

Volume 5
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GIT
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SECURITY

MAGAZINE FOR SAFETY AND SECURITY

6

79 824



COVER: SANYO – Full HD Lineup

Perimeter Protection

Security for Public Sectors

Video Surveillance

Info Security

Machine and System Safety

Fire Sprinklers

Airport – Safety + Security

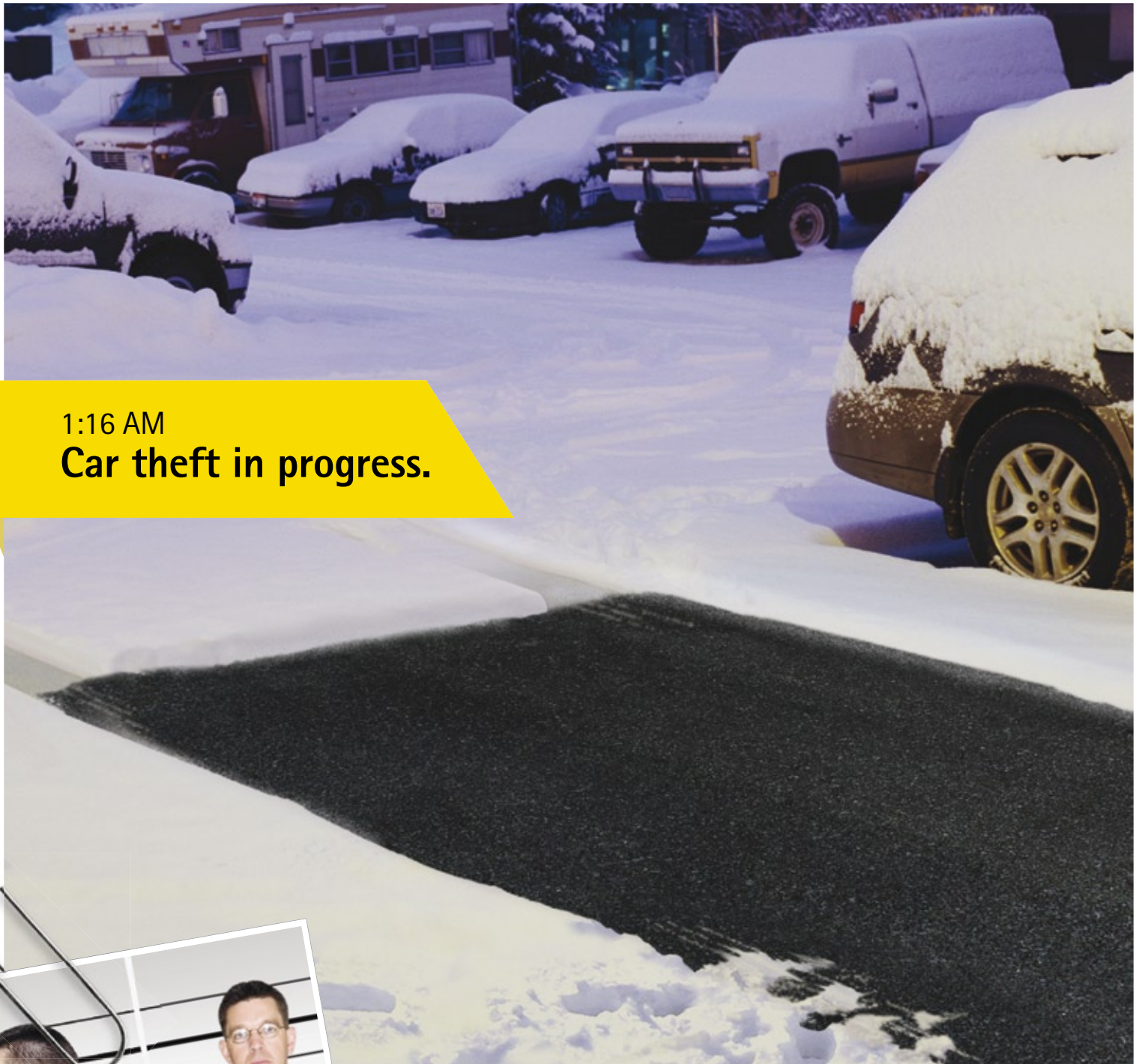
SANYO

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1:16 AM
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The Key to Success



"The key to success is people" is the slogan we have chosen for the header of our anniversary ads we are currently publishing in all of our magazines to celebrate GIT's 40th anniversary. Founded in 1969, GIT started with one publication full of information for people working in chemical laboratories. The explanation for the name 'GIT' is simple, GIT stands for Glass, Instruments and Techniques, the most important topics 40 years ago for the chemical lab. Since the start GIT, has been growing steadily and now we are publishing more than 30 magazines in the fields of laboratory & biotechnology, chemistry, health care, automation technology and safety & security.

40 years is a lot of time, even if you compare it to the more than 200 years of publishing tradition our colleagues at Wiley can look back at. Since 2002, GIT has been part of the John Wiley & Sons, Inc. publishing group. A great name, the tradition of which is an obligation to us. For the future we have the words of the French philosopher Jean Jaurès in mind who said: "Tradition is not about keeping the ashes, it's about passing on the flame."

That is why for the future we will keep on investing in people. Our editorial teams get support from competent advisory boards con-

sisting of top-class representatives from their respective trades. They give advice concerning the topics to be dealt with, recommend authors and establish contacts. The cooperation with the advisory boards, the feedback from our readers and integrating competent authors from industry and science guarantees practical relevance and the constant high quality of our publications.

The launch of new business portals in 2010 will mark the next step for us. Already in January we will launch our new portal for safety and security that will accompany our print publications in this segment and will be a complement to our product data base www.PRO-4-PRO.com. We will provide you with more information about the new portal in our next issue and will keep you updated when you visit our stand at Intersec in Dubai or at IIPSEC in January.

Enjoy reading this issue!

Best wishes from the
GIT Security + Management team

Heiko Baumgartner

THE "QUAY" FOR A FULL PERIMETER SECURITY.

The QBT200m series offer specially treated components to protect against marine corrosion, and a unique double modulated beam signal ensures high resistance to direct and reflected sunlight up to 50,000 lux.



PT+CCTV : THE FIRST LINE OF DEFENCE.

Bunker Seguridad PT Double Sided Beam Tower can now be equipped with PT-CCTV top allowing you to monitor the installation and record images of intrusions.





Full Lineup, Full HD and Full Frame Rate

Since the launch of the zoom type camera VCC-HD4000P as a pioneer of full HD last year, Sanyo has been gaining high reputation in the market and the camera was selected as "Product of the year" at the Ifsec 2009. Sanyo Electric now launches a full lineup of nine new full HD/full frame rate models in the fast-growing high-resolution network camera area of the security industry. The new cameras are available starting from November. **16**

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VideolP range
"a tribute to Amadeus"
 VideolP solutions from a single source

Dallmeier has planned and realised the biggest real-time IP systems worldwide. The extensive know-how has been used in the development of the VideolP range "a tribute to Amadeus". Just as Mozart, through perfect composition and brilliant instrumentation, created an ingenious body of work, individual high-value IP components can be used to realise top-quality video network solutions. The arrangement of the Dallmeier IP solution remains variable and flexible. Its composition can range from a duo of camera and streamer to a large ensemble of different elements. With the VideolP range "a tribute to Amadeus" the high standards of CCTV applications combine with the benefits of pure IP solutions. The best of both worlds, a star-studded ensemble with guaranteed success!

a tribute to Amadeus

25
 1984 - 2009
 25 Years Dallmeier

www.dallmeier.com

Dallmeier

Magal S3 and ICx Technologies Announce Partnership Agreement

Magal will offer ICx ground surveillance radars, as part of its overall outdoor and Perimeter solutions portfolio. "As a solution provider, Magal offers a very broad selection of sensors, but we recognize the growing demand for wide area surveillance technology in the more critical Perimeter Intrusion Detection Systems applications," said Eitan Livneh, recently appointed CEO of Magal S3. Mike Mostow, vice president of sales for Systems Products within the Surveillance Group at ICx Technologies said: "We are very excited about our partnership with Magal. It expands our sales reach globally and will allow us to better support our rapidly growing international customer base. We also recognize the growing demand for comprehensive, all encompassing multisensor perimeter security solutions."

www.magal-ssl.com · www.icxt.com

Musical Heritage Preserved with Milestone Technology

Milestone open platform IP video management software is the future-proof technology for security surveillance of historical treasures from Italian culture and music at the renowned Academy of Santa Cecilia. The system proved its scalability and flexibility when these were moved to a new location at the Parco della Musica Auditorium. "Our situation is unique, considering the quality and quantity of the assets we are required to preserve and this video surveillance system fulfils all of our requirements. The features we appreciate most include integration with other systems in the building and scalability that is essential for rapid response to new demands that develop," stated Angelo De Santis, Logistics Superintendent at the Academy of Santa Cecilia. The system integrator e-Jam who designed and installed the video surveillance system chose Axis network video cameras and Milestone XProtect Professional video management software with an open platform and the ability to manage different video camera models from a central server that can also be accessed remotely. In practice, it has been proven that the new generation technology can be used without requiring large investments to implement an efficient and effective system that, above all, looks to the future.



www.milestonesys.com



Videor and Videotec Agree on a Distribution Partnership

Videotec is expanding its distribution and will now also be selling its video surveillance products through Videor E. Hartig. The latter has concluded a distribution partnership with the Italian manufacturer Videotec and will be distributing its products in the Europe and Middle East Area. Michael Haas, Managing Director of Videor announced: „We are proud to have won Videotec, the market leader for PTZ systems and housings technology, as distribution partner. Our customers will immediately benefit from the high quality of the products, the attractive price/performance relationship and the new developments of the Italian innovator. This will enable us, as a multi-brand distributor operating throughout Europe, to expand, step by step, our range of products, which includes individual components as well as integrated solutions in the fields of security, imaging and broadcasting, and which is support by a broad spectrum of strong brands." A good opportunity to introduce the Videotec products were the Videor Infodays held in October at the Videor headquarter. Davide Boschetti presented the complete Videotec portfolio to an interested audience. In the middle of the presentation was the new ALBERT system for intelligent video surveillance and the new Ulisse Compact positioning unit.



www.videor.com · www.videotec.com



GE Security Invests in Bahrain

Tamkeen and GE Security announced the signing of a contract to support the set-up of GE Security's Middle Eastern hub in Bahrain and to establish a Training University, which will serve its regional operations and employ local Bahrainis. The project is part of Tamkeen's efforts to support the Economic Development Board (EDB) strategy aimed at attracting foreign direct investors to Bahrain and creating value added jobs in the country. The agreement signed today will enable GE to further develop its presence and continue its strategy of localization and knowledge transfer in the region.



www.ge.com

Magal S3 and DvTel Announce Strategic Partnership Agreement

Magal S3 and DvTel announced at ASIS 2009, that they are entering into a strategic partnership agreement to offer enhanced IP based solutions. DvTel has selected Magal S3 (Security, Safety, Site management) to support their Isoc V6.0 end-to-end Enterprise Platform solution with Magal's suite of intelligent sensor technologies including their IVA (Intelligent Video Analysis) server technology. Magal S3 has selected DvTel's intelligent Security Operations Center (Isoc) V6 solution as its main platform for IP video solutions. Both companies recognize the synergy in combining their technology solutions DvTel brings IP security expertise, while Magal S3 brings IVA and perimeter intrusion detection technology.

hagaik@magal-s3.com

Guide to Access Control for the Education Sector

The British Security Industry Association has published a new guide to aid the education sector in the application of access control systems. Education sites face a variety of threats including theft, vandalism and trespass. Therefore, safeguarding the wellbeing of pupils and staff is paramount. Access control systems can do just this by protecting assets as well as ensuring the physical safety of everyone on-site, whilst maintaining the continuity of education by preventing disruptions caused by theft and damage. Simple to use, access control systems are effective and provide staff and pupils with the high level of crime prevention they deserve. The BSIA guide provides information on how access control can reduce risks that the education sector faces, the added benefits the systems can bring, case studies and any legislation which should be considered. The guide to access control for the education sector is available as a download by visiting www.bsia.co.uk/accesscontrol.

New Members for HDcctv Alliance

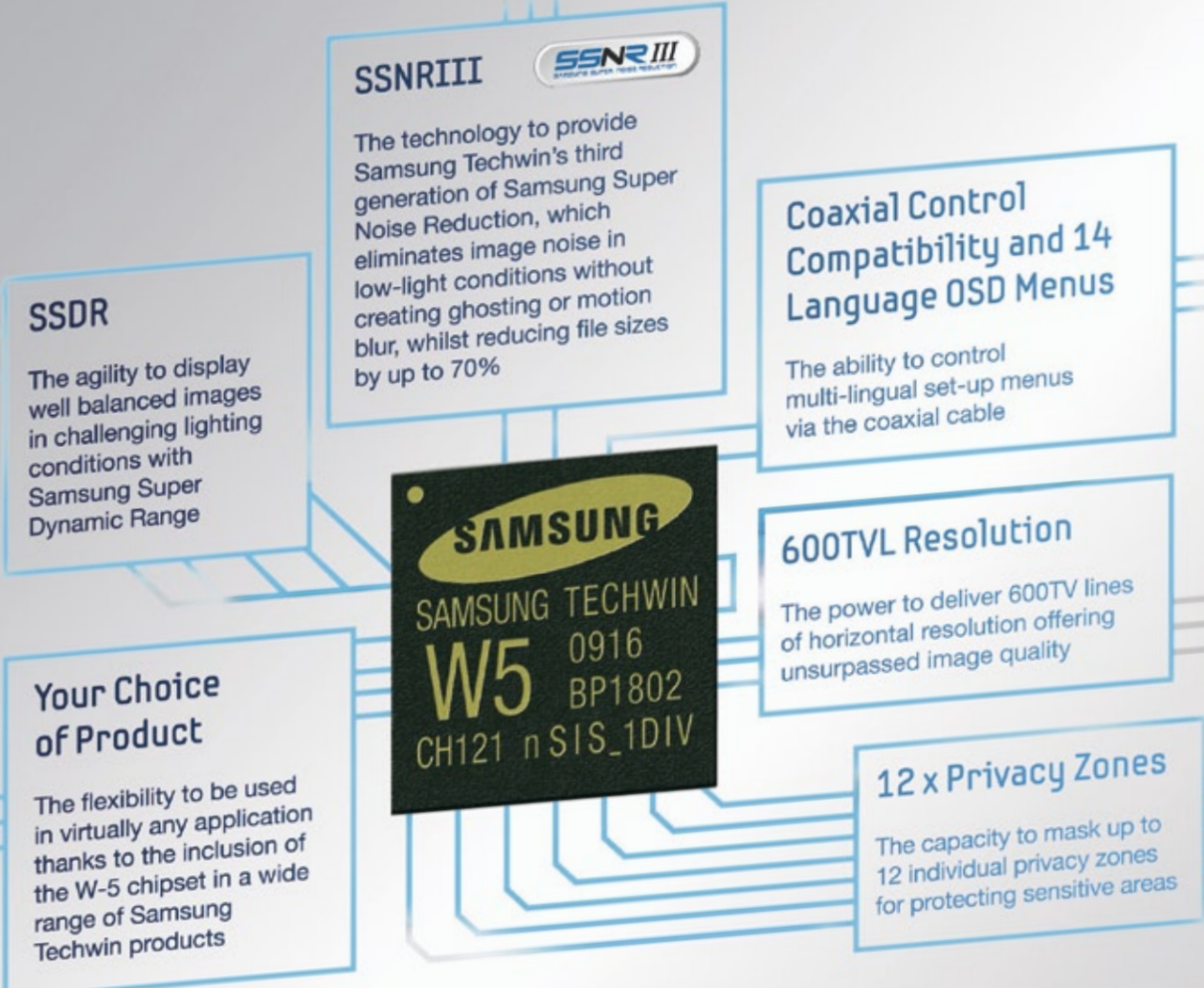
HDcctv Alliance, the global security industry consortium established to manage technical standards for HDcctv equipment interoperability, announced that Clinton Electronics, IDIS, Marshall Electronics, and Speco Technologies have joined to participate in manufacturing new security industry equipment compliant with HDcctv specifications and standards. HDcctv-based systems transmit HDTV signals digitally over conventional CCTV media without packetization and without any perceivable compression latency. The HDcctv Alliance has partnered with SMPTE to include the family of video interfaces known as HD-SDI to create derivative standards to enable plug-and-play security systems and equipment that deliver high-resolution, high-definition (HD) surveillance video with no delays, image artifacts, or jitter.

www.highdefcctv.org

Lilin Launch Onvif Support Program

Lilin has formed an Onvif Support Program. Available to third parties, it helps companies achieve Onvif compliancy whilst strengthening the company's commitment to open standards. As part of the Support Program the company will promote Onvif to potential new members, whilst supporting member companies with their integrations. Once applications to join the Support Programme have been approved, partners can benefit from developer support; including direct access to API documentation and the firm's Research and Development team. Companies will also be able to use the Developer Forum, to communicate with industry peers and Onvif experts. Discounted evaluation samples and demonstration equipment is also available for integration purposes.

www.lilin.co.uk



Imagine
uncompromising performance

Introducing the W-5 DSP chipset from Samsung Techwin

The new W-5 DSP chipset from Samsung Techwin provides powerful new technology that sits at the very heart of a new breed of next generation cameras and domes, offering performance and functionality which has to be seen to be believed.

