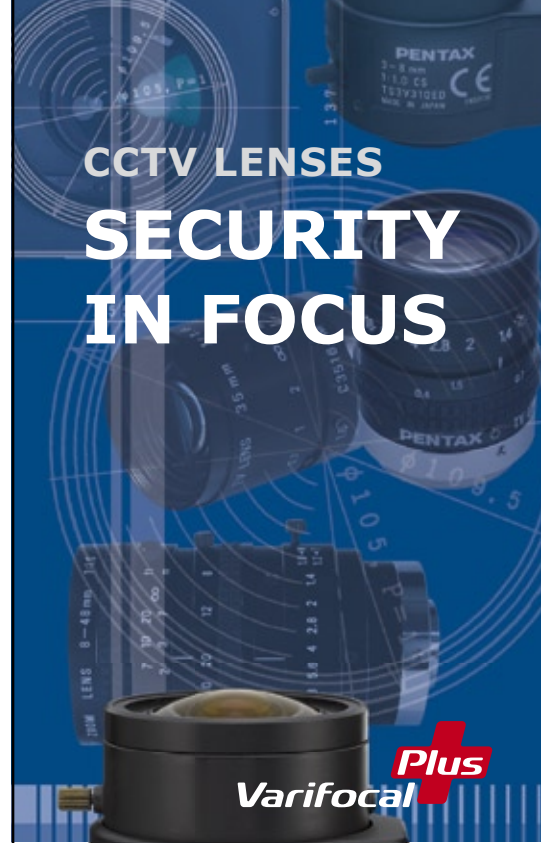
SECURITY FOR PUBLIC TRANSPORTATION

Take the Bus

Video Surveillance System Secures Ningbo City Buses

The Transportation Department of Ningbo in China faced many of the common problems with security on their buses. They needed to protect their assets and provide for the safety and security of passengers and drivers. Their security system would have to provide evidence in the event of theft or injury, and to help settle disputes between passengers and staff.

The Ningbo City Bus mobile surveillance project, one of the largest transportation installations in the country, covers more than 3,600 buses belonging to 14 transportation companies in Ningbo city. The surveillance system had to support high quality video playback and store video data going back 2 weeks. Anti-shock technology would be adopted as well to ensure normal functioning of the mobile surveillance system when the bus is in motion. Hikvision created a high-quality mobile solution which consisted of the DS-8004HMF-B mobile DVR, the DS-1002HM-S mobile DVR backup device and the DS-2CC512P color dome camera to meet these requirements.

Extensive Coverage

In this mobile surveillance system, one Hikvision camera was installed each in the windshield, the carriage, near the front door and the exit of each bus, providing surveillance coverage of more than 90% of the bus. The camera installed in the windshield mainly monitors whether the drivers goes through a red light, which could easily lead to traffic accidents. The camera fixed above the driver mainly monitors whether passengers enter the bus without tickets. The camera in the middle of the bus monitors the security status (theft or dispute) throughout the bus and the camera at the exit keeps an eye on the behavior of passengers getting off the bus. This system has a strong deterrent effect on criminals as well as on unruly passengers, effectively ensuring the safety of the drivers, passengers and their property. In addition, if there are complaints about drivers from the passengers or a dispute amongst the passengers, the related video footage can be retrieved and viewed for reference.

No Glitches

In contrast to the mobile surveillance systems used in other cities, the Ningbo City Bus surveillance system has a significant advantage as it delivers a high-quality video stream. Using the H.264 video codec, the mobile DVR supports real-time viewing and playback with a resolution of up to 4CIF. The color dome camera delivers a horizontal resolution of 480 TVL (752x582) and also features a color and B/W auto switch, ensuring high image quality for 24/7 monitoring. Hikvision's mobile DVR also features anti-shock technology for reliable performance. It can effectively avoid damage to the hard disk drives as well as making the surveillance system function normally when the bus is running. The GPS module embedded in the mobile DVR can help the security staff to locate the bus via an e-map on the client software and take quick action should an emergency occur.

Local Storage

„As more than 3,600 buses are equipped with surveillance products, it's unrealistic to pay at-tention to the on-site status of each bus simultaneously," said Chongguan Jin, vice director of scientific and information department in Ningbo city public transportation head office. „In addition, real-time video transmission would mean higher cost, so for now we chose to store the video data locally for playback and retrieval instead of real-time monitoring in this project." To realize this local high-capacity storage, the Ningbo transportation department chose hard disk drives of up to 750GB each, which can store video data for at least the past 15 days. The mobile DVR backup device was also used in this project for video data backup. With an e-SATA interface, it can be connected to the mobile DVR for high-speed video data backup in any specified time frame. Though this project didn't utilize real-time monitoring, the transportation department knows it may decide to upgrade the system at a future time. For this reason, the reserved network interfaces in the system will allow for wireless network video transmission to deliver real-time video/audio and alerting signals to the monitoring centers if required. Other interfaces are also set up on the mobile DVRs for passenger counting, GPS positioning and easy addition of other functions.

Security Up, Crime Down

„To date, this project has covered most of the public bus routes in Ningbo City," said Jin. „After evaluation of the products' utility, stability and reliability by actual use, Hikvision's products have proven to be superior to the surveillance products that have been used in the buses of other cities in China." The general manger of Ningbo city public transportation head office, Dezhi Zhu said „This video monitoring system has obviously improved the security level of Ningbo bus transportation routes and dramatically decreased the rate of crime or illegal action on our buses. The safety of passengers and their property is ensured, and the service quality of the transportation companies has also had a correspondingly positive change." „As mobile surveillance is becoming more critical and transportation departments begin to depend on surveillance systems to detect crime, there is an increasing demand for high performance mobile surveillance products and solutions," said Polo Cai, Vice President of Hikvision. „In addition to the city buses in Ningbo, our mobile surveillance solutions have also been used in many transportation projects in other major domestic cities, and we expect our products and solutions to be applied more in transportation projects worldwide."

► **C O N T A C T**

Finn Wu
Hikvision Digital Technology Co. Ltd., Zejiang, China
Tel.: +86 571 8700 6060
wulin@hikvision.com · www.hikvision.com

CONTROL ROOMS

Long Roads and Big Screens

ACESA Inaugurates New Operations Centre in Barcelona

Acesa's Operations Centre has modernised its facilities, incorporating the latest technology to deal more effectively with road conditions on its 542 km motorway network, where the average daily traffic intensity is 30,000 vehicles.

Acesa has a new Operations Centre in its premises in Granollers (Barcelona). The new layout of the Centre and the technical improvements which have been incorporated facilitate its work and the optimum use of the resources available. Acesa has improved the resources of the Operations Centre to manage its motorway network more efficiently 24 hours a day, 365 days a year. It includes a large, double height control room and a new video-wall. This viewing system with lengthwise screens dominates the new control room. It consists of 21 50-inch cubes in a 7x3 array, the cubes of type eyevis EC-50-SXT+ have a display resolution of 1,400 x 1,050 pixels.

It also incorporates the most advanced technology in systems to view images from all the cameras in Acesa's, network, and can receive images simultaneously from up to 140 cameras at different points on all the motorways.

The Centre, which is permanently staffed by a rotating team of communications coordinators and a head coordinator, manages road services on motorways (incidents, roadworks, special operations, coordinating its own and external resources, etc.) and provides information on road conditions to customers and private users as well as official bodies.

> Abertis Infraestructuras, S.A., is a Spanish corporation. The company runs 6,713 km of motorways in Europe and operates more than a dozen airports in cities including London, Stockholm and Orlando. Abertis manages toll roads and parking garages, is owner of various television and radio transmission networks as well as of the concessionaire of London Luton Airport. Its headquarters are in Barcelona, Catalonia, Spain.

The Incidents

In 2008, Acesa's Operations Centre dealt with a total of 80,578 incidents. These included: mechanical assistance (40.1%), roadworks (14.8%), obstacles on the road (12.8%), traffic (6.2%) and accidents (5.4%). Last year the centre handled over 400,000 calls.

The Equipment

The following equipment is installed in the control room in Barcelona:

- 21 x EC-50-SXT+ -DL (50" DLP rear projection cube with SXGA+ resolution and automatic double-lamp system)
- 1 x EYE-LCD8200 (LCD monitor with 82" screen diagonal and full HD resolution)
- 1 x NPX-3824XE-IP32-G1.1 graphics controller
- 1 x eyecon Basic Software (wall management software)

▶ **CONTACT**   [BUSINESS PARTNER]

eyevis Gesellschaft für Projektions- und Großbildtechnik mbH, Reutlingen, Germany
Tel.: +49 7121 43303 0 · Fax: +49 7121 43303 22
henique@eyevis.de · www.eyevis.de

ACCESS CONTROL

Join and Conquer

Gaining from Integrated Physical and IT Access Control

Jeremy Kimber

In the past few years, perhaps no security industry buzzword has been defined in articles and promotional materials as many times as ‚convergence.' These definitions have most commonly referred to the integration of physical security and IT systems, with occasional elements of building control. These definitions, while helpful to end users, beg the ultimate question: ‚How do I make it work?'

Convergence uses data generated by both physical security and IT systems to drive both business process efficiency and security, and its framework defines a migration path for organizational growth. There are some basic elements to consider before a solution can be considered truly converged.

Common Security Policy Management and Control

The IT infrastructure is the backbone of a converged solution, sharing knowledge of key business data across systems. The physical security system does not inherently know critical business data such as employee status, staff security clearances and training certifications. A computerized HR system, though, often has this knowledge. IP-enabled security systems therefore allow users to take advantage of fixed investments and improve return on investment (ROI).

Developing common protocols for managing access to company assets and data enables more efficient provisioning and management. An organization develops role-based policies that can manage badge issuance, enrollment and revocation processes by leveraging XML/SOAP interfaces for integration with identity management solutions. The key benefit is that building security personnel continue to use tools best suited to their jobs and HR personnel continue using HR tools.

Organizations should first identify the authoritative source (the system that has the ultimate say) for each person who has a building badge or

an IT account. These sources (IT systems or people) of key data are used to determine whether a person has permissions to use a resource or access an area. From this arise some compliance or audit needs where the data exists on multiple systems and any business or security concerns that are unique or are especially important to an organization will become evident. Then it will be necessary to address the key business processes (onboarding, offboarding, change of position) and determine the responsibilities of different systems. The result will be a policy platform that supports customizable workflow creation tools to easily model processes and approvals.

Common User Provisioning

Convergence drives the business to contemplate the inter-relationship of physical security on IT security, and vice versa. How many organizations can definitely claim that terminated employees or contractors are immediately removed from their building access control systems? How many are confident that a former employee who tailgates into the building does not have active IT accounts? How many are confident current employees would recognize former employees and know that their employment has been terminated? Provision dynamics are evolving and driving user permissions in non-IT and external IT systems. Organizations must determine how many terminated employees or contractors still have active building badges and IT accounts. They must also be able to establish how many contractors who have not been on site for the

last three months still have active building badges. It is advisable to perform studies to see if anyone questions tailgaters and to benchmark how long it takes for someone to be provisioned or de-provisioned. Educating employees on security risks will also help to close potential open doors.

Single Access Credential

Building security starts with a badge, often a prox or other ID card. IT security, meanwhile, starts with a user name and password. When organizations want to add more security to a card, they can add a PIN or a biometric. As IT systems look to increase security, however, the choices are not equivalent. Organizations can add an RSA token or biometric that authenticates the correct person, or a contract smart chip - embedded either in a card or in a USB dongle - that authenticates the correct person, and is also used for non-reputable digital signatures. Digital signatures are important in regulated environments to verify a person did approve or take action.

A single-card solution that includes a contact smart chip for IT and proximity technologies (contactless smart or 125 kHz prox) enables the organization to manage one resource for each employee, thereby minimizing both material and administrative costs. An optimized card issuance process allows building security to continue issuing badges, and the badge issuance process will be connected to IT systems for provisioning as a single process.

Two important steps to take are, firstly, that building security teams should discuss access credentials with their IT counterparts to identify opportunities to leverage cards across the organization. Secondly, the IT departments should review authentication and PKI requirements/needs.

Correlation of Events

By connecting systems, organizations can correlate seemingly disparate physical and IT security events. For example, it may not seem suspicious for an employee to download large amounts of data. However, system correlation might show the employee only downloads the data when he is in the room by himself.

Organizations must identify the thresholds of normal employee behavior by job classification – it may be necessary to audit current behaviors. Otherwise ‚normal' business events may cause security breaches (receipt of a resignation notice, termination for cause, unexpected change in work hours) and should be catered for. IT resources and/or locations with sensitive information (intellectual property, identity data) should be noted and a plan developed to lock down for normal security levels and for a heightened security level. Organizations must determine the return on risk for each sensitive item and develop security response plans accordingly. Then it is easier to identify normal usage for each sensitive resource and what would be considered abnormal (downloading all customer data or customer credit cards).

Convergence is the first step for any organization to connect its critical systems to provide a comprehensive and coherent security policy. By integrating systems to share information, an organization can see vulnerabilities in real-time and link IT security events with physical security responses. These abilities all drive real-time security policy management.

Finding the Threats

The next step will be proactive threat management, which enables correlation of real-time information with historical information. The system will ‚learn' how to manage the current environment and react in a real-time manner, increasing system value and improving ROI. The system, for instance, can classify behavior such as a certain employee trying to access random doors every few days or unusual behavior by a subset of employees who all had security clearances processed by a specific adjudicator. Using a converged system can reap substantial benefits and will provide additional benefits in the future as convergence continues to evolve. How organizations choose to implement these new toolkits is up to them and their specific security and compliance requirements.