Powerful image processing delivers 600TV lines horizontal resolution in colour, whilst functions such as third generation Samsung Super Noise Reduction (SSNR III), Samsung Super Dynamic Range (SSDR), multi-lingual on-screen display menus with coaxial control compatibility and 12 privacy zones are built-in as standard to deliver never before achieved image quality, ease of use and flexibility.

Samsung Techwin. Security solutions beyond your imagination.



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 Samsung House, 1000 Hillswood Drive, Fax: +44 (0)1932 455 325
 Chertsey, Surrey, KT16 0PS. UK

For further information please contact:
 E-mail: STSecurity@samsung.com
 Web: www.samsungcctv.com

Available from all leading electronic security distributors

ONVIF Reaches 100 Members

ONVIF announced that its member base has grown to 103 companies. The forum, which drives the development of a global standard for the interface of network video products, now boasts 12 full members, 13 contributing members and 78 user member companies. Over the last months, Canon and IDIS have joined as full members and Dallmeier, General Electrics, Genetec, Hitachi, Industrial Technology Research Institute, ITX, Nice, Optelecom-NKF, PMC-Sierra, Sanyo and Webgate are participating as contributing members. In line with ONVIF's Rules of Membership, the forum held an election for the committee seats at its Annual Meeting in Anaheim, California on September 23. As a result, Siemens is now a new member of the Steering Committee, Panasonic has been re-elected for both the Steering and the Technical Committee, and Cisco has been re-elected for the Technical Committee. In the Technical Services and Communication Committee, open seats were filled by Anixter and Hikvision respectively. The new committee members will start their work in November in conjunction with ONVIF's first anniversary. "Reaching 100 members is a huge milestone for ONVIF and clearly shows the importance of global interoperability and standardization for our industry," says Jonas Andersson, Axis Communications, Chairman of ONVIF's Steering Committee. "We welcome all the newly elected members to the ONVIF committees and look forward to their contributions for another productive year for ONVIF." www.onvif.org

Cias and Geutebruck Cooperate

Cias and Geutebruck have agreed to cooperate in order to create a total integration of Cias' products into the Geutebruck CCTV platform, thus creating a more user-friendly product for the customer. Using the Cias SDK, Geutebruck has implemented in their CCTV system the correct interpretation of alarm states (Pre-alarm, alarm, fault, tampering) generated by the CIAS intrusion systems installed on the perimeter. The integration of the systems uses the Ethernet network, and the TCP-IP protocol. The CCTV system opens a TCP-IP communication session (Client) for each installed CIAS IB-System (Server) and analyzes the status of each device connected to the common Ethernet network via IB-FMCREP ETH field repeater from Cias. www.cias.it

Optelecom Unifies Product Line

Optelecom announced that all products developed and distributed by the company will use the Siquira brand name as of January 1st in 2010. The Siquira registered trademark was adopted in 2006 to distinguish Optelecom-NKF's IP product line, even as the company's fiber products continued to be marketed under the Optelecom-NKF brand name. "The extension of the Siquira brand to our entire product line broadens the reach and definition of our technology across each of our key markets," said Dave Patterson, Optelecom-NKF's president and CEO. "Integrating all of our products that collect, transmit, and transform video and data will help us position a portfolio of solutions that deliver actionable information. Our goal is to provide technology to support each phase of the security lifecycle: To prevent, detect, respond to, and investigate incidents. Siquira solutions address these phases through a practical, market-focused approach." www.siquira.com

Seetec Increases Market Penetration

Seetec has expanded in 2009. The manufacturer of the video management software Seetec 5 has, according to IMS Research, been able to defend their second place EMEA position, in the category „Software-only Vendors of Open Platform Network Video Management Software". The EMEA market share increased by over 4% to 24.3% and the gap to the market leader could be further reduced. After the entry onto the French and Belgian markets, thanks to the opening of an office in Paris last year, new markets in Europe have been added. As of 1st May 2009, Gürkan Esenkova has been handling the Turkish market from Istanbul. Mr. Esenkova holds a degree in electronic engineering and has many years of experience in the CCTV sector. www.seetec.eu

Jesper Balsler Joins the Board of Milestone

Jesper Balsler has joined the Milestone Systems Board of Directors to add further strategic competence with an eye towards the organization's continued international expansion. „It is very positive that Jesper Balsler joins the Milestone Board of Directors. Over the years we have built up an international sales and distribution channel, and our expansion continues – the latest initiative being this year's new subsidiaries in Australia and Spain," comments Lars Thinggaard, President & CEO, Milestone Systems. "Jesper Balsler has great experience with developing global business channels for software, and we are pleased to gain from that expertise." www.milestonesys.com



Salto Access Control for Luxury Hong Kong Apartments

One of Hong Kong's premier property developers, VCC Land, has installed access control from Salto Systems into all their properties. Brand V takes existing apartment blocks in desirable Hong Kong locations and completely re-models them into luxurious, state-of-the-art contemporary living spaces equipped with top-of-the-range home comforts and hi-tech entertainment appliances. The best apartments also boast panoramic city views, and automatic skylights that open at the push of a button. Installation of some 208 Salto XS4 comfort and e-cylinder locks, together with wall and lift readers has been carried out by local business partner Barwin Metal, and these now control main entrance, lift and individual apartment access at V locations in Happy Valley, Wanchai and Causeway Bay and Causeway Bay2. All properties also feature independent databases running the company's Hotel Access Management (HAMS) 500 software. www.saltosystems.com



ADT Wins Fire Excellence Award

ADT has been named the winner of the FSE (Fire Safety Engineering) Project Design award at the 2009 Fire Excellence awards. The award was given for the installation of ADT's Mills (Modular Intelligent Lighting System) at the Odeon eight screen cinema complex in Belfast at the Victoria Square Shopping Centre. Held in Birmingham on 12th May as part of International Firex 2009, the Fire Excellence awards are widely recognized as the fire industry's premier awards event. The fire detection and alarm system boasts Mills dynamic emergency evacuation way-lighting and human flow control, which is fully integrated with ADT's Minerva Mx fire controller. www.adtemea.com

The Importance of Public Safety

The present danger of terrorism and sabotage shows that it has become more difficult to identify terrorists because they usually hide in crowds. Therefore, new measures with new security concepts and systems are required from relevant units and organizations responsible for homeland security and public safety e.g. the armed forces, police, border police, coastguard etc. Reconnaissance and surveillance have attained a new status. Fixed or mobile sensors record important information such as speech, images, video, radar, which have to be transmitted to relevant control and decision-making centers. Borders, water supplies, nuclear power stations, pipelines or other potential objects under threat may be in conurbations or located in remote areas or just far away. The reliable and secure transmission of information about these objects over long distances requires equivalent technologies. As a company which has been successfully operating in the market for information transmission for over 100 years now, Telefunken Racoms develops and offers comprehensive security concepts answering to these requirements for the surveillance of sensitive, decentralized infrastructures. www.tfk-racoms.com

White Lights from CBC

Electricity bills at a historic Napoleonic fort in Chatham, Kent, have been significantly cut, thanks to the installation of an energy-efficient lighting system from CBC. Savings of more than 2,000 £ per quarter have been achieved at Fort Amherst following the replacement of halogen-style lamps with Ganz WL100 and WL300 LED illuminators. The Fort Amherst site, comprising an extensive network of tunnels, gun placements, and hidden defenses, is in uniquely complete condition and is the world's largest surviving fortress from the Napoleonic era. It was originally built to protect the strategically vital dockyard at Chatham, and 150 years later continued in service as a secret command center during the Battle of Britain.

www.cbceurope.com

Visual Defence's "SecurEye" Survives Bomb Blast Tests

Visual Defence announced that its recent submission of its robust forensic camera – Secureye – designed and built at the request of the U.S. Department of Homeland Security (DHS) Science & Technology (S&T) Directorate has successfully survived rigorous blast testing – including an actual explosive charge representative of a terrorist bomb in a transit bus. The DHS Secure (System Efficacy through Commercialization, Utilization, Relevance and Evaluation) Program requires third party independent testing, so these explosive tests were performed at the U.S. Army Aberdeen Test Center (ATC) in Aberdeen, MD. This transit bus blast test scenario featured a retired Maryland Transit Authority bus rigged with representative explosives to emulate a suicide bomber detonation. Multiple camera units were positioned throughout the bus prior to the detonation. ATC technicians reported recovery of all units placed within the vehicle even though the transit bus was reduced to a mass of twisted metal.

www.visualdefence.com

Foil-lined Bag Detection Solution

ADT Fire & Security announced the Sensormatic AMC 7000 foil-lined bag detection solution for the Sensormatic Ultra Exit portfolio. It can help retailers detect foil-lined bags and clothing that thieves often use to circumvent anti-theft systems. This solution specifically detects foil-lined bags (also known as "booster bags") as they enter stores, providing retailers added security and identifying shoplifters before they steal. Powered by the AMS-9050 controller, this solution installs easily and integrates seamlessly with Sensormatic Ultra Exit pedestals to offer excellent detection coverage up to 2 m (6'7") wide. The solution does not require retailers to install additional antennas or modify pedestal layouts. This optimizes retail floor space to enhance the customer shopping experience while protecting profitability.

www.sensormatic.com

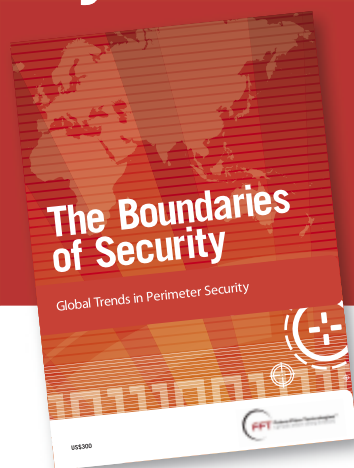
Geutebruck IP Video Security Solution for Port Yanbu

At King Fahd Industrial Port at Yanbu in Saudi Arabia the CCTV system has to provide high security for valuable cargos and infrastructure. When the original IP system proved disappointing, it was upgraded with Geutebruck servers, management system, video analysis and GUI. The company's Eurasia remedy, implemented by local partner Abdulla Fouad Holding Company, retained the cameras and encoders, but cut the number of monitors to 12 by installing a Geviscope management system needing only six servers, an alarm GUI and Gscview display software. To eliminate the vast majority of irrelevant alarms (around 1,000 a week), the perimeter system output is now filtered by Geutebruck's intelligent video analysis software.

www.geutebrueck.com

Attack Terrorists, Criminals, Saboteurs Defence

If you're in security, you need to secure this.

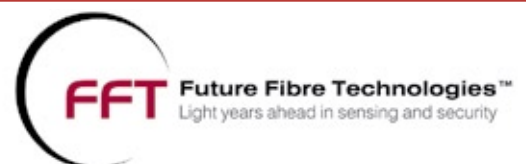


The Boundaries of Security is the industry's most comprehensive report on current global trends in perimeter security. It contains invaluable information all security professionals need to keep abreast of the fast paced world of perimeter protection. It covers the latest trends in the industry including highly detailed information on the different intrusion detection technologies.

This new report is a must have addition to the libraries of all security consultants and industry professionals.

If you are in security, you need this report! For a limited time only, secure your FREE copy worth US\$300.

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Within the Siemens Building Technologies Division, the business unit Security Solutions offers customers integrated security solutions ranging from the analysis of requirements and project design, installation and integration, up to training and maintenance. Heiko Baumgartner talked with Frank Pedersen, CEO of Security Solutions, about the latest developments.

A year ago, the integration of VistaScape and Novotec into your security platform Siveillance was a hot topic. Was the integration successful, and what is the latest news about this product?

F. Pedersen: The integration was successful and has now been completed. With Siveillance we have introduced a product line which combines the video analysis technology of VistaScape with the existing Siemens range of video and security technology. The extension to include Novotec control centre functionality has enabled us to develop a state-of-the-art control centre system. With Siveillance ELS Web we now have an impressive offer for interventional forces such as fire services and police. With our Siveillance ELS Vantage solution we can serve customers with security-sensitive infrastructures, e.g. ports, airports or industrial plants. In October we have launched a completely new solution. Siveillance Fusion rounds off the lower end of our range and is explicitly orientated to companies who wish to modernise an existing security infrastructure and have legacy problems. Many of these companies are looking for practically orientated solutions for this task.

What kind of legacy problems occur with these customers?

F. Pedersen: They are confronted with inadequate compatibility of their existing systems. Many businesses have increased security requirements and already have a security infrastructure or at least security technology elements in place. Due to growth as well as additional acquisitions, structures have grown up in which

INTERVIEW

Integrated, Open and Future-proof

Siemens Building Technologies Has a New Approach to Security Solutions

you meet everything, from ultra-modern elements to less modern systems which still fulfil their purpose, to completely obsolete technologies. As well as this, the systems are usually from a variety of providers. You find various types of video cameras, as well as different types of intrusion detectors and access control systems, which cannot communicate with each other properly due to closed protocols and systems.

What is the solution, and what do you offer customers as a solution for their problems?

F. Pedersen: In such situations some of our competitors take the easy way out and offer to get rid of everything and install a completely new system. This is very expensive, and in many cases it is also unnecessary. With Siveillance Fusion, we are launching a completely new open system, with which we can integrate everything and solve this type of problem. We downwardly integrate all components, which means that at IT level, we integrate everything into a single system, right down to the end devices in the fields of access control, intrusion detection and video. Siveillance Fusion is a system which we have tested for two years in cooperation with our customers, and which is now ready for market.

If I understand you correctly, the new system is suitable for all businesses with their own IT infrastructure, which means except for small retailers, for all businesses up to large groups?

F. Pedersen: Yes, I think that we no longer need to prove that we are in a position to secure large projects and areas. However, we also want to show that our solutions are just as well suited for small to medium sized projects. Enormous investments are not necessary for a Siveillance Fusion solution. You can achieve a great deal with a minimum of financial outlay, and with this product we are deliberately not just targeting large groups but rather also small and medium sized businesses. Siveillance Fusion is interesting for everyone who wants to have an open system and does not want to commit themselves to a particular technology, hardware or manufacturer. The objective is to be open and flexible. The system is flexible, for example because it permits simple integration of IT elements from the personnel area, e.g. ERP systems.

You mentioned projects which have already been implemented during the test phase. Could you give us a few examples?

F. Pedersen: The system is already being tested, or is in full operation, in over 200 applications. This includes an Indian department store chain, a telecommunications company and an oil and gas company. In all of these, Siveillance Fusion provides complete control of day-to-day security activities.

Was the development of Siveillance Fusion carried out in cooperation with Siemens IT Solutions?

F. Pedersen: No, it was an independent development by Siemens Building Technologies. Of course, we collaborated with Siemens Corporate Technology, Siemens' own development department. However, with the development, we did not want to bind ourselves to our own technologies, but rather to develop a genuinely open and flexible system.

The integration of a wide variety of different components into a functional system is certainly the trend. However, the combination of IT security and classic security technology is also being widely discussed at the moment. How do you see developments in this field?

F. Pedersen: The convergence of IT security and classic security technology is on the advance. In our opinion, this convergence will need to be seen from both sides in the future. During the daytime, it must be ensured that even at peak periods the IT network provides sufficient capacity to enable the classic tasks of video surveillance and alarm management. In the final quarter of this year we will be presenting "Security Gate", a new product which ensures just this. On the other hand, "Security Gate" is also able to analyse unusual data flows, e.g. at night, which could indicate a loophole in the IT network or an external attack. "Security Gate" therefore facilitates and optimises work with both types of network.