► **C O N T A C T**

Jeremy Kimber
Honeywell Security, Bracknell RG12 1EB, UK
Tel.: +44 1344 656 989
jeremy.kimber@honeywell.com
www.honeywell.com/security/emea/systems

Wireless and Digital

Ceotronics' CT-Dect Gatecom offers wireless full duplex communication for ground handling operations around aircrafts. Pilot and ground crews with up to eight people can simultaneously speak with each other and listen at the same time. This allows both a more secure and effective communication for all people involved. Clear communication without misunderstandings lowers costs due to less down times. The headset comes with intelligent software and a noise compensating electret microphone. It enables wireless communication between pilot and ground crew, even under running jet engines or rotors. The CT-DNR software suppresses surrounding noise and a digital speech processor (DSP) that can distinguish the human voice from surrounding noises. The latter are digitally filtered out and thus only pure speech is transmitted. The transportable interface of the system comes in a handy bag and contains the communication interface unit for up to four users including the pilot. The unit can easily be plugged in directly from outside. It connects to the airplane-intercom and serves as a communication link between pilot and ground crew. Where unusual circumstances require the presence of more than four users, the Gatecom case can be deployed to enable the participation of up to eight crewmembers in the communications network. The advantages of the system in comparison with cable bound systems are complete freedom of movement and security around the aircraft. For training purposes e.g. for the driver of a push back truck additional headsets are available and may easily be added. thomas.stamm@ceotronics.com

New Access Control Terminal: Of One Make Four

One, two or even four doors can be controlled with Gantner's new versions of the successful "GAT Terminal 3100". The well-proven one-controller-per-door solution with the GAT Terminal 3100 ECO with credentials for up to 2,000 persons is still possible. Without any hardware change, the terminal can now operate as DUO, controlling two doors or even as QUAD, controlling four doors, each door being individually managed. The number of persons with credentials is increased to 10,000 (DUO) or 5,000 (QUAD) per door. As the reader can be up to 200 m away from the controller, a wide range of applications can be envisioned. A further version is being introduced under the name GAT Terminal 3100 PLUS. It offers the classic functionalities, such as writing station for offline credentials, alarm control etc., but also the following new ones: For the easy installation and putting into operation, a test mode was created, enabling the testing of the installation at the door, even before the access control software is installed. Other functionalities, such as the update of the terminal and the connected readers via Ethernet and RS 485, are features vouching for service and maintenance friendliness. With these new product versions, Gantner is able to provide the optimum solution for the equipment of a door with a consistent system, irrespective of the requirements. All it takes is a simple software change to prepare the unit for new, different applications. More information, just send an e-mail to: info@gantner.com
Intersec, hall 3, stand 305 C

ACCESS CONTROL

Closing the Security Gaps – Part 2

Concepts for Reducing Vulnerabilities in Complex Security Systems

As with all information systems, the security, availability and reliability of an access control system is dependent upon the quality of the individual hardware and software components as well as its level of protection against interference. There are many components to consider between the access point and the application and control level that influence the security and unrestricted availability of the entire system. This article demonstrates how some possible weak spots in such systems can be recognized and avoided. In addition, recommendations are made for appropriate preventative measures. Part 2 of this article looks at the weak points of the identification system, system components and networking, environmental conditions, the power supply and installation.

Hand vein recognition is characterized by easy usage, contactless identification and highest security (Photo PCS Systemtechnik)

Weak Point: The Identification System

High security requirements demand identification features that are unmistakably linked to one person and that can be precisely recognized as specific to that person. These biometric features should eliminate the weaknesses of other types of identification, such as a forgotten PIN or a lost or damaged ID card. Fingerprint, facial and iris recognition are currently the most well known biometric processes. The weak point of fingerprints is usually the sensor used. There are various technologies in use here that differ largely in their technical aspects and in their price. Many tests, also made by the FBI, have shown that a capacitive sensor is best suited to security-related applications as it offers the best combination of technical features combined with a balanced price-performance ratio.

Facial and iris recognition has an acceptance problem. The weak spot with facial recognition is alteration of the face by (sun)glasses, beard growth, makeup or disguise (e.g. face mask). With eye background or iris recognition there is often an emotional objection because many people are convinced that their eyes will be scanned by - dangerous - laser beams. This assumption abounds even though only an infra red photograph is made and lasers are not used at all. There can be problems during iris recognition with varying light conditions or with people wearing glasses.

Systems where there is physical contact with the recognition system, such as for fingerprints or measurement of the hand geometry, have the disadvantage of dirt or hygiene problems of the users. For this reason, contactless methods such as hand vein recognition are being increasingly used. This relatively new in Europe and very secure biometric process collects the pattern of the palm veins of a person with an infrared photo to identify them. They hold the inside of their hand at a distance of just a few centimeters in front of the sensor. The infrared

LEDs provide a close infrared illumination that is absorbed by the oxygen-reduced blood in the veins. This allows a unique image of the veins within the hand to be recorded and used for recognition. The human palm vein pattern is extremely complex and is within the body, and thereby best protected against misuse and manipulation. The position of the veins remains unchanged during ones whole lifetime and is different for every person.

Weak Point: Transmission and Security of Data

The point of access should prevent unauthorized access to the access control software and the corresponding person-related data. The data network and the computers connected to it are included in this. As a rule, only those people obtain access to computers and networks who can identify themselves with a password, ID or some biometric feature. The checking of each access attempt is considered as access control and should not be confused with admission control. Access, admission and authorization control all belong close together. What is the use, however, of a clever admission control system if the admission server doesn't have any authorization protection for the admin software and the authorization data? Conversely, the computer room in which the admission manager is secured should be protected by appropriate access control.

Companies are increasingly demanding that sensitive personal data from the access control system be protected against unauthorized access. A firewall in front of the company is obligatory, but it doesn't help at all if attacks are attempted from within the company network. A further aspect is the security of data within the company, i.e. they should not be transported out of the company on any data medium. It is therefore important to equip access control components with a comprehensive security package.

Encryption can be applied at various levels to protect the transmitted data against manipulation:

- on the identification carrier (e.g. Mifare DESFire EV1) and at the creation level
- during transmission over the data lines, between creation level (identification system/access control reader and terminal) and control level (access control manager)
- in the LAN between the access control manager and the application server.

A multi-level hierarchical password concept can ensure that the collected person-related data remains secret. At the lowest level, the house technician can configure the communications protocol with his password or adjust the IP addresses of the Ethernet connection. A supervisor can additionally assign passwords, set maintenance groups or alter parameters on the access control terminal. The system administrator at the highest level is the only one who can alter the encryption and activate the firewall in the terminal/access manager.

Weak Point: System Components and Networking

The access system with its multiplicity of electronic devices and data transmission units is very sensitive to faults, security and environmental influences. Mechanical, physical, electronic and staff security measures are necessary to protect weak points of the system and, simultaneously, to ensure high system availability. Also with regard to the cost, these aspects should already be defined at the planning stage.

A significant portion of the overall system cost will be caused by the transmission equipment and the installation. The transmission routes are of particular interest (costs, speed, security etc.), such as Ethernet, serial interfaces, type of cable (glass fiber or twisted copper) and the connection distances must be observed. The decision for or against a particular network concept is a complex process. The server and intelligent access control terminals will be connected over a standardized LAN (Ethernet). The unintelligent periphery, however, such as ID readers, will be connected over a serial link for reasons of cost. A distinction must be made between two different topologies:

- with a star point-to-point connection, each access device/ID reader is connected directly with the superior control unit and has its own connection point. Interruptions to the data line only affect one station. This results in high security against failure for the whole system.
- with a multipoint or party line connection, a number of access devices/ID readers can be connected to one line or bus. The advantage of this lies in the saving of interface ports as well as lower cabling and installation costs. The disadvantage arises from security restrictions if the main line is interrupted.