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EVENT

Intersec Dubai 2010

Gate to One of the Most Interesting Markets for Security

The Arabian Gulf is one of the most exciting markets in the world for the security industry. Its security market is worth about 1 billion US-\$ and is projected to grow at 10% annually. In the middle of this market Intersec trade fair and conference is scheduled to take place from January 17 to 19, 2010, at the Dubai International Convention and Exhibition Centre. In 2010 commercial security will be one of the largest segments of the trade fair and conference.

Good experiences at past shows and the attractivity of this market are the main reasons why leading global and local companies have confirmed their participation including Honeywell, Bosch, Dedicated Micros, Genetec, Infinova, Axis Communications, Smith Detections, Tyco, Panasonic and Sony to name a few. The exhibition and conference, is the largest in the MENA region for the safety and security industry and its 12th edition is projected to attract more than 700 exhibitors from 50 countries and over 17,000 trade visitors from 95 countries.

International Profile with a Strong Regional Impact

Ms. Elisabeth Brehl, Managing Director of Epc Messe Frankfurt, organisers of the Intersec trade fair and conference, said, "Exhibitors participating at Intersec are aware of the opportunities that the region has to offer, this is evident with the growth of the show, year on year. The international interest in the exhibition has expanded remarkably over the years." The growing expertise of the event, as a result of working with experienced international suppliers, is underpinning the development of both the security and safety sectors across the region. It is also recognised that fire safety as a discipline has much development work ahead of it in most of the Middle East – which is

why consultancy and training services are in strong demand. "It is projected that within the next few years more than 60,000 buildings and assets in Dubai alone will be fully installed with direct alarm systems. Alarm system installation will be a mandatory requirement by law, to ensure and enhance the security of the city," said Ms. Brehl. She further remarked that, "Commercial Security represents the largest show segment of the Intersec trade fair and conference, showcasing the most advanced products, services and technologies by key global players."

CCTV in the Focus

The demand for sophisticated CCTV is growing at a rapid pace in this part of the world. This is evident from the fact that the recently launched Dubai Metro has 3,000 CCTV cameras mounted, to monitor the 74 km of rail tracks and the 29 stations. CCTVs are a crucial element in securing buildings, banks, ports and airports in the region. A number of exhibitors will be featuring the latest technology in CCTV cameras, in the Commercial Security section of the Intersec trade show. With the building of the Dubai Metro project; pivotal topics related to emergency response, disaster preparedness, safety and security equipment have been highlighted. International suppliers of security related equip-

ment and services will be displaying the most advanced trends in these areas.

New in 2010: The IT Security Pavilion

Cyberthreats are continuing to evolve, with large increases in financially motivated, highly targeted and damaging attacks. New technology and business trends, such as the consumerisation of IT, Web 2.0 and globalisation, are undoing many traditional security processes. New approaches and technologies for protecting critical business information systems are needed. The new IT Security pavilion at Intersec is a unique forum to focus on all aspects of IT Security.

New at Intersec 2010

The inaugural "UAE FireFit Championships" to happen alongside Intersec 2010. For the first time in the UAE, fire fighters from Canada and all seven Emirates will compete against each other in six categories relating to fire fighting and rescue in a three day challenge running alongside Intersec 2010. The event is supported by Dubai Civil Defence and organized by 911 Fire Fighting and FireFit Canada. FireFit has developed and administered the FireFit Championships and firefighter testing across Canada since 1994 and will bring the event to Dubai next year with the ultimate goal to create a UAE Fire-



Fit series, in which Emirati firefighters will compete against teams from all over the world.

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INTERVIEW

Cisco and Pelco Join Forces for IP Video

At the end of September Pelco and Cisco announced a strategic technology agreement to pursue the joint development of new HD-IP video cameras built upon Pelco's Sarix technology platform. The new co-branded video security cameras will bring together Pelco's knowledge in imaging with Cisco's IP networking expertise to deliver a new generation of high-definition IP video security cameras. Cisco and Pelco announced that the cameras will be sold globally by Cisco Authorized Technology Providers and are projected to be available from the end of 2009. Pelco will supply Cisco with a complete line of HD imaging technologies that will be used to extend Cisco's portfolio and cameras co-branded by Cisco and Pelco will feature functionality of Sarix technology. GIT SECURITY asked Dean Meyer, President and CEO at Pelco about the deal.

GIT SECURITY: What thoughts have led to this cooperation?

D. Meyer: Pelco and Cisco are natural partners to help drive the next generation of physical security systems. We're excited to work closely with Cisco to combine their deep understanding of IP networks with Pelco's industry-leading Sarix technology to drive innovative HD IP camera development for the global security market. Our shared



Dean Meyer, President and CEO at Pelco

commitment to our customers and proven success in working together will allow us to deliver new features and capabilities that meet the needs of today's safety and security professionals.

Pelco is the global market leader for video security cameras with a strong focus on analog products in the past. What experiences did you make in the first months after the introduction of the Sarix IP products?

D. Meyer: Our engineering team listened closely to the field during the design of the Sarix technology platform and we've been overwhelmed by the positive response since its introduction. Sarix delivers the advanced

high definition images, outstanding low light performance, easy installation, H.264 compression, and powerful analytics that the industry demands.

How do you judge the shift from analog to IP products in the video surveillance market?

D. Meyer: This is an exciting time for the video security industry. As the market transitions from analog to IP video security systems, it is critical that manufacturers incorporate the latest technology to develop solutions that address the unique demands of both security and IT professionals. In this regard, Pelco is leading the way with a broad spectrum of imaging systems, digital video recorders, hybrid video recorders and video management systems – all backed by our legendary customer service.

Pelco products normally are sold through the traditional physical security channel and Cisco products through IT resellers. Is the cooperation the silver bullet for both companies to open new distribution channels without disappointing established partnerships?

D. Meyer: From the Pelco perspective, the access to the IT market that this partnership will provide is obviously something we are very excited about.

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SECURITY FOR PUBLIC SECTORS

A Front-Row View

A New Display Wall for the 112 Emergency Center in Cantabria

The new Central de Emergencias 112 de Cantabria, inaugurated on March 3rd 2009, is part of a larger effort undertaken by the government to improve emergency services for the citizens of this autonomous region in Northern Spain.

Just like their counterparts at 911 centers throughout North America, the emergency center in Cantabria is a 24/7/365 operation that handles all types of emergency calls and coordinates both public and private agencies that need to respond, including: the fire service, health, civil defence, police (regional and national), public works, and others.

In addition to incorporating new technology, updates to the new center include an increase in staff from 13 to 30 operators as well as a crisis management area for local government that provides the same real-time access to information as if working from the control room, helping to facilitate and accelerate decision making.

No 'Burn-in' Effect

A 3 x 2 display wall has been installed for visualization in the control room, consisting of 6 Eye-LCD 4600M displays chosen for their sharp image quality, high contrast, high brightness and high resolution. In contrast to plasma displays, which are also available in frameless versions, there is not the permanent danger of 'burn-in'

effects with TFTs. These effects occur on plasma devices already after the short display of a static image and cause irreparable damage to the screen over time, but this does not happen to TFT screens so easily. The 6 displays have a screen diagonal of 46" with 16:9 aspect ratio, and native WXGA resolution (1,366 x 768 pixels). They are driven by an Eyevis Netpix controller type 3008 and Eyecon software to provide a versatile platform for the presentation of cartography and text to all operators.

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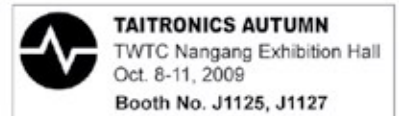
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COVER STORY

Full Lineup, Full HD and Full Frame Rate

Sanyo Launches a Complete Range of New Megapixel Cameras

Since the launch of the zoom type camera VCC-HD4000P as a pioneer of full HD last year, Sanyo has been gaining high reputation in the market and the camera was selected as "Product of the year" at the Ifsec 2009. Sanyo Electric now launches a full lineup of nine new full HD/full frame rate models in the fast-growing high-resolution network camera area of the security industry. The new cameras are available starting from November.

Smaller in Size, Better in Performance

The new line up includes the major types of security cameras in terms of product shape: CS mount types (VCC-HD2100P, VCC-HD2300P, VCC-HD2500P), vandal-resistant dome cameras (VDC-HD3100P, VDC-HD3300P, VDC-HD3500P), a zoom type camera (VCC-HD4600P) and also two PTZ cameras (VCC-HD5400P, VCC-HD5600P). The new cameras will expand the range of possible installation environments. The new lineup incorporates the newly-developed 'Xacti HD-Pro' image processing engine that allows sophisticated functions and the next level of image quality. Xacti HD-Pro is an upgraded version of the engine used in Sanyo's Dual Camera Xacti that is highly regarded in the consumer video camera market.

By applying Sanyo's ultra-miniature mounting technology acquired through the development of Dual Camera Xacti and digital cameras, a 40% size reduction over previous Sanyo models was achieved. Consequently, installation of a security camera in a way that does not spoil the interior ambience has become possible, which expands possible use environments compared to conventional products. Through making such compact model designs, Sanyo has taken on the challenge of remaking the stereotype of a security camera. Now a security camera which has been a highly-obtrusive object, can naturally blend in with the installation environment.

High Performance as Standard

All models and product types of the new HD Series enable full 1,920 x 1,080 HD resolution for high-definition, high precision security surveillance and all models are compatible with a 25ips full frame rate. Smooth and natural video imaging with high-definition image quality ensures capturing of crucial moments. The product lineup meets the diverse needs of customers by being

able to flexibly create high image quality network camera solutions. For the CS Mount a lens selection is possible. The vandal-resistant Dome is equipped with a high-resolution vari-focal lens. The zoom camera offers a high-resolution 10x AF optical zoom lens and the PTZ cameras have a high-resolution 10x AF optical zoom lens that rotates for broad range surveillance.

Power and Comfort: The Twin Engine Xacti HD-Pro and Optimum IP-Pro

For the new HD Series, Sanyo's high quality motion picture technology is actively applied, which is used in the Xacti

Series that has been leading the digital movie camera market since its launch. Following the highly-regarded image processing engine used in the existing model VCC-HD4000P, Xacti HD-Pro has been developed for professional security cameras by further upgrading the advanced image processing engine used in the dual camera Xacti. The top-end models incorporate the Twin Engine system equipped with the new network oriented engine Optimum IP Pro. In conventional network cameras, image processing is heavily-loaded. The Twin Engine system makes the operating environment smoother and more comfortable by doing image processing and network processing separately to drastically reduce processing load.

New Full HD Processing Engine

Through the new technology significant functional enhancements have been made and new functions were incorporated to meet market and customer needs:

Multi-Streaming

All cameras use dual codec, supporting both the latest video compression standard H.264 and the still image compression standard MJPEG. Smooth video-based surveillance or clear still image-



based surveillance can be selected depending on the intended use. Twin Engine models incorporate a multi-streaming function to enable simultaneous output and transmission of H.264 and MJPEG up to 4 (quad) streams. This allows for example, that while using low-resolution streams for real-time surveillance of multiple places through multiple cameras using surveillance software, the full HD setting can be selected for the recording stream so that in the event of a crime taking place the suspect may be identified easily in the clear high-definition images.

Video Analytics for High Precision Surveillance

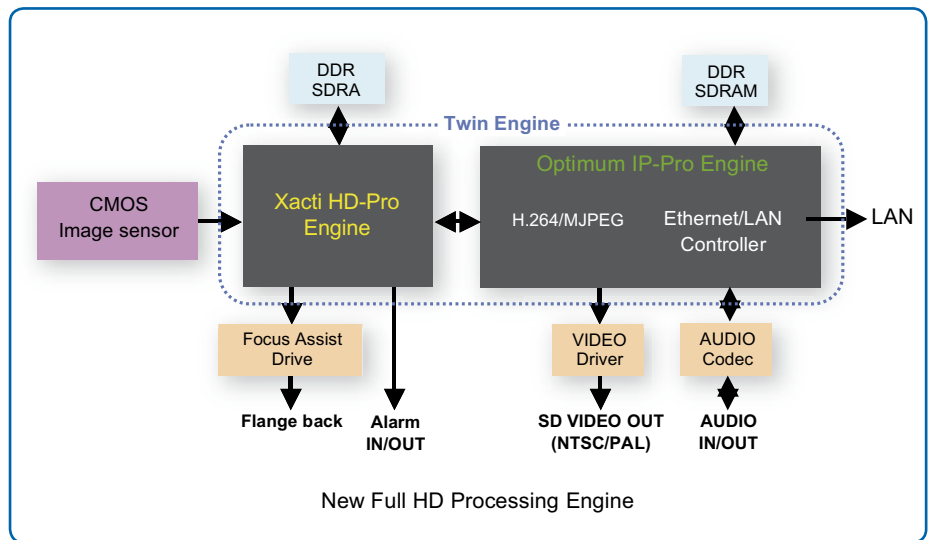
The video analytics function enables higher precision surveillance by utilizing preset subject information in terms of size and behavior to identify the behavior of certain subjects.

Convenient Focus Assist

The 'Convenient Focus Assist' Function is incorporated to facilitate focus adjustment upon installation. Sanyo's original 'Focus Assist Function' makes installation work dramatically easier. By simply pointing the lens at a target and pressing the 'focus assist adjustment' button, the camera automatically detects the target and adjusts itself to the optimum position. Fine focus adjustment can be done manually by operating the fine adjustment button.

Card Recording

An SD card slot is incorporated to ensure reliable security surveillance. In the case of a network problem records may be saved temporarily on



the SD card. Also a dedicated external HDD can be connected for long-duration recording, which is a unique feature offered by no one else.

Digital PTZ

By clipping the observation target area (VGA size) from the entire photographed image (2 megapixel), Pan/Tilt/Zoom can be done digitally. With this digital PTZ function, it is possible to easily move to and zoom-in on the spot to be observed, increasing the efficiency of surveillance operation.

Flexible System Construction

For Sanyo network cameras the Software Development Kit (SDK) is provided to enable user-level

application development and integration into network surveillance software by other companies. With this, each user can construct their system flexibly. In addition, Sanyo is a Contributing Member of ONVIF and will be able to respond to protocol standardization which is expected to be done in the near future.

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The introduction of the new IP camera lineup is a key step for Sanyo in the security market. GIT SECURITY had the opportunity to ask Hilmar Salac, Sales Manager at Sanyo Sales & Marketing Europe, about the product launch.

GIT SECURITY: What expectations do you have for the introduction of the new camera series?

H. Salac: After the success story of Sanyo's first FullHD camera launched already last year we are very confident to have a great success with such an outstanding high quality camera lineup. Already the first version was elected as CCTV product of the year at IFSEC 2009. This gave us the confirmation that direction, concept and product design are right. As it is world's first complete Full HD 1080P camera lineup for CCTV, it gives users a great variety of options to create the best solution on HD level. The complete lineup will be launched in only three months from October to December 2009 and will have a major impact on Sanyo's brand awareness.

The market for Megapixel-IP cameras is growing fast and your new line-up consists of 4 Megapixel cameras. Why don't you unlike other vendors stress the fact that you have more Megapixel than most of your competitors?

H. Salac: If we look at Sanyo's know-how, coming from a long time leading position in camera technology from CE market and especially the state of the art products in dual camcorder technology and if you mix this with more than 40-years of experience in CCTV you can easily guess that this is an advantage against other CCTV specialized companies. Sanyo does not rely on 3rd party ASIC or DSP chipset. All core elements are developed and designed by Sanyo itself. The ability to produce currently more than 15 Mio. digital cameras per year in one single high-tech factory including CCTV shows the powerful resources we are able to use. A warranty of 4 years on the whole camera lineup and very high given MTBF times show the trust we have in the outstanding and probably leading quality of our products. Honestly spoken surely each individual producer has some USPs and sometimes even some out-

standing solutions for IP Video, but coming to Megapixel technology competition becomes less, at least in the so called A-brand level we want to be in. The key arguments for this new lineup are surely the small, compact design, picture quality, performance, features and usability. When this new concept was created, we took note about the lessons learned from the first HD camera generation that certainly had it's limits.

Sanyo uses CMOS sensors for the new camera models. What is the reason for that?

H. Salac: One of the reasons is that the camera DSP was already designed for a CMOS chipset and it was of course easier to allocate same CMOS chips as we currently use hundreds of thousands of those chips in our CE camcorder production. The quality level of the CMOS chips used in these cameras is outstanding. And finally it has something to do with the higher processing speed of CMOS against a CCD version in Megapixel camera technology. A better backlight compensation and no smear effects are other arguments for the use of CMOS chips.