Weak Point: Environmental Conditions

Of all the system components, the identification system and/or the access control terminal are particularly vulnerable to all disturbing factors at the place of installation. Therefore, they must be chosen, configured and installed in such a way that ensures their correct operation. Such devices must be appropriately protected against the weather if they are to operate outside. Also, protection against vandalism and unauthorized opening of the terminal/reader cabinet must be
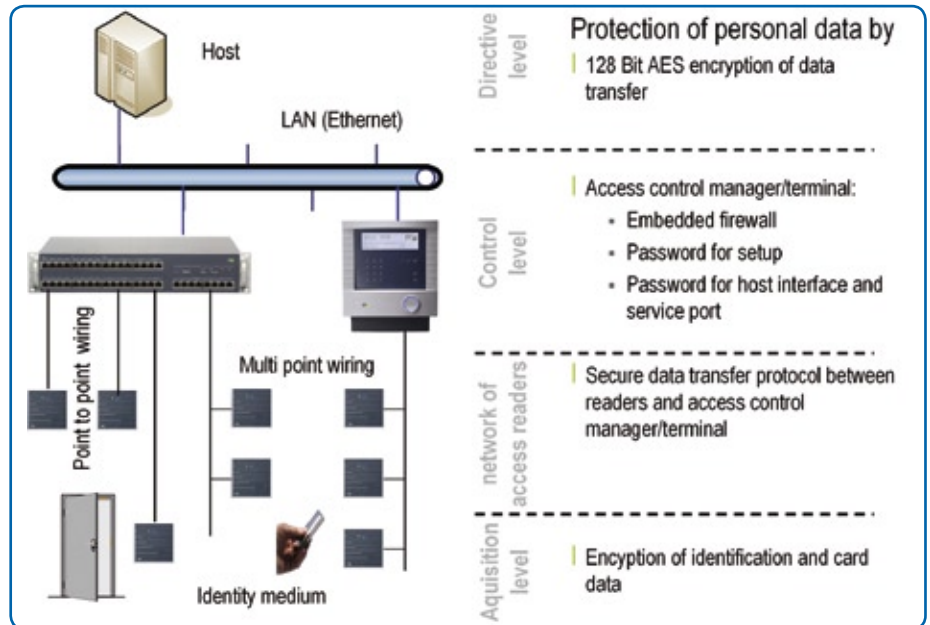
Multi-layer security concept for increased protection in the collection and transmission of person-related data in access control projects

included, for example, by the way in which it is installed and with a sabotage contact inside the case. Any attempt to open the device by force or to manipulate the contact will send a signal to the access control system and an alarm raised. The identification system and the access device should have a level of protection at the collection point, such as IP 54 or IP 65, against external influences such as dust, foreign bodies or moisture. Periphery that is built into well thought-out cases is also protected against accidental removal of or damage to cables. Power and data cables as well as peripheral connections should run in their own lockable cable channel or in a column.

Weak Point: Power Supply and Installation

It must be ensured, in the event of power or computer failure or if the transmission lines are interrupted, that there is no data loss and that authorization checks are still possible offline so that authorized people can obtain access without problems. Power failures, a defective power supply or quality problems with the chosen components are frequently the cause of system crashes or interruptions to access control. Not infrequently, cheap components are used for budget reasons, with the corresponding risk of their tendency to fail. For example, the power supplies used should demonstrate resistance to interference impulses and be able to compensate for voltage fluctuations. Switched power supplies on the input side have better reliability if they comply with VDE 160. The access readers should be provided with power centrally by the access manager. The same applies for the door opening control. External self-contained power plugs for readers are certainly cheap, but they are also an additional source of problems, for example, through the small plug in the power

socket or through the lack of any thermal protection (cooling slots). Voltage variations or dropouts can be mitigated by either an integrated or an external USV for the access manager. Many computer crashes, data losses or other interruptions are caused by faulty installation. The system providers usually deliver comprehensive installation guidelines that must be followed by the user. Recommendations for protective measures are also included in the hardware documentation. In particular, the instructions of the suppliers with regard to electrical conditions and cabling must be observed, such as those for wire diameter, insulation and earthing measures.

Summary

Secure access control can only be ensured if the security chain has no weak links. Beginning with the type of identification, the encrypted data transmission from the reader up to the control and application level, a large number of protective measures must be observed. If contemporary technical capabilities are properly used, a very high security standard can be achieved.

►CONTACT

Werner Störmer
PCS Systemtechnik GmbH, Essen, Germany
Tel.: +49 201 89416 30 · Fax: +49 201 89416 10
wstoermer@pcs.com · www.pcs.com

Next Day Delivery, Security Everyday

A Comprehensive CCTV Solution for APC Overnight

APC Overnight is the UK's largest next day delivery network with more than 125 local depots covering all areas of the country. The network specialises in timed deliveries, offering a choice of convenient morning or afternoon options as well as a Saturday service. APC Overnight collects, routes and delivers more than 1 million parcels each month with an industry-leading on-time delivery record. To ensure that the companyt provides an efficient and reliable service to its customers, APC Overnight has never hesitated to invest in the latest technology. With the help of electronic security experts, Securitec Systems and Samsung, it has applied the same philosophy to the CCTV system which it relies on to minimise shrinkage, protect its premises and monitor health & safety compliance at its national sorting centre in Wolverhampton.

Cannock based Securitec Systems were tasked by Colin Dicken, APC Overnight's Head of Security, to recommend how new IP based cameras could be introduced as part of an expansion of the CCTV system, whilst retaining the 64 existing analogue cameras which were still performing satisfactorily.

APC Overnight's requirements in respect of what they wanted to achieve from its CCTV had changed. The original system was installed for general security purposes but there were now

Colin Dicken, APC Overnight's Head of Security

two other specific objectives. The first of these was to ensure that the company's health and safety policies were strictly adhered to and that if there was an accident or incident that needed investigating, there would be video evidence to call on. The second objective was to monitor the processing of every parcel that entered the building until it was loaded onto a delivery vehicle.

A Reduced Number of Claims and a Lot of Trust Gained

"The system provides a visual record of how we carefully and accurately handle our customers' parcels. It also helps us demonstrate how we monitor the parcels while they are in our care. Such video records also help to reduce claims," said Colin Dicken. "The 96 cameras which we have now installed cover every square inch of our premises. There are absolutely no blind spots

and we can therefore, track every movement of parcels from the moment they arrive until they are sent back on the road by tying in the CCTV system with our bar code booking system."

Securitec Systems recommended and installed 32 Samsung SND-460 IP/network dome cameras. With its die-cast aluminium vandal resistant body and tough polycarbonate dome casing, the SND-460 provides a robust solution for a busy sorting centre and as it is a true day/night camera with an integrated IR cut-filter, it is also able to deliver high quality images even in the most demanding of lighting conditions. The SND-460V is also equipped with Samsung's Super Noise Reduction technology (SSNRII), which eliminates image noise in low-light conditions without ghosting or blurring. There is also the added bonus that SSNR technology can save up to 70% of hard disk space on a digital video

recorder, whilst maximising bandwidth when viewing the video over a network.