CCTV

A Step towards "Plug and Play"

How New Standards Are Benefiting the World of Network Video Surveillance

Consumer technology has long benefited from standardization – connecting a laptop to a monitor or projector, plugging a memory stick into a computer and even using a 3G phone overseas are all made possible thanks to industry standards. They establish uniform engineering or technical criteria that vendors agree to adhere to when manufacturing their products. Because of these standards, consumers enjoy freedom of choice, constantly-improving products and low prices when purchasing technology.

But despite the clear benefits, some business to business technology has yet to develop its own standards. The security industry is beginning to address its own shortfall in standardization. This should give rise to great competition for best-of-breed components from which end users can choose to build their ideal surveillance system solutions. We have already begun seeing products based on these new standards initiatives in 2009, and they are expected to make a significant impact on the market by 2010.

Standardizing Network Video Surveillance

Specifications only become standards once they have been ratified by a Standards Developing Organization (SDO). SDOs can operate globally, regionally or nationally. While "standards" has a very specific meaning, the term sometimes gets applied to products that have not been ratified by an SDO. The Internet Protocols (IP version 4 and version 6), for example, were not ratified by an SDO. Rather they were specifications worked out by several companies working together. These types of specifications usually work as well as standards ratified by SDOs and often become widely accepted and deployed by the market.

In the analog world, regional organizations NTSC (America) and PAL (Europe) have ratified standards for the video signal coming from the analog cameras. Those standards came from the television industry in the 1950s and have made it possible for analog cameras from multiple vendors to be used in a single system. Since the standards are regional rather than worldwide, however, vendors still need different versions of their products for different markets, which add to development, manufacturing and logistics costs. In contrast, most standards developed for

network video surveillance come from the IT industry and have the benefit of being worldwide standards.

Security Industry Driving Its Own Standards

Currently, there is no global standard defining how network video products such as cameras, video encoders and video management systems, should communicate with each other. But now standards developed within the security industry itself are on the horizon, which will complement the existing standards already deployed.

Recently several organizations have become active in the development of standards for network-connected video surveillance devices. One group is SIA (Security Industry Association), which is accredited by ANSI as a national SDO. Two other groups – ONVIF (Open Network Video Industry Forum) and PSIA (Physical Security Interoperability Alliance) – were started in 2008 and are focusing on improving compatibility by creating global open standards for the network interface between network video products. They want to define how network cameras, video encoders and video management systems communicate with one another to make it easier to integrate various brands of video equipment into a single solution. Among the IP video standards the groups plan to address are issues surrounding video streaming, device discovery and management, intelligence metadata and event handling, as well as real-time viewing and remote pan/tilt/zoom control. ONVIF is also addressing testing to ensure conformance to the standards, especially important in the early days of a new standard.

Alastair Hayfield, Senior Research Analyst at IMS Research (www.imsresearch.com), has observed ONVIF and PSIA's rise. "The video surveillance industry has clearly decided that standards are desirable," he says. "Well over half of all video surveillance equipment sales can be attributed to companies in one or both of these standards bodies. In fact, 11 of the top 15 video surveillance vendors have joined either ONVIF or PSIA."

How Standardization Will Benefit the Surveillance Industry

The ultimate goal of these organizations is to standardize the interfaces on the network layer level of the products in terms of functions such as video streaming, intelligent metadata, and device discovery. A seamless integration of different network video surveillance products operating on this standard will be enabled regardless of brand. This will make it even easier for end-users, integrators, consultants and manufacturers to take advantage of the possibilities offered by network video solutions.

End Users

The biggest beneficiaries of standards are end users. Instead of being locked into proprietary

ONVIF: Setting the Standard for Growth

ONVIF (Open Network Video Industry Forum) has hit the 103-member mark, totaling 12 full members, 13 contributing members and 78 user members. Recent additions to the organization include full members Canon and IDIS, and contributing member companies Dallmeier, General Electric, Genetec, Hitachi, Industrial Technology Research Institute, ITX, Nice, Optelecom-NKF, PMC-Sierra, Sanyo and Webgate. The organization has also seen the roll-out of several ONVIF-conforming products from Axis Communications (a founding member) and Lilin (which has 11 conforming products). A list of conforming products can be found at ONVIF.org.

In recent analysis, IMS Research found that ONVIF member companies command over 40 % of worldwide video surveillance market revenues compared with the 25 % taken by PSIA member companies. The difference is even more startling when put into the context of network video surveillance equipment. Here ONVIF member companies command nearly 60 % of market revenues compared with the 20 % share for PSIA member companies. Senior Research Analyst, Alastair Hayfield comments, "Instinctively it felt that ONVIF members had a greater market presence. However, it was a surprise to see quite how large the difference was. The move to a standards based approach for network video surveillance is an important one. It will help to drive the adoption of network video surveillance products and will greatly benefit end-users."



Driving network video through global standardization



Axis, Bosch and Sony cooperate in industry standardization at ONVIF. From left to right: Matt Soga, Senior General Manager, B&P Marketing Division, B2B Solutions Business Group, Sony; Gert van Iperen, Executive Vice President of Bosch Security Systems; Ray Mauritsson, President of Axis Communications.

solutions, standards allow them to pick and choose best-of-breed components from different manufacturers with confidence that all the pieces will work well together. Freedom of choice tends to increase competition between vendors, ultimately speeding delivery of better products to the market at a lower price as the market expands at an ever-higher rate. Greater product demand, higher production volumes and lower integration costs for vendors and manufacturers will also translate into lower costs for the end user. Standardization will also offer end users a greater level of future-proofing for their investment. The standard will ensure that interoperable products are available from a large variety of vendors, no matter how the market develops.

Integrators & Consultants

The interoperability between different vendors' products, aided by the standard, will make it easier for integrators and consultants to offer their customers cost-effective and simple solutions. Installation will be simplified, regardless of brand, and there will be greater freedom to specify a system with products from different vendors, thus making it easier to fully meet the specific needs of each customer.

Manufacturers & Software Vendors

The benefits offered by standards to end users, integrators and consultants will result in increased interest in network video products and IP-based security/surveillance solutions. This means that the development of an industry standard is an important spur to the growth of the network surveillance industry as a whole. Standards offer manufacturers interoperability with other products without losing the ability to differentiate products from the competition. They also present extended market opportunities, as the products/software can be easily used as a part of a global network video solution, and reduced in-house development costs.

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CCTV

Largest Ever HD IP Video System

IndigoVision's System Keeps Watch on US-Canadian Border Crossings

Canada Border Services Agency (CBSA) has deployed what is believed to be the largest ever High-Definition (HD) IP Video surveillance system to monitor its customs operation on the US-Canadian border and at Vancouver Airport. CBSA chose IndigoVision's complete IP Video system to upgrade 30 of its land border crossings, transitioning its surveillance from analogue/DVR technology to a fully distributed, scalable IP-network based platform. The enhanced video surveillance images and tools assist the CBSA with the enforcement of illegal and threatening acts through the collection of useable evidentiary video images.

"With the new HD cameras, CBSA officers can more easily identify critical information that was not perceivable before," explains Terry Hoffman, CPP, CBCP, Principal Hoffman & Company, Security Management Consultants Inc, the company which designed and project managed the upgrade. "They can now display dozens of cameras on multiple screens and analyse video much quicker, resulting in incidents being resolved in a fraction of the time."

Five-hundred IndigoVision HD cameras were installed alongside 500 of the original analogue cameras, which are connected to the network using IndigoVision's 9000 series transmitter modules. The megapixel HD cameras stream high-quality H.264 video at 15 fps. Due to its advanced H.264 compression technology and unique architecture, IndigoVision allows both standard definition and HD video to be streamed and recorded side-by-side using standard IP networks and storage. This has allowed CBSA to significantly improve its retention period for recorded video, even when taking into account the increased storage requirements of HD video.

"IndigoVision's robust, scalable technology has been field-proven worldwide in large enterprise projects," continued Hoffman. "However, it was also their local support and Partner network that were major reasons for choosing them. The scale of the project meant a number of installers were required across the country and IndigoVision partnered with Intercon ADT Advanced Integration, Chubb Canada and Southwest Surveillance to achieve this."

Currently, each border crossing has their own self-contained surveillance system with video



IndigoVision's HD Fixed IP cameras monitor traffic passing through each check-point.

CBSA has deployed an IndigoVision HD IP Video surveillance solution to monitor US-Canadian border crossings



being monitored on workstations running IndigoVision's 'Control Center' Security Management Software and recorded on IndigoVision standalone Network Video Recorders (NVRs). The distributed architecture however, will allow live and recorded video from each border crossing to be viewed regionally or nationally if required in the future. Over 200 standalone NVRs were deployed locally across the system, configured as RAID 1 discs and with failover redundancy, which automatically records video on a back-up NVR should a primary NVR fail. Evidential quality video clips can be exported from any NVR for use by other agencies following an incident.

An Integrated and Future-proof System

"CBSA will benefit from IndigoVision's flexible licensing, as they will not have to pay for expensive software licenses every time they add a video workstation or pay for yearly maintenance upgrades," added Hoffman. "This will ensure that their surveillance solution remains leading-edge for years to come." With its distributed architecture, live and recorded viewing of multiple

cameras, thumbnail displays, motion search and unique features such as Activity Controlled Framerate (ACF), IndigoVision is helping CBSA meet its new surveillance objectives and at the same time ensure future requirements are accommodated. As IndigoVision's system is a complete solution, including everything from the cameras to video management software designed in-house, it can offer advanced analytics features such as ACF, which has been implemented in many cameras by CBSA. ACF reduces the overall bandwidth and storage requirement by reducing the framerate of the transmitted video from a camera to a pre-configured minimum when its scene is inactive. The instant that motion is detected in the scene, the camera automatically begins streaming at maximum framerate.

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GEUTEBRUCK
Competence in Video Security

CCTV

Crime on TV

Safeguarding Quality of Life in Villennes-sur-Seine



Ville sous Vidéo-Protection

CONTROLE RADAR

Villennes-sur-Seine lies about 30 kilometers west of Paris, in the middle of a protected nature reserve. With 4,788 inhabitants, the small and prosperous city offers its population a very high quality of life. However, repeated incidents involving vandalism, theft and burglary have prompted the city council to install a video surveillance system.

Mobotix M12 day/night cameras were installed in September 2007. These are intended to deter crimes against people and property in areas with a high risk of violence or theft, and also to protect public buildings and institutions against such attacks. Two months later, the system was launched at eight critical locations: at a sports centre, in a parking lot, near three schools, at an underpass, by a train station exit and at the main streets downtown. The city also wanted to use this system to improve and regulate the flow of traffic and to monitor vehicles. Furthermore, the police needed to have high-quality images to prove that a particular vehicle passed a certain location in order to build their case based on such evidence. High-resolution digital cameras were required to identify license plates of moving cars both day and night. For this reason, Mobotix cameras were installed at strategic locations where cars would have to pass when driving through the city.

Successful Deterrent Factor

"With the 19 cameras we have installed in the city centre and near schools, Villennes-sur-Seine, with a population of about 5,000, is a true pioneer in the fight against crime," highlights Pierre-François Degand, Second Deputy Mayor and Security Officer for the city. "The cameras deliver two things. First of all, they deter crime and, secondly, they are useful in case an event actually occurs. In only a few months, we noticed a decline in petty crime and an increase in cases solved. Over 20 cases could be solved thanks to the cameras." The system will be expanded by 2011 to include other locations such as intersections. City police departments and gendarmeries are the first-line users of the video surveillance system. This approach is backed up by government measures in the form of guidelines, which push the development of video surveillance systems in a particular direction. These measures include a French law passed in October 2006 which requires local councils to install the equipment needed to combat terrorism.

Minimum Resolution

This directive stipulates that certain technical standards must be fulfilled in regards to image quality. For instance, a recording must feature a 576 vertical lines resolution taken at 12 frames per second. Due to technical limitations, analogue cameras can at best deliver a resolution of between 0.1 and 0.4 megapixels, or up to four CIF (PAL). It is therefore not possible to zoom in on key details, such as the car's license plate or faces, and hence solve a crime quickly and conclusively.

To overcome this shortcoming, a decision was announced in August 2007 to establish binding technical standards that guarantee a



minimum level of quality. These standards concerned the camera's capacity, storage, compression, transfer, and image rendering, amongst others. In view of the many laws in this area, digital IP technology is increasingly being used and is replacing analog technology.

As of today, Mobotix cameras are already able to deliver the required solutions and meet the needs of law enforcement for the discovery of evidence. Images are recorded and saved at a resolution of three megapixels, thanks to image processing in the camera. Police officers find these high-quality images extremely helpful in identifying license plates and people. Furthermore, the resolution provides a better general overview, which means that fewer cameras need to be installed.

▶ CONTACT



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CCTV

Chipset Evolution Is the Key

The Contribution of the New Samsung Techwin Chipsets to Improve Image Quality



In years gone by, purchasers of CCTV systems would perhaps have looked no further than the outline description of a camera to decide if it was suitable for a specific project. The fact that a particular camera, for example, incorporated a 1/2" or 1/3" chip made by one of the well know manufacturers, might have been sufficient for it to be specified. Nowadays, although the size and type of the sensor continues to play a very important part in the quality of an image, particularly in low-light situations, it is the DSP chipset which processes the image that seems to be offering the most recent advancements in camera performance and functionality.

David Hammond, Sales Manager for the professional security division of Samsung Techwin Europe explains "As a company we have a reputation for producing some of the finest security cameras in the world. One of the major reasons for this is attributed to our continued investment and development of our DSP chipsets that form the core of our cameras and domes". Samsung Techwin has two DSP chipset technologies – the "Winner" (W) and "Super Vision" (SV) series – which feature in the vast majority of its camera and dome products. The company however has just launched to early acclaim its W-5 DSP chipset, the fifth generation of its "Winner" series which brings some very advanced technology to a host of general purpose cameras and domes.

Improved Low Light Performance

"The results of our investment in research and development is what makes us stand out from the crowd in terms of image quality, low –light performance and additional functionality", added David Hammond. "Just three years ago for example it could not perhaps be imagined that innovative technical features such as Digital Image Stabilisation, Highlight Compensation and Dynamic Backlight Compensation could be availa-

ble in anything other than the most expensive of CCTV cameras. And yet Samsung Techwin has incorporated all these features and much more into the new W-5 DSP chipset, the 'engine room' of the company's expanding mid-range day/night cameras and domes."

W-5 is designed to equip cameras with greater stability and articulated image processing to deliver colour images at 600TVL of resolution. A Sens-up capability of 512x allows cameras to capture superb quality images at 0.001Lux, (0.05Lux sens-up off), a lighting level far below at which most other day/night cameras are likely to have switched to a monochrome image.

Among the key features available via the W-5 DSP chipset is the third generation of Samsung's highly acclaimed Super Noise Reduction technology. SSNR III uses "Pattern Matching" to simultaneously reduce noise and maintain the object's edges in both static and moving images. After removing the noise, a very small 3 x 3 matrix matching system is employed to ensure the scene produced by the camera is as close as possible to the original image. SSNR III removes image noise in low light conditions without creating ghosting or smear and can save up to 70% hard disk space on a digital video recorder, whilst maximising bandwidth when viewing over a network.

Privacy Zones

The W-5 DSP also provides advanced features such as day/night operation and frame integration to enhance low light performance as well as eight programmable 'Smart' motion detection

zones and no fewer than twelve privacy zones. "With the ever increasing number of surveillance cameras in our lives, there is also an ever increasing need to protect private and sensitive data," said Peter Ainsworth, Samsung Techwin's European Product Manager. "The introduction of

privacy zones in cameras ensures that ATM screens, for example, or the windows of private residences are masked out. Having twelve independent zones improves the balance between the need for surveillance and privacy. Instead of masking a whole building there is the option to just mask the windows and doors."

All of the features incorporated into the W-5 DSP chipset are programmable via onscreen menus accessed either locally or remotely set up from the comfort of the control room via a coaxial control cable. Coaxial control allows both video and telemetry to be transmitted via the coaxial cable, giving full access to camera set-up and pan-tilt-zoom functions via a compatible digital video recorder. The technology offers the potential of real cost savings through the reduction of cabling infrastructure whilst providing flexibility for retro-fit applications by allowing existing equipment to be upgraded quickly and easily.