Solve the Security Risk but Stay Within the Budget Restraints

Securitec Systems also upgraded the CCTV's recording facilities by installing four Samsung SVR-1680 DVRs onto which images captured by the analogue cameras are recorded, whilst a Samsung SNR-3200 records the images from the IP/network camera domes. The SVR-1680 DVR is capable of simultaneous real-time recording at full D1 (704 x 480) resolution across all its 16 channels whilst the SNR-3200 can record at half D1 resolution across all 32 channels and giving users the option to customise recording settings to achieve real-time full D1 resolution recording on selected channels.

"This project has been successful on two levels," said Martin Kadir of Securitec Systems. "We have been able to prolong the life of the previously installed 64 analogue cameras by integrating them with the 32 new Samsung IP/network dome cameras and this has saved APC Overnight a considerable sum of money by not having to rip out the existing cameras which have been performing satisfactorily. We have also achieved a high degree of integration allowing both sets of cameras to be monitored from the same multi-screen display in APC's security control room. This has been achieved by utilising the control functionality of Samsung's licence free Centralised Management Software (CMS).

More than 1 million parcels are handled each month at APC Overnight's sorting centre

The cost of extending the CCTV system has already been justified according to Colin Dicken. Any complaints of lost or damaged parcels have been investigated with the help of video captured by the cameras. "We take great care to ensure that our customers' property arrives in good condition as well as on time," said Colin Dicken. "Therefore, it is important that we can identify and track individual package through our sortation centre. The remarkable quality of the images we are seeing from the new IP/network cameras is certainly helping us to do this."

▶ **CONTACT**

Securitec Systems Ltd., Cannock, UK
Tel.: +44 01543 505759
martin.kadir@securitecsystems.net.
www.securitecsystems.net

Samsung Techwin Europe, Chertsey, UK
Tel.: +44 1932 455 308 · Fax: +44 1932 455 325
STEsecurity@samsung.com · www.samsungcctv.com

CCTV

Safe Study

Flagship West Herts College Equipped with CCTV

Chris Brown of AIS

Students and staff at the new West Herts College campus in Watford town centre are now under the protection of a comprehensive security package specified and supplied by AIS, that includes a Panasonic end-to-end IP CCTV solution. The brand new campus, which opened in September 2010, serves some 2,000 students and 450 staff on a daily basis. With state-of-the-art facilities throughout, staff and student security were both primary considerations for its design, construction and operation.

The college features leisure and social spaces alongside fully equipped working areas and classrooms that include the latest teaching tools and technology, covering a wide variety of subjects. To complement and protect the cutting-edge building and its high-value contents, college managers were eager to employ the latest CCTV technology as part of an overall security plan at the site. Chris Brown of AIS, a Panasonic Premier Integrator, explains: "We were given the opportunity to tender for the project via the construction company BAM, who were responsible for the build. Initially they had specified a traditional analog installation. However, we were able to take advantage of close manufacturer support and demonstration equipment, and to display the key advantages of an end-to-end IP solution from the Panasonic product range."

„On winning the tender, we specified a dedicated fiber backbone that was installed by the building contractors to our specification. Along with fiber links to each camera location and PoE network switches, this formed the basis of image transmission from the cameras to an on-site equipment room that was also included in the construction. Here we installed two WJ-ND400 network video recorders that supply images to be transferred to the college's wide area network (WAN), giving key members of staff and the security team the ability to remotely monitor live and recorded images."

All In One

The use of an integrated network and fiber backbone, as opposed to a coax transmission

method, meant a minimised impact on the outstanding architecture of the building, and allowed the discreet inclusion of 33 WV-NS202A cameras and 84 WV-NF284 cameras. These now cover all key aspects of the interior of the college; including all corridors, stairwells, reception atriums, meeting rooms, and restaurants. For easy installation and IP configuration, each camera features Power-over-Ethernet (PoE), supplying power and transmitting images via a single cable. No separate power supply was required, allowing AIS engineers to simply connect each camera to a PoE switch.

The modern architecture on campus features illuminated corridors opening into naturally lit, glass-sided atriums with contrasting lighting. To manage security in these conditions, WV-NS202A cameras featuring Super Dynamic 5 technology were deployed – they are specifically able to deal with any subject within a wide variety of lighting conditions. This technology performs gradation compensation of contrast on an individual pixel basis, ensuring detailed scenes throughout the college environment are captured and transmitted to the equipment room/security office for recording and monitoring.

Also installed at the site are 11 WV-NW960 weather-resistant network dome cameras, and five WV-NW502 cameras cover the college's courtyard and all perimeter areas. Also featuring dynamic technology, the WV-NW960 combines 30x optical zoom and 128x wider dynamic range to provide continuous 24-hour surveillance. When darkness falls at the college, the camera automatically switches from colour to black and white mode for greater sensitivity. When daylight arrives, it automatically switches back to colour mode. With a minimum illumination of 0.04 lux in B/W mode and 0.5 lux in colour, a crystal-clear image can be captured, even in any unlit areas of the grounds.

Latest Learning Facilities

The new campus also features a public street with gym, spa, café and comprehensive restaurant facilities. Social areas include spaces for relaxing and studying in groups, plus a central square where students can meet, relax and enjoy some well-earned fresh air between classes. The campus has modern, flexible classrooms and extensive professional facilities, including art studios and workshops, forensic science laboratories, hair and beauty salons, IT suites, photography studios, media editing suites, sound and recording studios, a performing arts theatre complete with a sound and lighting control room, dressing rooms and green room, as well as dance studios and audience seating space for up to 120 people. The new facility complements West Herts College's Construction and Engineering Centre in Kings Langley and the Dacorum campus in Hemel Hempstead.

The college's CCTV network is a key tool in an overall security package at the site that also includes access control and intruder alarm systems. Both of these are linked to the CCTV network and, upon activation, adjacent cameras are automatically selected and moved to a preset position to cover any event. „Whether it is a request for entry via the access control intercom or intruder detection, the technology automatically captures essential scene coverage via the nearest camera," adds Chris. „Instantly bringing the situation to the attention of the operator, it also ensures the circumstances of any activation by the integrated system are recorded for future investigation."

The ability to 'virtually' patrol the site at the touch of a button has proved an invaluable asset to the overall security structure at the college, and acts as a foundation for the college's manned guarding team, giving full and accurate reporting of any situation right from the outset. As the students enjoy the latest in academic facilities, they can do so in the knowledge that they are being protected by a passionate security team, backed by the latest CCTV technology.

The Polar Pioneer Offshore exploration platform (Image courtesy of Transocean).

CCTV

IP Video Passes
Rigorous Testing

IndigoVision's IP-CCTV System Monitors Offshore Drilling Platform

IndigoVision's complete IP Video technology has been used to upgrade real-time monitoring onboard the Polar Pioneer exploration rig, having passed an extensive and rigorous testing programme in a harsh and challenging environment. The new IP-CCTV system monitors the platform drilling operation to ensure safe and efficient operation at all times and provides the rig with a scalable solution for future expansion.