W-5's Advanced Features

Samsung Techwin's ambition to be one of Europe's leading professional security brands is reflected in the company's move to incorporate the choice of eight European languages onscreen menu options into the W-5 DSP chipset. Additionally there are some more advanced features incorporated in the new chipset:

- Samsung Super Dynamic Range (SSDR) is Samsung Techwin's new Dynamic Backlight Compensation, which automatically lightens the dark areas within the scene whilst maintaining the brighter areas at the same level. This ensures that the dark areas become more visible allowing the operator to 'view' objects in the shadows. Highlight Compensa-





SECURITY

tion technology identifies areas of peak white, i.e. excessively bright areas, in the image and neutralises it by inverting them to black/grey. This effectively enables the camera to see past these areas allowing the operator to view previously hidden details.

- Digital Image Stabilisation (DIS) technology that can negate the effects of the camera shaking due to high winds or building vibration.
- 600TVL of resolution delivers superb high quality colour images even in the most demanding of light conditions.

- Coaxial control offers the potential of real cost savings as well as providing flexibility for retro-fit applications.

As is the case with all Samsung Techwin products, cameras and domes equipped with the W-5 DSP chipset are offered with free system design, free technical support and a full three-year warranty.

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CCTV

Interfaces, Integration and Interoperability

Inter-system Communication More Important than Ever

If you are only interested in a stand-alone CCTV system for screening and recording video – full stop – then this article is probably not for you. However, most CCTV users these days want much more for their money. Many want their video system to communicate with other security, management and technical systems, to form an integral part of a multi-functional system which supports staff and contributes to the organisation's physical and financial well-being in as many ways as possible.

Even those CCTV users whose focus is limited to security, also recognise that a comprehensive security solution which has all its sub-systems, including CCTV, linked together transparently and intelligently, offers considerable added value. It fulfils individual needs better; is easier to use and more manageable. It presents relevant information quickly in a readily understood form – particularly important when handling alarms or critical situations. And, by allowing the user to concentrate on the current situation rather than the technology, it promotes better management of events and hence better security.

Achieving inter-system communication and interoperability requires interfaces to act as simultaneous interpreters, to convert the coding used by CCTV equipment into the coding used by other systems, be they access control, building management, ATMs, or computerised payment systems – and vice-versa. However, the standard of service offered by interfaces can vary. Code conversion may be limited to the translation of just a basic range of coding which supports only a basic range of functions, or it can be extensive and sophisticated enough to support the full capabilities of the systems involved. It depends on the philosophy of the



Integrating toll payment systems, cash counting systems, and providing mobile access to CCTV systems are just a few of the many technical feats achieved using Geutebrueck's SDKs.

CCTV manufacturer as to what he includes as standard, whether he charges for its provision, and whether he offers additional help in dealing with additional individual project requirements. Where the CCTV manufacturer does not have a free interface, SDK and developer support policy, there can be significant extra costs involved in achieving the desired level of system integration.

The SDK or software development kit is a set of tools which enables a software developer to develop individual applications for a particular device or system. Besides the relevant software interface, the SDK usually provides source code examples with supporting technical documentation. It may also include a full digital test environment – a virtual device enabling the developer to test out his new software for a limited period.

Developing interfaces and SDKs to enable their products to communicate with third party devices and systems is an expensive business, and consequently many manufacturers charge for this work. Others see facilitating integration as part of a broader marketing strategy, in which the provision of free SDKs along with free assistance to outside developers enables higher levels of integration, greater customer satisfaction and long term customer loyalty. So when choosing a CCTV system supplier be sure to think about your current or future need for integrated functionality and check out the supplier's interface policy. That can avoid surprises and significant costs later in the project.

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In Focus: Axis Q1755

With the high end model Q1755, Axis has a HDTV high resolution network camera in its range, which should offer advantages in areas in which detailed images are necessary, e.g. in airports, passport control or in casinos and high security areas. The Q1755 provides day and night functionality and progressive scanning. It is equipped with intelligent video functions such as improved video motion detection, audio detection and detection of tampering with the camera. It features a 10x optical and 12x digital zoom with autofocus.



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Performance

Performance at 1000 Lux

In comparison with the reference image, at maximum resolution the Axis Q1755 shows a slightly cloudy but clear colour range and good to very good sharpness. In addition, the high end model from Axis has a very good contrast ratio.

Performance at less than 1000 Lux

Even with a Lux value of 1000, blurring of moving objects can be detected in the lower half of the sequence. This continuously increases down to 0 Lux and results in objects becoming unrecognisable at 5 Lux. Slight image noise occurs at 2 Lux, although this only becomes noticeable during switch-over from day to night mode at 0.5 Lux.

Performance in backlight situations

The compensation time with backlight is approx. 2 seconds and shows good dynamic characteristics. The size of the cone of illumination extends to just beyond the edge of the backlight and slight to moderate traces of smearing are detectable.

Performance in use: bandwidth measurement

On closer examination of the characteristic curve, the compensation characteristics of the H.264 codec become clearly apparent. Depending on the illumination conditions and movement in the image, a slight to severe increase or reduction can be detected, from which it can be deduced that a variable bit rate is used, which provides a higher quality with overall less storage requirements. With comparable quality, an MPEG stream provides an average data rate of approx. *20 Mbps (average value), corresponding to a reduction in bandwidth by a factor of about 9.6 in comparison with the measured 2.08 Mbps (average value) for the H.2.64 stream.

*Average value.

Technical data for the camera test

Manufacturer	Axis
Model	Q1755
Firmware version	5.02
*Distance from test chart	0.7 m
Objective used	Autofocus; f 5.1 – 51 mm; f 1.8 – 2.1
*Set focal length	Approx. 6 mm
*Compression method	H.264
*Resolution	1920 x 1080 (1080i)
Compression	30 %
I-Frame spacing	1 second
*Set stream bandwidth	Unlimited
Measured frame rate	25 fps
Average measured bandwidth	2.08 Mbit/sec

The camera was integrated into the test system with the "default" settings and correspondingly modified with the test criteria listed above

Assessment with differing illumination conditions

Criteria Lux values	1000 Lux	100 Lux	10 Lux	0,5 Lux	0 Lux + *BL1
Colours	2	2.5	2.5	b/w	b/w
Contrast	2	2.5	3	5	–
Sharpness	2	2.5	3	4	2.5
Motion sharpness	2.5	3	3	4.5	3
Image noise	2	2	2	4	2
Compensation time for backlight	–	–	–	–	2.5
Backlight characteristics	–	–	–	–	3.5

Assessment according to the following grades: 1 (excellent), 2 (good), 3 (average), 4 (satisfactory), 5 (limited), 6 (poor)

Conclusion

The high resolution of HDTV 1080i and good image sharpness in combination with a 10x motor zoom and the autofocus function characterise the Axis Q1755 as a worthy and improved successor to the 221/223M range. The SD/SDHC slot enables the recorded data to be directly recorded on an SD card. The high performance HDTV camera is ideally suited for surveillance systems which require sharp images and great detail. The wide screen format makes the high end camera a perfect solution for securing areas in which high quality images are necessary, e.g. in airports, passport control or casinos.

Solution for Command & Control Centers

With Siveillance ELS Vantage Siemens introduces a solution for Command & Control centers. This software was specifically developed for integrated security management of companies having critical infrastructures, including e.g. industrial complexes, heavy industry, chemicals and pharmaceuticals, power generation and distribution, oil and gas, public transportation, ports and airports. The software supports all processes and procedures of a modern security organization, adapting without difficulty to customer-specific requirements and policies. It reduces risks and the effects of potential damage within companies which in turn saves them money. The open interfaces enable diverse security systems such as access control, video surveillance, intelligent video, fire detection, emergency call stations, telephone and others to be integrated without difficulty.



www.siemens.com/buildingtechnologies

Solution for Video Walls

The EWS-400 Eyevis Workstation is a cost-effective solution to drive personal walls or medium size video walls. Equipped with the latest hardware architecture based on Intel Quad Core CPU's and the latest graphic boards it is possible to drive up to four HD-displays. The integrated hardware decoder solution is the benefit of the system. It supports simultaneous decoding of multiple IP video streams at multiple resolutions from a wide variety of cameras and codecs. Thanks to the internal hardware decoding architecture there is no offload for the host system. The normal CPU is free for use for other applications. Possible applications are e.g. airports, casinos, city monitoring, governmental administration, military applications, perimeter surveillance, plant surveillance, universities, shopping malls, and stadiums.



www.eyervis.com



New Holistic System Simplifies Security Management

Siveillance Fusion is a holistic security management system now introduced by Siemens' Building Technologies Division. As a centralized solution (top-down approach) it combines access control, video surveillance and intrusion protection on a single platform. Using the existing IT infrastructure and .NET Framework, Siveillance Fusion allows for complete interoperability. The platform provides a complete overview and control of a corporation's daily security operations and ensures situational awareness. Siveillance Fusion as a flexible, scalable and user-friendly system caters to a broad variety of applications. It is suited for both single sites and organizations having several subsidiaries, including worldwide operations. All security applications are dynamically presented on a single screen and can be accessed via a desktop or web clients. For extra security and greater energy efficiency, Siveillance Fusion can also interface with fire detection and building management systems.

www.siemens.com/buildingtechnologies

Software Development Tools

HID Global launched its Edge Developer Kit, a key tool for development to Edge Evo, the next generation of the company's access control platform. For OEM software host system providers that need a quick development ramp up to Edge Evo it is a tool for developing to the latest products designed to extend and enhance the functionality and support of the platform. It includes plug-and-play hardware, enhanced API and critical documentation. By providing these tools, developers can test a wide spectrum of actual use case scenarios to create visionary applications on the platform. Developers using the Kit are able to take advantage of enhanced security and versatility, such as e.g. support of locking hardware through 12/24 V selectable outputs, enhanced flexibility through input/output add-on modules, and increased security with 2-reader application support.

www.hidglobal.com



Getting Home Faster

Digital Identification Solutions announced that Roncari Express Parking has begun providing its patrons with the new "Electronic Gopass" membership card. The new membership card will eliminate waiting for their customers while they are dropping off or picking up their vehicle. A new membership card system has been installed at the Bradley International Airport (BDL), the Gateway to New England, as part of Roncari Express Valet Parking's operating agreement. This system is based on the new Egopass RFID membership card and the IP-AXS system provided by Red Beetle, which includes the Edisecure XID 580ie Printer. The system is tied together on the back end with Park Wares' parking management software suite which manages all aspects of the customer profiles, point of sale, lot management and transaction processing.

www.digital-identification.com

Network Security Appliance

Genetec announced the availability of Omnicast through Ionodes' new network security appliance, the SV-3200 Network Security Appliance. The video surveillance market is rapidly shifting to IP-driven solutions using IP cameras, IP management software and network storage. The system combines all of the flexibility of a sophisticated IP video surveillance solution with the simplicity of a single appliance. Currently powered by the company's IP video surveillance solution, Omnicast, it is also designed to be powered by other security applications from the company, making it an all-encompassing network security appliance. Today, it can manage up to 32 cameras and offers eight built-in Ethernet ports for direct connectivity of IP cameras, avoiding the need of external hardware. With the Omnicast software built in, the SV-3200 appliance can also be seamlessly integrated to any new or existing Federation system from the company.

www.genetec.com



Rear Projection Cube

Eyevis has introduced its EC-LED cube series. The displays are available in different sizes and resolutions. Besides native HD-resolution (1,920 x 1,080 px) and SXGA+ (1,400 x 1,050 px), this new technology will also be available in WUXGA resolution (1,920 x 1,200 px) in 16:10 image format. The cube is designed for sophisticated 24/7 applications. The technology is based on the DLP (Digital Light Processing)-technology by Texas Instruments. It allows the display of high-resolution images in best image quality. The cubes were developed for the requirements of areas with difficult lighting conditions and other security relevant conditions. The MTBF of the LED's averages 55,000 hours according to the manufacturer. Thanks to the LED-technology, the use of consumables such as lamps and colour wheels can be avoided.

www.eyervis.com



Network Cameras Supported

Pelco's latest version of its Endura IP video surveillance system (v2.1) now supports select Panasonic I-Pro Series network cameras. "Pelco is an important member of our PSDN Program," says Mike Maddox, Panasonic Solution Developer Network (PSDN) Program Manager. According to company officials, initial support for the Panasonic i-Pro network cameras on the Endura platform will include MPEG-4 support for live video monitoring, recording, playback, and pan-tilt-zoom (PTZ) camera control. Enhancements for additional functionalities and support for the latest Panasonic H.264 Megapixel I-Pro network cameras (WV-NP502 and WV-NW502S) are expected in future releases.

www.pelco.com



CAMERA TEST

In Focus: Sanyo HD4000

Since its launch in 2008, the VCC-HD4000P has attracted a great deal of interest and was named as CCTV Product of the Year at the Ifsec 2009. The Sanyo HD4000P is a Full High Definition (HD) network camera, equipped with a 4 megapixel progressive scan sensor. An integrated autofocus 10x optical zoom makes the camera an ideal solution for all applications in which detailed close-up images are required. In addition, the VCC-HD4000P utilises technological advances with dual-streaming (H.264 and JPEG) to enable simultaneous high resolution H.264 live surveillance in real time.

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Performance

Performance at 1000 Lux

In comparison with the reference image, at full resolution the Sanyo HD 400P has a clear colour range with very good sharpness. In addition, the Sanyo high-end model has a good to very good contrast ratio, which indicates a minimal reduction in image contrast.

Performance at less than 1000 Lux

Below 100 Lux, blurring of moving objects can be detected in the lower half of the sequence. This minimally increases down to 10 Lux, but shows no significant deterioration. From 5 Lux to to 0.5 Lux, blurring of moving objects can result in them becoming completely unrecognisable. At 2.5 Lux there is slight image noise, although this is only significantly noticeable during the switchover from day to night mode at 2.5 Lux.

Performance in backlight situations

The compensation time with backlight is approx. 3 seconds and shows adequate to poor dynamic characteristics. The size of the cone of illumination partially extends over more than half of the sequence and severe traces of blooming are visible around the backlight.

Performance in use: bandwidth measurement

On closer examination of the characteristic curve, the compensation characteristics of the H.264 codec become clearly apparent. Depending on the illumination conditions and movement in the image, only a slight increase or decrease can be detected, from which it can be deduced that a constant compression method is used, which always attempts to provide good image quality with limited data transfer capacity. With comparable quality, an MPEG stream provides a measured average data rate of *20 Mbps, corresponding to a reduction in bandwidth by a factor of 3.1 in comparison to the measured *6.4 Mbps for the H.264 stream.

*Average value.

Technical data for the camera test

Manufacturer	Sanyo
Model	VCC-HD4000P
Firmware version	MAIN Ver.: 1.04-00 <090514-00> SUB Ver.: 1.00-03 <090302-00>
*Distance from test chart	0.90 m
Objective used	6.3-63 mm; F1.8-2.5
*Set focal length	6.3 mm
*Compression method	H.264
*Resolution	1920 x 1080
Compression	50 %
I-Frame spacing	1 second
*Set stream bandwidth	Unlimited
Measured frame rate	25 fps
Average measured bandwidth	6.40 Mbit/sec

The camera was integrated into the test system with the "default" settings and correspondingly modified with the test criteria listed above

Assessment with differing illumination conditions

Criteria Lux values	1000 Lux	100 Lux	10 Lux	0,5 Lux	0 Lux + *BL1
Colours	2	2	2	b/w	b/w
Contrast	2	2	2	4	–
Sharpness	2	2	2.5	3	2.5
Motion sharpness	2	2.5	2.5	4	2.5
Image noise	2	2	2	4.5	2.5
Compensation time for backlight	–	–	–	–	4
Backlight characteristics	–	–	–	–	4.5

Assessment according to the following grades: 1 (excellent), 2 (good), 3 (average), 4 (satisfactory), 5 (limited), 6 (poor)

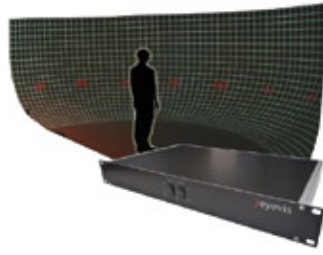
Conclusion

The Sanyo VCC-HD4000P is the first 4 megapixel camera with a 10x motor zoom and provides a very good image in combination with the autofocus function. The SD/SDHC slot and USB port enable the recorded data to be stored directly on an SD card or a hard drive. Further features of the HD4000P include face recognition by the software and a clipping function, which enables several areas to be continuously monitored and recorded. Possible fields of application of the high performance Sanyo camera include e.g. airports, casinos, banks or department stores, where high quality images are required.