"Using IP-CCTV technology onboard a drilling platform is a major breakthrough for us," said Mr. Per Jogeir Karlsbakk, Fugro Oceanor's CCTV Project Engineer. "We demonstrated that IndigoVision's system exceeded their demanding specification and now the rig benefits from the operational flexibility that IP Video delivers." Offshore drilling platforms have traditionally relied on analogue CCTV due to the need for full frame-rate video with minimum latency. Having proved, through a successful pilot installation, that the IP Video system guaranteed no dropped frames and delivered excellent quality video at very low latency, IndigoVision's partner, Norway

based Fugro Oceanor AS, deployed the system throughout the rig. The driving force behind the CCTV upgrade was the continuing problems of supporting an ageing analogue system and the lack of expansion capability.

Based in the North Sea, Polar Pioneer is operated by StatoilHydro, one of the world's largest oil companies. The rig is a semi-submersible drilling platform, capable of operating in harsh environments in water depths of up to 500 meters and is able to drill to an amazing depth of 7,000 meters. Operational running costs for a platform of this kind are high, so any downtime from technical problems is unacceptable. Reliability is therefore a fundamental requirement for the CCTV system. Unlike analogue systems that use a central switching matrix, IndigoVision's IP Video solution is distributed and doesn't have a single point of failure. Its multi-way racks that house the MPEG-4 transmitter/receiver modules have built-in redundancy with dual network connections and power supplies.

Off-Shore and Onshore Surveillance Becomes an Option

The operators use 'Control Center', IndigoVision's Security Management Software, to view live video from 24 cameras around the rig. The analogue cameras are fitted in specialist housings manufactured from 316L stainless steel by Fugro Oceanor and are designed to handle the harsh environment caused by corrosion, mud and oil. Many of the cameras are EX rated for use in hazardous areas. Fugro Oceanor has also developed a special cable for the harsh environment that carries power, digital video and telemetry. "As the IP Video system is distributed, video management workstations can be located anywhere on the network" added Karlsbakk. "StatoilHydro currently monitor the video from both the rig's main surveillance centre and the drilling cabin and plan to expand the system so real-time video can be streamed to onshore surveillance centres."

►CONTACT

IndigoVision
Tel.: +44 131 475 7200 · Fax: +44 131 475 7201
enquiries@indigovision.com
visit www.indigovision.com

CCTV

Enjoy the Quality, Take Care of the File Size

Some Facts about HD Images, Bandwith and the Storage Space Needed

The quality of the images that can be captured by Full HD cameras is truly amazing compared to even the very latest analogue or standard resolution IP cameras but there is a price to pay in terms of file sizes of the images.

Typically, a standard camera will create images which have a file size of 0.3MB based on a resolution of 640x480, whilst images (1920 x1080) from a Full HD camera are 2MB in size. There is clearly therefore going to be a need for a large number of DVRs and backup storage capability if there is a requirement to record and store video from a large number of cameras. The cost of this could be prohibitive and prevent customers from the opportunity to capture the superb evidence grade images which can be generated by Full HD cameras.

● **The solution is simpler** and requires a lower investment less than you may think. It involves the use of H.264 compression and the installation of servers or NVRs instead of DVRs. For inexperienced installers in IP/network methodology, the thought of installing a server may seem daunting but it is not as complex as it may first seem. The financial savings which can be achieved compared to the cost of recording onto a DVR is substantial and as a result the simultaneous recording of video from a large number of Full HD cameras becomes affordable.

● A**djust the bandwith to your needs.** A full HD camera image is made up of approximately seven times more pixels than that from a standard CCTV camera and as a result we can expect to see picture quality similar to what we have come to expect from our HD TVs. Do CCTV operators however need to observe and record Full HD images in real time all of the time? Even in VGA mode, Full HD cameras deliver very high quality images.

● **A further way** to reduce storage requirements may therefore be to only record Full HD images upon Alarm, including motion detection, with images recorded in VGA mode at all other times. This would ensure that evidential quality video is available when required and would enable operators to simultaneously monitor live images in Full HD mode. This functionality is provided by the latest Dual and Quad Streaming technology which adds to the flexibility of viewing and recording IP Streams.

▶ C O N T A C T

David Hammond
Sanyo Europe Ltd., Watford, UK
Tel.: + 44 1923 477226
cctv.uk.sel@sanyo.com
www.uk.sanyo.com

CCTV

The Camera-PC

A New Type of Camera with a PC CPU

There were some astounded faces to be seen at the Security exhibition in Essen. Eyewatch, a company belonging to the Deister Electronic Group, had a truly good idea for a new product and, with it, blurred the distinction between previously separate technologies. The motivation to develop it was the realization that conventional cameras and video systems create enormous amounts of image material in a short time. If this could be pre-sorted, ignoring all the uninteresting stuff, there would be great savings in storage capacity and therefore also investment.

Even intelligent video systems nearly always require a central server solution. They therefore also need a significant amount of additional infrastructure and are costly and maintenance intensive. The company was founded with the main aim of overcoming these obstacles, and it all began with the development of an IP-based, all-in-one camera that used real standard IT technology. The product definition required that it should be intelligent, be able to load software for behavior and pattern recognition, to take its own decisions and always record in the highest possible resolution. The product family was born out of exactly this idea.

Eyetwo is the name of the family of network cameras. A few important features for the speed-reader up front: it is equipped with two high-resolution 5 megapixel image sensors and can be used either inside or outside without restriction. The IP65 protection rating and the absence of moving mechanical components such as a shutter and motors make the system extremely robust. The camera has two adjustable eyelids as additional protection against sun and other environmental factors. But the most unusual fact is that it uses powerful and power-saving CPUs like those used by mobile devices!

A ‚Clever' Camera

A purpose-built FPGA solution carries out the processor-draining tasks of image improvement, picture sharpening or lens correction. This ensures that the camera CPU is not loaded down with these jobs as well. It then has enough reserves to run additional applications and to record in maximum quality. The required bandwidth and memory can be significantly reduced thanks to the H.264 compression that is also integrated into the FPGA. The integrated infrared LED projector provides optimum lighting for up to 25 meters and has minimal power consumption (as it adapts to the ambient light and synchronized with the image sensors). This allows the 5 megapixel sensors mentioned above to deliver an optimal picture in color and black and white. The image improvement and processing happens in the FPGA, a powerful additional chip with lens and pixel correction, a scaler and more.

Apps and Other Features

The Eyetwo camera is a so-called smart or edge camera that can operate independently of a server, is decentral and can be given additional functionality at any time by software. Apps for function, pattern and behavior recognition, for example, can be loaded into the camera and run and then provide a variety of applications for the platform. And the icing on the cake for every programmer is that any program can be integrated into the camera because it is equipped with x86 architecture, including an Intel Atom CPU and Linux operating system. That means that it has the performance of a real PC!

The Streams

Many visitors to the Security exhibition in Essen were interested in the multiple video streams. The FPGA solution developed by Eyewatch can create up to three independent streams that are each optimized for their particular application. The Analysis stream provides image material specially prepared for video analysis and ensures that objects can be reliably recognized by the installed video analysis software. The Live stream, just as with many other cameras, is also used for image presentation and recording. It delivers FPGA-coded H.264 streams in the highest quality and definition. The Alarm stream on the other hand can independently record image sequences with metadata, together with pre and post alarm pictures, at up to full 5 megapixel resolution. This makes forensic evaluation of events possible in the highest quality. Sound is also not neglected: the integrated microphone and loudspeaker allow the Eyetwo camera to be used as a telephone, an intercom, an announcement unit and monitoring device. The camera can therefore supplement a separate door entry system and, under certain circumstances, even replace it.

Platform for Complex Analysis Software

The Eyetwo PXA-270 network camera is the base model and the ATX-510 the most powerful version in the product range. It too has two 5 megapixel image sensors (color/b&w), but also the already mentioned extremely powerful Intel Atom CPU that, apart from performing all standard video surveillance tasks, also provides a platform for more complex analysis software. Thanks to the processing power of the camera and its x86 compatibility, software for pattern and behavior recognition that was originally developed for server-based analysis can be adapted to the platform without a problem and then run directly in the camera.

This flexibility and openness provides the ability to access all the high-value algorithms that already exist for PC systems or are still being developed. Future progress made in this promising field can be integrated into the camera. Eyewatch states that it already works together with some leading software manufacturers and is also open to jointly develop and market the resultant products of other interested providers.

Further details about the installation, the operation, the special ‚eyelids' or about the hardware twisting protection from an orientation sensor can be discussed with the CEO of Eyewatch, Thomas Blum. But the real question you have to ask him is: do you refer to this as a ‚PC-camera' or a ‚camera-PC'?

▶ C O N T A C T

Thomas Blum
Eyewatch GmbH, Barsinghausen, Germany
Tel.: +49 5105 516 222 · Fax: +49 5105 516217
info@eyewatch-gmbh.com · www.eyewatch-gmbh.com

LED-Backlit LCD

BUSINESS PARTNER One of the latest products in the Eyevis LCD family is the LED-backlit LCD. Its backlight structure is composed of LEDs, which are more efficient than CCFLs (Cold Cathode Florescent Lamps) in terms of delivering a realistic graphic display. The LED-backlit LCDs have a better color gamut, provide full HD (1,920 x 1,080) resolution, offer a contrast ratio of 5,000:1, a brightness of 450 cd/sqm and have a response time of 5.5 ms, working very well in fast-moving transitions. LEDs cover a broader range of red and greens (up to 114 % of the NTSC standards), the full area of the RGB natural color space. Being able to display a more extensive range of colors means the attribute of colors is more natural or lifelike as they are closer to the human eye's color perception range. That increased range is in the areas of greens and reds, which is of key importance for color-critical workflow. The LEDs also emit a more uniform light and degrade less quickly than CCFL backlight, which results in more stable brightness over the screen's lifetime. LEDs have virtually no warm up time, so you don't have to wait for your monitor to stabilize to get correct colors. They are also more eco-friendly, containing no mercury. info@eyevis.de

Centralized Video Storage Management

BUSINESS PARTNER Bosch introduces the DLA 1200 Series and DLA 1400 Series IP video storage appliances, simple, centralized, all-in-one storage management solutions for up to 64 or 128 channels, respectively. These intelligent IP storage devices eliminate the need for separate network video recorder (NVR) server and storage hardware. This can reduce a system's total cost of ownership by as much as 45 %, as well as reducing overall power requirements. The appliances offer storage capacity of up to 4TB for the DLA 1200 series or 8TB for the DLA 1400 Series. Powered by the manufacturer's Video Recording Manager (VRM) software, they deliver IP video storage solutions for small- to medium-sized businesses. Their low maintenance embedded design combines NVR server capability with intelligent video storage, reducing possible points of failure. The DLA 1200 Series is housed in a compact, ultra-quiet tower chassis featuring field-replaceable drives and supports the recording of up to 32 IP video devices (up to 64 with optional expansion license). The DLA 1400 Series supports the recording of up to 64 IP channels per appliance (up to 128 with optional expansion license) and comes as either a 1U (4-bay) or 2U (8-bay) rack mount unit. www.bosch.com

PC-less 16 Channel NDR

The Panasonic WJ-NV200 is capable of real time, 30ips recording across all channels in multiformat. The recorder has a simple GUI and mouse control so selecting cameras, recording and camera control is made simple. The recorder supports full HD output via HDMI connection so live and monitoring images can be displayed in high definition. To aid the simple set up and usability, a quick search with calendar and timeline ensures recording is easy to find. Estimated recording days is also calculated based on number of cameras, frame rate, image quality and HDD capacity. Most impressively is the intelligent face-matching feature. Working with intelligent cameras in the Smart HD range, up to eight faces at a time can be recognized and matched to a flexible database of up to 16 face images. www.panasonic.com

Perimeter Protection At Intersec

More than 35 years of experience "in the field", this is the strength that allows the company Sicurit to be known as one of the most reliable and technologically advanced company in the security market, providing state of the art Outdoor Perimeter Protections for different applications. "Our detailed attention to the manufacturing process, from the choice of raw material up to the exhaustive tests carried out by our specialists, and the maximum availability of our personnel pre and post sales have achieved the trust of the major players in the security market, from the USA to Australia, crossing all Europe and parts of Asia," says Sebastiano Vento, Export Manager of Sicurit. His company is a trusted supplier to many high sensitive areas, with products deployed for the protection of civilian, industrial and military sites, with installations in areas such as airports, government compounds, financial institutions, electrical and nuclear facilities, military bases and correctional facilities. Amongst others also Sicurit's main product "Absolute Plus", a high security dual technology barrier that combines microwave (MW) and infrared technology (IR), will be exhibited at Intersec in Dubai. This system enhances capability of detection while drastically reducing false alarm rates. Unlike conventional systems Absolute Plus is a modular tailor-made barrier available in different configuration, heights and ranges according to customer and site requirements. It is available in three ranges (200/80/50 mt.). For further non-binding information just send an e-mail to export@sicurit.it.

Homeland Security: Remote Gateway

BUSINESS PARTNER The Homeland Security Business Unit of Telefunken Racoms provides police, frontier defence, coastguard, search and rescue units with innovative systems. These products are used for the reconnaissance and surveillance of conflict or disaster regions as well as for safeguarding major events. Latest innovation is the "iRG-4G Gateway", a low-cost, compact VSAT that is scalable in both performance and capability, making it a universal solution for businesses of all sizes and growth stages. The iRG-4G supports from QPSK to 32APSK modulation and dynamic ACM (Adaptive Coding and Modulation) on the outbound path and 8PSK modulation with FEC of 2/3 and 8/9 on the inbound path. 32APSK modulation combined with dynamic ACM improves the link efficiency by more then 50 per cent compared to DVB-S2 8PSK modulation and CCM. Furthermore the iRG-4G dynamic ACM enable it to have link availability up to 100 per cent regardless of weather conditions. – This user-friendly terminal adapts to changing needs, allowing to seamlessly upgrade system capabilities over satellite using a simple software "key." This scalability allows to make a minimal hardware investment and later move to a more powerful solution without having to purchase additional hardware. – The iRG-4G gateway supports DVB-S2/ACM in addition to DVB-S standard. Supporting standard-based solutions that employ advanced technologies to offer unparalleled efficiency and functionality. On the forward link the support of DVB-S2/ACM technology includes advanced LDPC coding and QPSK to 32APSK modulations for improved performance. The terminal supports turbo codes, dual continuous and burst mode operation and data rates of up to 4 Mbps. It has an advanced set of networking capabilities, including Quality of Service and acceleration. To support flexible connectivity of end-user equipment to the iRG-4G, this unit comes equipped with two Ethernet ports, as well as two voice ports (RJ-11).
The terminal is ideal for:

- Fast Internet Access
- Voice over IP Telephony
- Videoconferencing
- Interactive Distance Learning
- VPN (secure) Applications
- CRM
- IP Multicast Applications
- Telemedicine
- Terrestrial Backup
- Governmental & Military Applications
- Reliable Business-To-Business (B2B)

The iRG-4G comes equipped with a 10/100 BaseT Ethernet port for direct connection to a LAN, WLL, ADSL and other last mile interface equipment. The terminal has low power consumption and the ruggedness required for operation in difficult environments. For further non-binding information just send an e-mail to info@tfk-racoms.com.