Pay-per-Channel

With the new Open Warp 2 device, Eyevis provides a cost-effective single-channel solution. The customer only pays for the number of channels he really needs. Any number of devices can be cascaded to realize customized multi-channel installations. The field of application for VR systems has been widened, from the mere representation of three-dimensional images up to the creation of multi-functional interactive workstations. The multi-media presentation of research results or prototype models is becoming increasingly important. These new tasks, which combine virtual reality and the presentation of multi-media content, constitute a new challenge to the technology of VR systems. The company provides a technological platform for the upgrade of existing installations, as well as for the planning and realization of new state-of-the-art systems.

www.eyevis.com



Modular Alarm Platform

Bosch Security Systems is introducing a Modular Alarm Platform that allows security systems to be optimally tailored and configured to meet individual user needs. The Modular Alarm Platform 5000 provides a customized security solution for office buildings, industrial areas, banks, museums or branch offices regardless of size or of the security level required of the application. The modular nature of the system allows easy modification of existing installations over time to suit changing needs. Moreover, in the event of a change in size or regulatory requirements, the necessary adaptations can be carried out while the initial investment remains intact. The Platform secures a site using high-performance and cost-efficient technology. The system can operate on its own or as an integrated part of an existing network connected via the premise's standard IP interface.

www.boschsecurity.com



Management of Thermal Imaging Cameras

Flir Sensors Manager offers powerful and efficient management capabilities for any security installation with the company's thermal imaging cameras. The software allows to automatically locate cameras in the network and to easily control them. The commercial "Out of the Box" software is available in two different versions: Basic and Pro. The Basic version allows to discover sensors in the network, display network video, define presets, manage scan lists, create panoramas, show thermal images on multiple monitors, capture images or display Nexus sensors on a geo-referenced map. The Pro version contains all the features that are incorporated in the Basic version, plus a number of useful modes such as Video Analytics, Video Motion Detection, Target Detection, Software based tracking of moving objects, electronic stabilization, radar cueing and display of radar tracks and video wall display.

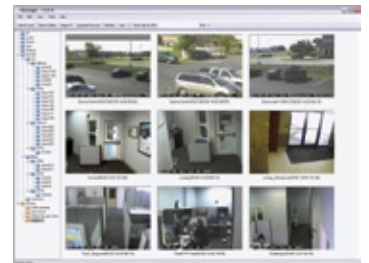
www.flir.com



System Support Tools Line Expanded

IQinvision announced the release of Iqmanager system software for managing Iqeye network cameras. The software enables network managers to easily edit and update the cameras with an intuitive, intelligent software support tool. It can find local and remote cameras, perform batch updates, cut and paste camera configurations, and even perform basic camera diagnostics. "IQmanager is a low-cost, easy-to-operate administrator utility that ensures our end users are optimizing their Iqeye camera systems, regardless of whether their install base is a few cameras or hundreds of cameras," said Paul Bodell, Chief Marketing Officer.

www.IQeye.com



Intelligent Video Analysis

Bosch Security Systems is introducing a major new release of its Intelligent Video Analysis (IVA) software with easier scene calibration and even more powerful forensic search capabilities. IVA 4.0 focuses strongly on ease of setup, and reducing false alarms. With the new interactive setup tool it takes an average installer about two minutes to calibrate a camera. The tool also includes 'accuracy feedback', reporting how accurately the camera is calibrated. In addition, a new head detection filter detects human head and shoulder contours to reliably classify people in a scene and further reduce false alarms. IVA 4.0 also comes bundled with a new vector-based direction-detection motion algorithm: IVA 4.0 Flow, providing in effect two powerful algorithms for intelligent video analysis.

www.boschsecurity.com



PSIA Compliant Network Cameras

Hikvision Digital Technology has released its PSIA compliant network cameras (DS-2CD862MF-E 1.3-Megapixel CCD-based and DS-2CD852MF-E 2-Megapixel). The DS-2CD862MF-E 1.3-megapixel Network Camera offers high-definition video quality with enhanced sensitivity in low-light scenarios using a 1/3" Sony progressive scan CCD. In addition, its advanced auto iris, as well as Wide Dynamic and Back Light Compensation technologies, enable the product to provide clear images in various lighting conditions. The DS-2CD852MF-E 2-megapixel Network Camera can deliver high quality real-time video by adopting the advanced DSP platform and MPEG4/H.264 video codec. And its progressive scan technology enables the product to capture high-definition panoramic views of moving objects in the shortest time.

www.hikvision.com



Website Re-developed

Videofied has completely re-developed its website. Comprehensive details about all the company's solutions are available on the site, with videos, webinars, and technical documents. The new interface uses contemporary tab features designed to help users easily navigate around the site. Up-dated pages include the "More Info" area, "Applications" solutions and "Technical Support", created to help clients find a solution in the quickest time possible.

www.videofied.com

Top Supplier

The accolade of 'Top Areva Supplier' was recently bestowed on video security specialist Geutebrueck at a ceremony in Berlin. The French energy technology giant's award program promotes good supplier relationships by bestowing top supplier status on companies who meet its performance criteria in 25 categories. These include quality, competitiveness and innovation, as well as long-term partnership, sustainability in development, environmental protection and safety.

www.geutebrueck.com



CCTV

A City of Dreams

Video Security Technology for the new „City of Dreams“ in Macau



Willy Allison, founder and president of World Game Protection

The „City of Dreams“ is a massive new casino project currently under construction in Macau – an integrated urban resort in which there will be exciting entertainment, elegant night clubs, a varied choice of hotels, first-class regional and international catering and world-class shopping as well as an expansive and modern casino. Part of the complex opened its doors to visitors already in June 2009. When it is completely open, the „City of Dreams“ will have around 2,200 hotel rooms as well as 550 gaming tables and around 1,500 gaming machines. The complete video security technology comes from Dallmeier – and according to the manufacturer, this is the first and therefore largest pure IP-based surveillance system to date. Willy Allison, founder and president of World Game Protection, spoke with the Director of Surveillance of the City of Dreams, Leroy Daniel, before the big opening.



W. Allison: Mr. Daniel, what is the size of the surveillance room at the City of Dreams? How many control consoles and monitors are installed there?

L. Daniel: The central surveillance room covers more than 500 square meters and houses the central control of the surveillance system, the offices of the special agents, the administration, the central store and the workshops and technology training facility. In our department alone we work at 54 control consoles. The CCTV system can be actively controlled from any of these. We use around 260 monitors to watch what's going on.

What concept was used in the design of the surveillance room?

L. Daniel: Most people in my job normally have to make do with central surveillance installations of the CCTV systems that were designed and chosen by people who have never worked in casino surveillance. With the „City of Dreams“ project, however, we had the freedom to decide for ourselves on every aspect of the layout of our control center. We paid particular attention to the functionality and meeting the staff management requirements as well as maintaining the overview (to enable quick decisions) and easing communication between each workstation. The needs of our security staff were naturally at the center of our considerations. Contrary to the usual layout in standard surveillance rooms where the duty manager sits either behind or at the end of the rows he's responsible for, we put his workstation right in the middle of the room on a raised dais. The individual workstations were then arranged in a circle

around the duty manager's workstation. That makes communication in the surveillance center more effective and all the staff and monitors can be seen more easily. Instead of hanging rows of monitors on the wall, we brought the screens closer to the operators by using peripheral equipment. The small distance to the monitor enables the security staff to follow all the details of an event. This is particularly important when monitoring the progress of games in a casino.

How many staff are employed in the surveillance center in total?

L. Daniel: More than 100.

How many and what type of cameras are in use in your system? (manufacturer, megapixel etc.)

L. Daniel: We have almost 5,000 Dallmeier IP cameras with a PAL resolution of D1 (720 x 576 pixels) installed throughout the entire complex.

Who were the installer and supplier or manufacturer?

L. Daniel: Our system integrator is Elixir, a company with widespread experience in Asia. Elixir can provide local experts in Macau and swings into action immediately in the event of a problem. AME Systems supplied the workstations for our security staff. We chose this company because it is able to provide tailored solutions and also has an excellent support department with extremely competent installation teams. The CCTV system and the IP cameras come from Dallmeier.



Leroy Daniel, Director of Surveillance of the City of Dreams

Approximately how much have you invested in the entire system so far?

L. Daniel: More than 10 million US dollars. We can consider ourselves lucky that the company takes the subjects of investment protection and re-investment very seriously.

Can you explain to us how the system functions, for example, how the images get from the camera to the monitor?

L. Daniel: The surveillance system is IP-based with a decentralized system architecture consisting of servers, switches, workstations as well as network storage units (NSU) and cameras. The IP cameras encode the images at a speed of 25 fps at D1 resolution. Then the signal is sent over the surveillance network to be recorded on the NSU. The cameras support multicasting to transmit the live video stream to multiple workstations and monitors while the recorded images are sent from the NSU as a stream. The cameras are selected entirely via a virtual matrix. In this way we could save the usually large amount of space needed for an analog matrix and use the available space more effectively. We have here one of the first and largest completely IP-based surveillance systems for casinos. That means that the encoding of the images takes place directly in the IP camera before they are sent over the surveillance network. The decoding then takes place shortly before the images are presented on the LCD monitors.

How did you choose the system and for what reasons?

L. Daniel: We looked at what's available on the market and saw that, for our purposes, Dallmeier offered the best solution. If you look at the systems for prisons, airports, shopping malls, hospitals, universities and the like, you will find that only very few situations where CCTV is used are as demanding – or require a higher camera density – as a casino. It is necessary to have numerous workstations with live video streams as well as multiple consoles for real-time surveillance. We have to be able to replay the recordings at any time in high definition and in exact detail. The more individual details we can recognize during the course of the game, the better we can support the different business areas of the casino. It was vitally important for us to be able to trim the system to meet our requirements and get the optimum coverage of our gaming machines and other entertainment elements.

What challenges (technical or operational) did you have to overcome in order to implement a project of these dimensions?

L. Daniel: We had to solve the usual problems that occur with new projects, such as the conflicts between the CCTV system and the existing ceiling layout or the lighting systems, for example. The complexity of the systems made the project an interesting challenge. We have rooms with different ceiling heights as well as numerous decorative fixtures and differently designed lighting systems. So we used more than ten different methods to mount the cameras in order to adapt to the multiplicity of designs without having a negative effect on our takings. All this will certainly keep our technician busy with maintenance and service work in future.

How did you ensure that all the risk areas were covered when you were planning the system and the camera positions?

L. Daniel: There were a number of critical areas to consider with regard to the layout of the system. For example redundancy, system availability, network load, latency time, storage as well as archive capacity and network and system security. With regard to the cameras, the main focus was generally on profitable activities, high-value objects, gaming accessories, areas in which chips or cash are in use or being counted and peripheral profit centers. We have implemented an effective and modern concept for the demarcation of the security control room and surveillance center. As a result, we are able to turn ourselves fully to the task of surveillance as well as the security of the gaming operation and the profits.

Leroy Daniel: Many thanks for the interview.

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RECOMMENDED BY THE EXPERTS

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ACCESS CONTROL

Choosing the Right Reader

Access Control: Industry Best Practices

With a wide variety of reader technologies to choose from, it's important to ensure that the technology selected properly balances risk, cost, and convenience factors. Prox technology is a viable choice, especially for sites where there are existing Prox cards in use, but contactless smart cards represent the next generation Prox technology and offer all of the convenience of Prox along with increased security and additional benefits such as multiple applications, read/write and increased memory.

However, when selecting a vendor's system, be aware that some manufacturers, in an attempt to sell "universal" readers capable of reading almost any contactless smart card, bypasses the security measures of contactless smart cards in order to achieve their goal. These readers, known as "CSN readers," only read the card's serial number, which, as per ISO standards, are required to be able to be read by any reader for the express purposes of being able to read multiple cards presented to a reader at the same time. Furthermore, because the ISO specifications are publicly available, details of how this process works can be employed by unknown persons to gain unauthorized access.

Communications Protocol

Access control readers typically read a card and send the card data to another "upstream" device such as a panel, which decides whether to allow access. When this communication takes place using wires, the most popular method is the Wiegand Protocol because it's almost universally supported by all vendors. Although more modern protocols such as RS485 and TCP/IP offers more security, there is less interoperability between different manufacturers of readers and panels.



Holly Sacks,
Senior VP, Marketing
and Corporate
Strategy HID Global

Protect the Wiring

Installing the security system's wiring in conduits makes it more difficult to compromise due to the difficulty of identifying the correct conduit. Additionally, bundling several wire runs together so that identifying the correct set of wires is more difficult is also desirable. Avoid the use of readers with built-in connectors that are easy to swap out with an unauthorized reader and connect wires in a permanent fashion by soldering.

Use Security Screws

Utilise security screws that require special tools to remove a reader. This makes the removal process longer and more difficult and increases the possibility that a malicious attack will be noticed.

Prevention of Tailgating

Program the access control host software to refuse access to a cardholder that is already inside the facility. This requires an "in" and an "out" reader at the door and prevents "tailgating," - when an individual follows closely behind a user who has legitimately been given access.

Detection – The Second Line of Defense

Buy readers with a tamper detect mechanism that provides a signal when the reader has been removed. If the reader is controlling a sensitive location, monitor it by CCTV. Many readers also have the capability of sending "health" messages on a periodic basis to the upstream device which can also detect reader malfunctions. It's better to know when a reader is not working before somebody complains they can't get in. For converged physical and logical access control systems, "geographic" monitoring is available. If a person has just entered a door in London, but is trying to log into a computer in Manchester, there's obviously a problem. A converged system can also prevent a person logging onto their computer if they haven't used their card at a perimeter reader.

Additional Authentication

The use of card readers with built-in keypads means lost cards cannot be picked up and used to enter a facility. It also reduces the threat of card cloning. The use of biometric readers ensures that the person presenting the card is the same person it was issued to and should be used at doors that require higher levels of security.

Mind the Cards

To prevent use of illegitimate cards that may have been fraudulently obtained, old cards should be voided immediately and only issued cards should be valid; don't have pre-validated "spare" cards ready to hand out. Some access control systems can also generate a different message than "just denied" for cards that haven't been entered in the system. Any messages reported by the host access control system with wrong formats, wrong site codes, or out of range should be immediately investigated. It's also advisable to use a card with a proprietary format or one that's exclusive to a particular site. Cards with these formats are more difficult to illegally obtain, as compared to the industry standard open 26-bit Wiegand format. The utilization of as many of these best practices as feasible, with attention to appropriate levels of security, will result in a system that better fulfills its intended function with less possibility of being compromised.

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ACCESS CONTROL

Under Lock and Key

Managing the Movement of Keys and Small Valuables

Keys are used to control access to so many things these days that there can be serious consequences when one is misplaced or has been taken without authority. Managing who is authorized to take and use keys, and indeed knowing who currently has possession of a particular key, is traditionally left to one person who makes corresponding entries in a handwritten log. A product from deister now provides the opportunity to make the whole process more secure and less labor-intensive.

Where is the digital camera? Who's been using the company car? When was the technician last in the building? Where's the key to the server room? These important questions can now be answered by the proxsafe, an intelligent management system for keys and objects of value. It provides optimum management of keys, a vehicle fleet, small cameras, mobile phones and tools. It can also complement an access control system by providing a cost-effective way of expanding an electronic security management system to doors that are still secured by a conventional mechanical lock and key.

A durable electronic tag is attached to each key or valuable object by using a one-time, self-

locking seal. The tubular tag has a unique number that is identified each time it is removed from and returned to the cabinet. All user activities from all terminals and cabinets are gathered and stored in a central database, providing a full audit trail for later evaluation when required.

Grows with the Task

A basic cabinet has positions for up to 32 keys, each assigned its own permanent position. Should there be a requirement for more keys to be securely stored, the system can be expanded by simply adding further cabinets. Many thousands of items can be electronically controlled in this way. Keeping track of so many keys would normally be a full-time task. The proxsafe management system keeps a record of which key is taken, when and by whom. Users gain access to the electronic safe by using their chip-based proximity card, a PIN or both and are immediately identified. Information about usage rights is stored in the terminal, enabling self-service to authorized items. When the required key has been selected, it is highlighted for quick location by the illuminated cylinder surrounding the tag. When returning the key, the user simply presents the tag to the reader in order to gain access to the system, which helps to prevent delays at busy times.

Secure from All Points

When not currently in use, an automatic self-locking shutter door closes in front of the keys to guard against unauthorized access. This is however sensitive to obstructions so there is no danger of fingers getting caught. The key tags use RFID transponder technology to provide a unique identification of the key or item. They are

compact, sealed and water-resistant and will not corrode. The designers chose to use a key tag without any electrical contacts and this avoids any problems of grease, dirt or contamination affecting the ability to read the key tag. The contact-less concept also extends to the users who, by using a chip-based proximity card, gain access to the system quickly, conveniently and securely. The proxsafe commander management system supports all current credentials including mifare, Legic, HID, proxentry and other technologies. This enables it to be integrated over a network into other systems via the open deBUS communication protocol. Security personnel therefore always have an overview of which items are currently in use and by whom.

Invaluable Experience

Deister electronic was established in 1977 and is well-known in the security market. One of its strong points is radio frequency identification, and the company specializes in the design, manufacture and distribution of products using RFID-technology. Users of their systems include telecommunications providers, police fleet management officers, household technology manufacturers, engineering firms as well as city administrations.

▶ CONTACT



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High Performance Video Encoders

Verint Systems announced additions to its family of multiport encoders, along with the next release of its patent-protected Nextiva Enterprise Video Management software. These integrated solutions are the latest enhancements to the Nextiva IP Video portfolio from Verint Video Intelligence Solutions, and are designed to deliver a flexible and scalable IP video management platform to organizations around the world. The introduction of its environmentally friendly Nextiva S1808e and S1816e multiport encoders represent the latest addition to the portfolio. They are enterprise-class solutions designed to deliver high-resolution images for recorded and live video, and support H.264 and MPEG-4 video up to 4CIF/30fps on all ports.

www.verint.com



LED Rear-projection Video Walls

Visualization specialist Barco has launched its new LED-lit rear-projection video walls. The OL series of video walls presents significant quality improvements over the current state of the art in LED projection. "Barco's LED video wall has been developed based on a long heritage of LED expertise, since we have been designing and producing LED signage since the nineties," comments Mathieu Massart, Director Product Management of Barco's Displays technology unit. "As an illustration, today, we process more than two million LEDs every week. So, we know LED and its characteristics like no other company. This way, we have been able to considerably improve the existing LED rear-projection state of the art and we have succeeded in significantly optimizing image quality, ease of use and cost of ownership." Barco's OL rear projectors come with Sense6, a sensor technology which co-ordinates across multiple rear-projection modules to provide brightness and color stability over time and across the entire video wall screen.

www.barco.com



Arecont Unveils MegaFlash Cameras

Arecont Vision announces new compact cameras with MegaFlash technology in 1.3, 2, 3 or 5 megapixel formats. The MegaFlash camera series can capture megapixel-quality snapshots using a high-speed shutter synchronized with an external strobe light for license plate recognition (LPR) and intelligent transportation system (ITS) applications. The cameras can capture images of vehicles travelling up to 100 miles per hour (160 km/hour). Megapixel CMOS cameras provide exceptional frame-rate and image clarity benefits for license plate recognition. However, the use of CMOS megapixel camera technology in LPR and ITS applications has been impeded by its inability to synchronize with a flash strobe, due to the lack of global shutter in conventional CMOS sensors. Introduction of sophisticated highspeed shutter in the camera effectively addresses this problem, opening exciting possibilities with new applications in the transportation vertical with LPR and ITS requirements.

www.arecontvision.com

Upgrade Option

Geutebrück's ANPR software for its Geviscope and Reporter digital CCTV system platforms is available as a fully integrated option on new equipment or as an easy upgrade for existing installations. Suitable for use with moving or stationary vehicles up to 20 meters away traveling at speeds of up to 100 km/hour; this real time ANPR analysis function delivers a recognition accuracy of 96% under optimal conditions. You can run the function on any video channel or channels irrespective of whether the image source is analog or digital, so long as you hold a separate license for each channel. By combining the associated metadata with the picture data, the software module ensures that the system's video database can be searched by registration number or other factors.

www.geutebrueck.com

ComNet Expands Ethernet Product Offering

ComNet is introducing the ComWorx product line to bring to market its expanded Ethernet product offering. ComNet has recently expanded their Ethernet product offering to be one of the most comprehensive lines in the security market. The line consists of copper to fiber optic Ethernet media converters, un-managed Ethernet switches, and managed Ethernet switches. A new addition to the managed switch are the twenty-four port CNGE2FE24MS and twenty-four port with PoE CNGE2FE24MSPOE models. Each features two Gigabit and 24 Megabit ports, support IGMP Snooping and Rapid Spanning tree Protocols as well as many other features. A subset of the newly introduced product line is ComNet's hybrid solution suite. This suite consists of products that allow an Ethernet network to act as the transport mechanism for traditional functions and allow unusual media be used for an Ethernet network. By product line was expanded to include Ethernet over unshielded twisted pair (UTP), CNFE1CR1MS and Ethernet over coaxial cable, CNFE1CL1MS media converters, serial data to Ethernet data devices, CNFE2DOE and contact closure over Ethernet, CNFE8COE devices.

www.comnet.net



All-in Performance Package

Geutebrück's classic Multiscope III XP is now available complete with standard function licences in an attractively priced package. The CCTV platform offers a wide range of functions, lots of interfaces for maximum flexibility and is readily integrated into the company's system world. The platform manages up to 32 camera inputs per unit and offers extensive alarm management capabilities for alarm image recording, centralized picture evaluation and configuration as well as flexible serial and TCP/IP interfaces. Included in this special package are licenses for activity detection (AD), which provides for reliable motion-controlled recording, and camera position authentication (CPA), which provides effective sabotage monitoring.

www.geutebrueck.com

Switching To LED Lighting

Raytec reports a widespread positive response to the 'scrap and save' Lighting Amnesty scheme launched last month. The scheme encourages organizations to switch from wasteful CCTV and security lighting to low energy LED lighting. Prisons, utility companies, local authorities and private businesses have been among the first users to take advantage of the scheme, which the company estimates will save users thousands of pounds per year by helping them adopt energy efficient, long life LED lighting technology. Security installers and consultants have also responded quickly and are encouraging their customers to take advantage of the scheme. "In direct response to our campaign we have been contacted by organizations from around the country requesting site surveys to assess the efficiency of their lighting and to calculate their energy and cost savings," says Shaun Cutler, the company's MD. "Our message, which is that both costs and CO₂ emissions can be easily reduced, has struck a real chord in the industry."

www.rayteccctv.com

Catalogue for Download

Registered partners and customers can easily and conveniently download Dallmeier's catalogue as a PDF file in the company's Partner Forum on its website. New products, specific information about all available variants, detailed schematics and comparisons of the individual products give substantial information on the company's product range.

Moreover, new case studies and "Worth knowing" pages are available. A special highlight is the new range of HD products. With the DDZ4010-YY/HS/HD Domera the company presents a full HD high-speed PTZ dome. Because the best HD camera is useless if the image quality cannot be transmitted, recorded or archived, the producer offers complete HD end-to-end solutions. The company celebrates its 25th anniversary – that is why the preface to the catalogue contains a historic review of the company.

www.dallmeier.com



Network Video Recorders

Everfocus Electronics presents the 32-/16-/8-channel Network Video Recorders (NVR) ENR 3200/1600/800. Being part of the Nevio IP product family, the ENR series' is capable of recording and managing up to 32 channels from Megapixel cameras, IP cameras and video servers of multiple IP product manufacturers. Easy and intuitive operation, combined with intelligent search functions provided by the integrated video analytics, enables the fast and efficient evaluation of recorded footage. The multilingual series offers local and remote PTZ control as well as digital PTZ function. By means of the integrated counting function, users are able to count objects of freely definable sizes in one or two directions. Further features include bidirectional audio transmission, synchronized playback with up to 16 cameras, I/O control of IP video devices, dual monitor support, system and event log database, 3GPP live view support and full EKB 200 USB joystick support. Automatic camera search allows the easy installation in a wide range of security applications. All Recorders are delivered including PC keyboard (also UK keyboard version available), PC mouse and a CD-ROM containing recovery software, remote software (incl. remote live client, remote playback client, database maintenance software and backup software) and comprehensive documentation. For rack installation, optional 19" mounting brackets (BA RK01) are also available.

www.everfocus.de



Full HD PTZ Dome Camera

With the DDZ4010-YY/HS/HD Domera Dallmeier presents a full HD high-speed PTZ dome which was specifically developed for the professional security market and to the highest demands regarding quality and reliability. The full HD camera series, which also includes a fix dome camera, is particularly characterized by the use of a 'native HD sensor' with a resolution of 1,920 x 1,080 pixels i.e. a 'real' HD resolution as compared to other manufacturers who create an artificial 16:9 HD resolution from a 4:3 megapixel resolution. Moreover, the Smartzoom functionality provides the best possible zoom quality. The company's high-definition cameras are equipped with the proven Caminpix technology. They feature a high dynamic range and an excellent control action, thus providing detailed and true-colour image material. With its high-end DSP processor ('Digital Signal Processing') the HD cameras offer a platform that will enable many more functions in the future (programmable), while remaining open for updates or other further developments.

www.dallmeier.com



Technology Migration Solutions

HID Global announced the expansion of its Multiclass transition reader product line, providing new access control migration options to help organizations transition from low frequency EM4102 proximity to high frequency Iclass contactless smart card technology. The company's Multiclass family of card readers is designed for customers upgrading their current card system from the most popular proximity technologies to Iclass credentials. With the Multiclass RP40, RPK40 and RP15 readers, existing EM4102 proximity customers now have the ability to seamlessly transition to smart cards over time while incorporating the use of multiple card technologies within a single building or across multiple facilities.

www.hidglobal.com



Hybrid DVR

Dedicated Micros is targeting the mid-range CCTV market with its SD Advanced Hybrid DVR (Digital Video Recorder). It comes in 16, 12 or 8 channel models and builds on the extensive features of the company's popular SD Range with added capabilities such as IP streaming and recording, front panel local control, VGA main monitor support and the ability to configure the Oracle dome camera. One of the first systems from the company to feature embedded help videos, for the system these are accessible from both the local and remote viewer and cover all major operation and configuration topics including: the use of Point & Go, Absolute Positioning and On-Screen Maps.

www.dedicatedmicros.com



Infra-red Beam Towers

Bunker has concentrated its efforts on the production of infrared beam housings. The company's two major product lines address the specific requirements of different user groups. The industrial range is aimed at warehouses, government buildings and factories where robust and solid structures are of prime importance. The durable towers are frequently used to protect ongoing construction projects. The other major product line is for the residential market. Here, a discreet appearance is most important, and the beam towers are designed to give the impression of being regular lampposts or outdoor lanterns without any obvious security function. Residential property owners are interested in effective but nevertheless non-intrusive security systems to protect their homes. Sensors and cameras built into the beam tower send alarms and take images as soon as abnormal movement is detected within the perimeter between the street and house. The company recently launched two accessories; an illuminating accessory (PT-LUX) and a camera enclosure (PT-CCTV). These can be added to the company's flagship product, the PT 360° beam tower.

www.bunkerseguridad.es

Positioning Unit with IR LED

Fast, efficient, competitive and full optional. The new Ulisse Compact positioning unit from Videotec could not offer more, thus becoming the most convenient and reliable solution for outdoor video surveillance systems. Thanks to an advanced constructive technology, it offers an exceptional quick and precise positioning, utmost sturdiness and simplified system configuration. Ulisse Compact guarantees quality images even in scarcely illuminated areas for maximum protection during the nightly hours as well. Moreover there is now the possibility of having the IR LED illuminator integrated and factory aligned. The different models available offer the choice between built-in Sony 36x, 18x or 10x cameras in PAL or NTSC modes, with a 230 Vac, 24 Vac or 120 Vac power supply, with an integrated wiper and illuminator.

www.videotec.com



Environmentally Toughened Video Cartridge System

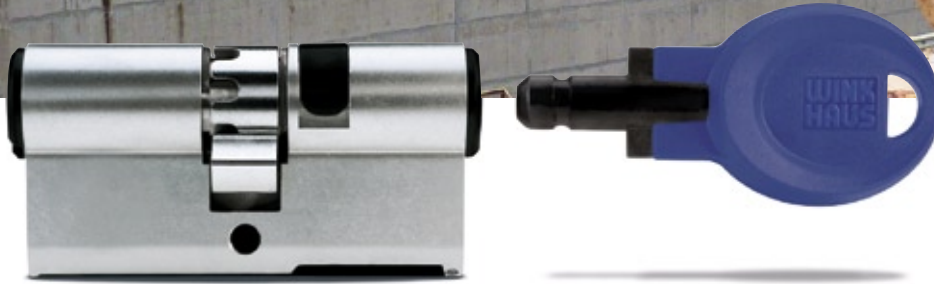
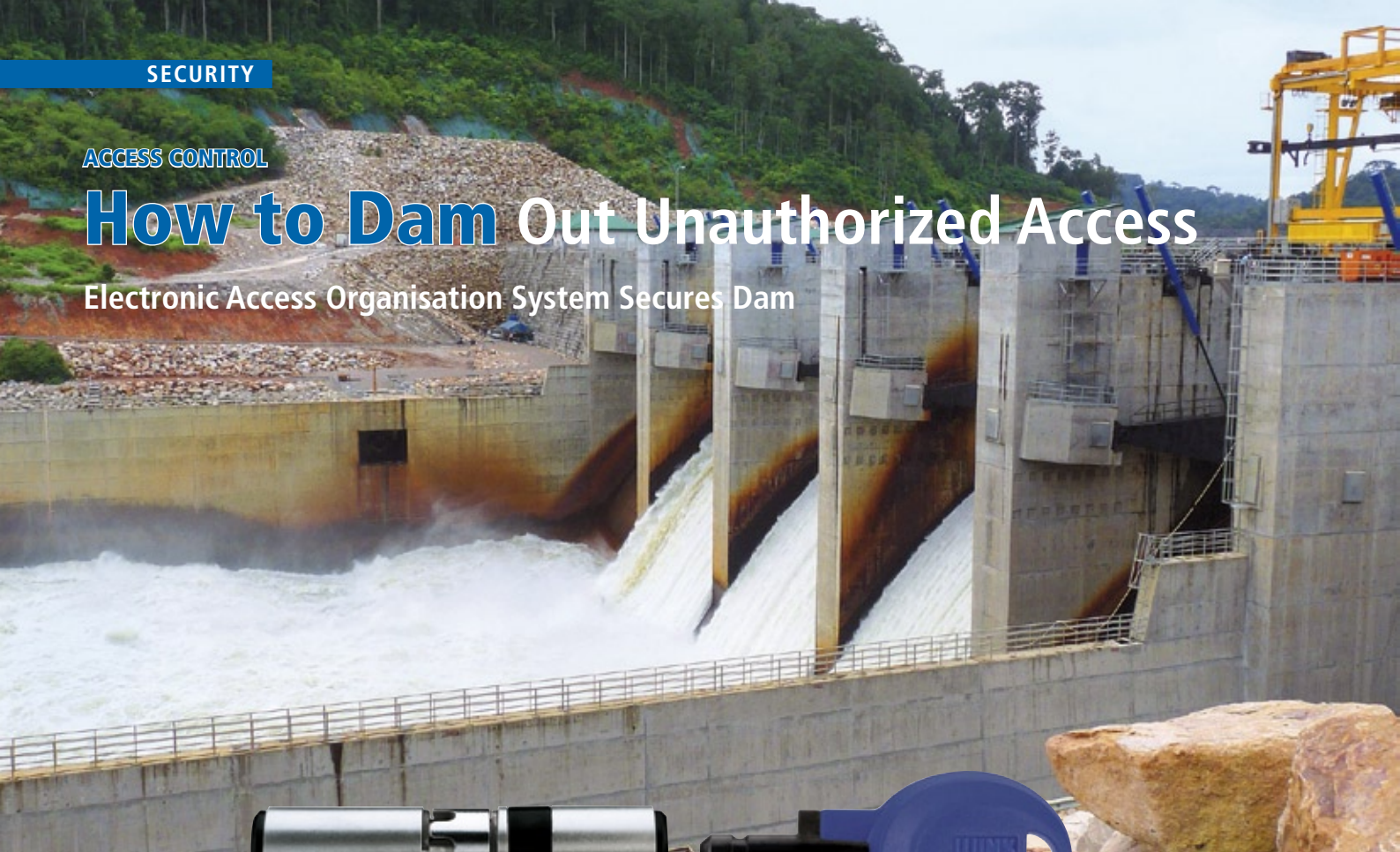
The BWA-Udock 1 is a swappable HDD memory system offering all the advantages, which are expected from a hard disk data medium: ultra-high-speed, high memory capacity and immediate access to data. An extended input voltage range, power supply output and USB screw-locking feature allow for industrial use in many mobile applications. It uses HDD cartridges from Imation, available from 160 up to 500 (or 640: Q4/2009) GB. The system is enclosed in fan-less aluminum housing with rugged screwed connectors (USB and power input).

www.bwatech.com

ACCESS CONTROL

How to Dam Out Unauthorized Access

Electronic Access Organisation System Secures Dam



The Nam Theun is a tributary of the Mekong and flows through Laos. Its role as an energy source will become more significant in the next few years. The completion of the second barrage project, bearing the name of Nam Theun 2 is scheduled for completion this year. Winkhaus's BlueChip electronic access control system will play a key role in ensuring a high level of security for the project, something which is required by the World Bank in its capacity as a lender. Winkhaus's project advisor, Günther Zimmer, visited the location with a team of Thai security engineers to complete initial installation work.