Entry-level IP Video Solution

Geutebruck's Reporter-IP/SE is conceived as an entry-level solution for pure digital video surveillance systems. Specifically designed for IP-camera recording, this newcomer to the manufacturer's range of business surveillance systems supports up to 20 IP cameras and many different kinds of digital video source. It handles M-JPEG, MPEG4CCTV, H264CCTV as well as H264 standard formats. Licenses are needed for third party cameras, but not for Geutebruck branded video sources like Vipcam and Cam 2 IP. With its new processor and hardware technology as well as new software algorithms, the Reporter-IP/SE can process and store any data fed into it – a feature that reduces loading on networks and demand for storage space. Its new interface hardware allows the direct connection of up to 16 contacts for event-controlled recording, as well as eight relay outputs for direct communication with third-party systems. carmen.lahr@geutebrueck.com

Innovative Fire Alarm System

BUSINESSPARTNER The Neuss experts in professional fire detection technology, Novar, have successfully launched their innovative "Esser" fire alarm system onto the market. Installers, planners and operators profit from this trend-setting concept. Thanks to a modular hard and software platform the FlexES control can adapt to changing conditions at any time and allows for almost unlimited system expansion. The performance level can be extended through additional hardware modules or software upgrades where and when necessary. As the name hints, the high degree of flexibility plays a central role in this latest piece of innovative technology from Novar. The product presents impressive features from both the technical side as well as from the customer's vantage point. A user-friendly operating panel with unique ergonomics, configurable modules and expandable housing models significantly facilitate installation and also guarantee a system that is tailored exactly to the customer's needs. Only components which are actually used have to be paid for. Thus it is certain that the system is never oversized yet at the same time offers just the right amount of room for expansion – something expected by today's installers and operators. The control panel clearly sets itself apart from other available fire detection products by its outstanding features. For further non-binding information just send an e-mail to info@esser-systems.de

Video IP Appliance

BUSINESSPARTNER At Intersec 2011 Dallmeier introduces its Video IP appliance Smatrix to the Middle East market for the first time. The complete range of HD and megapixel cameras will also be presented on the stand. The Video IP appliance has an integrated storage system, which is tailored to the needs of video security technology. Whether used with only network cameras in a purely IP environment or in hybrid operation together with analogue cameras – the system is flexible and supports the newest HDTV technologies. Its structure is space saving; power consumption and heat emissions are low – that helps the environment and saves costs: According to the company it saves on average 30,000 € within five years in comparison to standard DVR/NVR devices. The system is adapted to applications requiring a high recording speed, enhanced storage capacity and low power consumption whilst providing maximum security. The company's HD megapixel cameras deliver very high picture quality. The 4500 series as well as the 4900 camera series are equipped with a 1/2.5″ 5 megapixel CMOS image sensor with Cam in Pix technology. The manufacturer itself develops this image processing technology. The picture information of every single pixel is digitally converted at the point of capture and is processed in the most optimal way – this makes it possible to record clear, high-contrast and color true pictures even in difficult lighting conditions. Digital noise reduction as well as numerous control functions like AWB, AGC or slow shutter, makes further optimization of the picture quality possible. info@dallmeier.com

Power and Performance

Kentec Electronics will be exhibiting their product range at Intersec 2011 in Dubai together with powerful control solutions from the company's US subsidiary, VES – a total array of product solutions for demanding applications. The company will be featuring their Sigma XT standard three zone single area extinguishant releasing panel and Sigma XT Plus range, which combines the extensive configuration options of Sigma CP's 2, 4 and 8 zone conventional control panels with highly configurable extinguishing control modules to allow compatibility with a wide range of detection devices, plus their Syncro XT+ – multi area addressable extinguishant control panels. Also on show will be a range of Warning Signs, Audible and Visual Indicator Units, Open Connect – BMS Communications Interface and Remote Indicator. From VES are their world-leading UL-listed, FM approved, Elite and Elite RS analogue-addressable fire alarm control system that simplifies local configuration of a diverse range of fire systems scalable from the stand-alone to the highly complex network. robine@kentec.co.uk

Far-IR Compliant Zoom Lenses

Tamron introduces two prototype zoom lens models designed for true Far-Infra Red Imaging with its proprietary VC (Vibration Compensation) system built in, the very first in the industry. The two zooms include a 14–40 mm and 35–105 mm, addressing the needs for both wide-angle and telephoto coverage with versatility in use with a 3X zoom ratio. Integration of the VC feature certainly enhances practical values, delivering crisp IR images without the blurring caused by camera vibration. "Expansion of Tamron's product portfolio to the true far-infrared zone, stretching out to 14,000 nm wavelength range is a quantum leap in a sense," stated Mr. Morio Ono, president & CEO, "but this is in line with our corporate management direction to bring new imaging solutions to a whole variety of industries, and a departure from optics for visible ray." M.betger@tamron.de

Reliable Fire Detection

BUSINESSPARTNER Notifier took the opportunity to present their products at Security 2010 in Essen – alongside other members of the Honeywell clan. The fully functional shower on their stand was certainly an eyecatcher but served only to demonstrate how fire can still be reliably detected under anything but ideal conditions, for example, in a hot and steamy atmosphere. The individually adjustable sensors and comprehensive software package help their detection units to be adapted to the conditions, ensuring reliable fire detection but nevertheless minimizing false alarms. The company also demonstrated a fire alarm panel with two ring-format detection circuits, which is found at the heart of their systems, as well as detectors for air intakes that will raise the alarm if various gases are found in the airstream. www.notifier.com

Alarm Control Linked to Building Management

Open Connect Gateway from Apollo Fire Detectors allows fire alarm control panels to be linked to building management systems (BMS) using standard protocols, thereby increasing the efficiency and reducing the costs of system management. Environmental and security systems, such as heating, ventilation and lighting, can be readily integrated using modern building management systems. However, fire detection systems are safety-critical and subject to stringent standards and controls, so they usually had to be kept separate. The company's system, however, allows the full integration of an Apollo-based fire detection and alarm system into a BMS without any modification to either system. This allows all building services to be controlled from a single point without compromising the integrity of the fire alarm system or other essential building equipment. alison@proteuspr.co.uk

GIT **BUSINESSPARTNER**
The Purchasing Section for direct contact

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