World Bank's Security Requirements

The World Bank's security requirements for the project are stringent. International standards must be maintained from construction through to operations. Even in such remote areas as Central Laos the BlueChip solution offers the characteristics to fulfill this standard. Laos is the only landlocked country in South East Asia. It has borders with China and Thailand, among other countries, and both are major consumers of Laos's export industry. Generating hydro-electric power is the most important branch of industry

in this country with some six million inhabitants. This is reflected in the fact that, following completion of the Nam Theun 2 Dam with a length of up to 500 m and a height of up to 39 m, three further dams along the river are planned.



Staff from Thai security experts Skulthai installed the BlueChip locking cylinders.

Know-how in Technology and on Site

Building work on the Nam Theun 2 complex started in 2005. In June 2009, the building work had made sufficient progress to warrant initial installations of the BlueChip locking system. The range of applications for Winkhaus's electronic access control system covers everything from the gatekeeper's lodge, through generator rooms, to the flooding areas. Three further deadlines have been planned for the installation of no less than 255 BlueChip cylinders in the scope of the project.

To ensure professional implementation of the work on site, Winkhaus's project advisor, Günther Zimmer, accompanied a team of technicians from Skulthai Co. Ltd. from Thailand for two weeks. The security specialist, whose head offices are located in Bangkok, has been a Winkhaus customer for years and has supplied material for projects in Thailand and abroad one of them being the Nam Theun 2 Dam in neighbouring Laos. In November 2008, Skulthai staff took part in training in Germany. At the Winkhaus Training Centre they familiarised themselves with BlueChip access control and organisational technology. They soon mastered installation, programming and management of the system. Thanks to this, they were able to provide valuable support to Günther Zimmer on site in Laos.



Initially, 85 doors were fitted with electronic locking cylinders. After completion the BlueChip locking system will include 255 cylinders and eight hundred keys.

Together, they installed 85 electronic BlueChip cylinders in external and internal doors, as well as padlocks and panic doors. At the same time, they also programmed all 255 cylinders which will be installed by the time the dam is completed. „Despite the heat and humidity, work made excellent progress, so much so that the team from Thailand will be able to handle the three planned installation trips on its own“, Zimmer reports.

Perfectly Suited for the Region

After completion of the building project, staff from Skulthai will train the staff from the dam in the use of the BlueChip system to enable them to manage their system independently. Easy hardware handling and the user-friendly software will facilitate this work. After all, BlueChip helps users to implement organisational changes in next to no time with just a few clicks on the central PC. Lost keys can be blocked in the system at any time and new utilisation concepts can be quickly implemented. Access entitlements can be restricted with respect to time, and access via doors can also be logged electronically, if needed. The BlueControl software, which Winkhaus tailors individually to customer requirements, ensures reliable system operations.

And the eight hundred BlueChip keys, which will be handed out to the dam's staff on completion of the project, are perfectly suited for use in the region. The BlueChip key does not require a battery and is enclosed in a stable, watertight plastic housing. This means that it can easily cope with the humid climate. Additionally, the BlueChip key is used like a normal mechanical key; in other words, inserted into the electronic BlueChip cylinder and turned. Thanks to the key owner's individual locking authorisations, the cylinder immediately and reliably detects who is allowed to open the door, and when.

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AIRPORT SECURITY

Boundaries of Security Report

Research commissioned by designers and manufacturers of fibre optic intrusion detection technologies, Future Fibre Technologies (FFT) has found that global spending on perimeter security is continuing to increase, in an effort to combat increasing threats to security. Global factors including increased threat of terrorism, consequently higher insurance premiums, increasing international travel, technological innovation, and increased infrastructure spending is fuelling the increase, which is predicted to reach more than US-\$4.5 billion in 2010.

FFT, which undertook the research to provide security consultants, managers and specialists with invaluable insight into the fast paced world of perimeter protection, has released the information in a document called *Boundaries of Security – Global Trends in Perimeter Security*. The document takes a balanced look at the security industry and is a must-have resource for all security consultants and industry professionals. It describes a wide range of perimeter intrusion detection technologies and explains their fundamental operating principles, typical applications, and the strengths and vulnerabilities of each.

Detailing security industry trends and case studies, along with best practice recommendations and discussions for infrastructure and high



value asset protection, it also includes white papers from FFT's Chief Technology Officer, Dr. Jim Katsifolis. Essential reading for those wanting to know more about alarm recognition and discrimination for fibre optic intrusion detection systems. According to Alec Owen, International Client Manager at FFT, the technological advances which were confined previously to primarily the military and aerospace industries a couple of years ago are now emerging in the latest generation intrusion detection systems.

"Techniques such as intelligent learning algorithms, neural networks and advanced multi-parameter signal processing are being employed to dramatically improve the recognition of real intrusion events versus nuisance alarms," Mr Owen says. "We produced the *Boundaries of Security* to give our customers and industry part-

ners an edge in understanding the technology," he said. "The pace of these technological advances can make it challenging to stay abreast of the latest developments and we believe this report can help with that."

Boundaries of Security, valued at US-\$300, is available free for a limited period to qualified individuals and can be ordered on-line at www.fffsecurity.com

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Fraport Consortium Signs Concession Agreement

Fraport AG's executive board chairman Dr. Stefan Schulte signed the public-private-partnership agreement for developing, reconstructing and operating St. Petersburg's Pulkovo Airport, the fourth largest airport in Russia. "Fraport and its partners in the Northern Capital Gateway consortium can be proud of winning the concession bid and to be soon taking over operation of Pulkovo Airport in April 2010," declared Schulte at the contract signing. "With Fraport, the City of St. Petersburg has found a partner that is fully dedicated to the project. We intend to make the development of Pulkovo a model project for the Russian aviation industry and for us as an airport manager." Using its expertise, Fraport intends to make Pulkovo Airport the main transportation hub for one of Russia's most popular tourist regions and to expand and operate it in a steadily growing market.

www.fraport.com

Pan-European Network Service Launched

Eurocontrol signed a contract with SITA to launch PENS, a pan-European communications network service that will allow all air navigation service providers to exchange voice and data communications in a seamless and integrated manner. PENS, a managed internet protocol (IP)-based regional communications backbone service, will provide an alternative to the ad-hoc, bi-lateral communications that air navigation service providers (ANSPs) mostly use today. Delivered by SITA, it will meet both current needs for inter-ANSP information exchange as well as those being planned in the SESAR programme for the System Wide Information Management (SWIM) initiative. Importantly, it will help those ANSPs who are still using the X25 Protocol to move to an IP service in a cost-efficient and manageable way in order to comply with the Single European Sky regulation. PENS will also replace the individual IP network services that have been used for services to Eurocontrols Central Flow Management Unit and the European Aeronautical Information Service Database (EAD). It will provide substantial economies of scale, as there are a number of common points through which both CFMU and EAD services are delivered.

www.eurocontrol.int

Genetec Secures Denver International Airport

Genetec announced that Denver International Airport (DIA) in Colorado has selected Omnicast, the company's IP video surveillance solution, to secure their 53 square-mile (137 square-kilometer) facility. Ranked the 10th busiest airport in the world in 2008 for passenger traffic by Airport Council International, DIA was looking to upgrade their outdated analog system to a newer and more advanced network-based solution that they could evolve as newer technology emerged. The entire system to date consists of 1,200 cameras and 12 archive servers that are expected to double in the next 18 months.

www.genetec.com



H.264 Mega Dome Series

Arecont Vision is enhancing its Mega Dome series of megapixel camera solutions to offer a choice of megapixel lens options, each incorporated with an H.264 megapixel network camera and vandal-resistant housing into an all-in-one dome. In addition to the 4.5–10 mm megapixel lens originally offered, the company now provides customers the choice of equipping a Mega Dome camera with an 8–16 mm megapixel lens to enable more telephoto lens requirements.

Available in color or day/night versions and with 1.3 M, 2 M, 3 M or 5 megapixel sensors, the cameras incorporate the company's H.264 (MPEG 4, Part 10) compression that uses up to ten times on average less bandwidth and storage compared to megapixel counterparts using MJPEG compression.

www.arecontvision.com



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- + Support detection trigger under video loss/motion/ alarm/HDD state
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IP CAM (Mega Pixel model released)

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Volker Zintel, general manager of
the "Airport Security Management"
strategic business area at Fraport AG

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40
Years
1969
2009

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✎ We are proud that Mr Volker Zintel is one of our prominent authors. His most recent contribution to the subject of airport security appeared as an interview in our publication GIT SECURITY + MANAGEMENT. Volker Zintel has been the general manager responsible for the "Airport Security Management" strategic business area at Frankfurt airport since 2007. Mr Zintel is responsible for all activities at the Frankfurt site relevant to security. These activities make a decisive contribution to the security of more than 50 million passengers who use Frankfurt airport each year.

Mr Zintel worked in management positions with the Hessian police for two decades, and was mayor of the town of Hochheim am Main between 1984 and 1990. He started work at what was then Flughafen Frankfurt Main AG in 1990 as manager of the Air Security Department. Between 1997 and 1999, he took on department managerial roles, initially in the "Passage, Trade and Services" department, and then from 1999 was department head of the "Traffic and Terminal Management" strategic business area, which he managed on a temporary basis from April to December 2003. He was subsequently the general manager responsible for the strategic business area of "Air Traffic and Terminal Operations, Expansion and Security". Volker Zintel took over the management of the "Airport Security Management" business area when it was founded.

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PERIMETER PROTECTION

Seeing in the Dark

Thermal Imaging Cameras: A Cost-effective Solution for Perimeter Protection



Today, the challenge to CCTV professionals is to make sure that video footage is effective on a 24/7 basis, 365 days a year. Securing an area during the daytime is one thing. But what happens during the night? And in weather conditions such as fog, rain and snow? What can be detected if CCTV cameras are blinded by the sun?

The standard for closed-circuit television (CCTV) system installations nowadays is to provide 24 hour surveillance, not just day-time operation; to be truly secure, a site must also be protected day and night. Often different technologies are combined to detect potential intruders in the dark and create a secure perimeter. Fences can be complemented with CCTV systems, with or without active infrared illumination or old-fashioned tungsten lights, RF intruder detection (RAFID) systems, thermal imaging cameras and/or walking patrols.

Whatever solution or technology is chosen to secure an area, they all have their advantages and disadvantages and some technologies are more expensive than others. To get a full picture of the total cost of ownership (TCO) for a spe-



cific solution, not only the initial installation cost but also the maintenance and running costs need to be taken into account. Some solutions consume a lot of power and some need a lot of spare parts during their lifetime.

Environmental and energy consumption issues are high on the global agenda today. \$1 of every \$5 spent globally is used on lighting, and much of this goes on inefficient and unnecessary lighting. Local authorities and private industries are all looking at methods to save energy costs, and lighting is one area due careful attention.

Let there Be Light

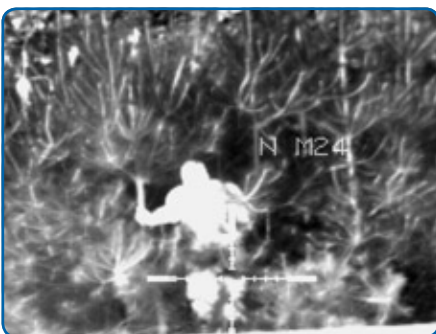
Just like the human eye, CCTV cameras do not see too much in total darkness. Although some bulbs (fluorescent lamps, HID lamps) are more efficient than others, the operational cost is still very high. Light can only reach a certain distance and completely illuminating an area so that it

can be kept under the surveillance of CCTV cameras is not always possible.

CCTVs with traditional lighting require lamp replacement every 2000 to 4000 hours or about every 8 months, causing significant labor and material cost. Light pollution is an increasingly hot political topic and a global problem caused by inefficient, intrusive and unnecessary use of artificial light. Government legislation will control and punish light pollution. Furthermore, lighting essentially lays out a route of attack for intruders, creating shadows in which they can hide and access undetected.

Alternative Technologies

Compared to any bulb, LED's provide significant savings on electrical consumption. LED's also provide long life performance with little ongoing maintenance costs. Infrared illumination with LED's, sometime also called active infrared,



throws infrared radiation into the area in front of a camera. It is compromised by limited range and cannot be fitted to move with the dome cameras.

To improve security, fences can be equipped with sensors that generate an automatic alarm when someone touches the fence. Or they can be electrified to keep intruders away. In all cases, fences need to be complemented by other technologies such as CCTV cameras or walking patrols in order to see what is happening around the fence.

The simplest description of RAFID is to consider a system using two specially designed cables, one transmitting a radio wave while the other receives that wave. If the amount of signal changes, this means that someone or something is between the two cables and an alarm will be raised. Due to the difference in the signal strength, the system can detect whether these changes are due to the presence of a human, a small animal or something else. Note that in a lot of cases CCTV cameras still need to be installed in order to see what is generating a real, or false, alarm.

Thermal Imaging

A new tool for seeing in total darkness and in the most diverse weather conditions is thermal imaging using thermal imaging camera to ,see' heat emitted from an object. These cameras produce a crisp image on which the smallest of details can be seen. They work both during daytime and nighttime. Most Flir Systems thermal imaging cameras contain an uncooled Vanadium Oxide detector. Not only does it produce excellent quality thermal images, since it does not contain any moving parts, it needs no maintenance. Thermal imaging technology requires no additional lighting or illumination and has no regular maintenance costs.

Deciding Which Technology to Use

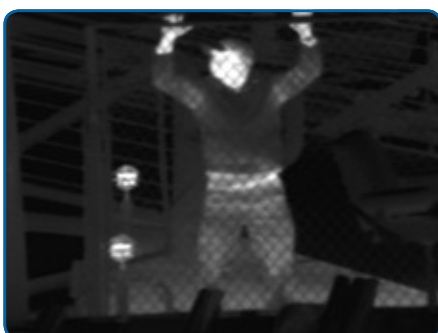
Before making a final decision about which technology will be implemented to secure a perimeter at night, it is a good idea to have a look at the specific advantages and disadvantages of each. Not only the initial purchase of the system needs to be considered, the total cost of ownership needs to be calculated too. For example, the electricity consumption of an installation is often not taken into account when deciding which technology to install.

	Advantages	Disadvantages
CCTV with traditional lighting or LED	<ul style="list-style-type: none"> · Good visibility during daytime · Relatively low initial cost 	<ul style="list-style-type: none"> · A lot of cameras need to be installed to cover a large perimeter · Limited detection at night. Light illuminates only certain small area. · Limited capabilities in fog, rain, ... · Civil works need to be carried out to install light poles · High power consumption · High maintenance cost for replacing the lights: material and manpower
Electrified Fence	<ul style="list-style-type: none"> · Creates a physical barrier · Allows to stop intruders · Works during the night as well 	<ul style="list-style-type: none"> · High installation cost · Full civil works needed · Power consumption · Needs to be complemented with CCTV to see if alarm is false or not. Light or infrared illumination needed during the night to do this.
RAFID or Sensor Cable	<ul style="list-style-type: none"> · Fully automated system · Works in total darkness 	<ul style="list-style-type: none"> · High installation cost · Full civil works needed · Troubleshooting and maintenance after installation · Many false alarms · Needs to be complemented with CCTV to see if alarm is false or not. Light or infrared illumination needed during the night to do this.
Thermal imaging	<ul style="list-style-type: none"> · Full awareness · Can be used day and night · Works in practically all weather conditions. Can see through light fog, rain, smoke, ... · No downtime, low maintenance · Low power consumption · Extremely difficult to hide from since thermal contrast in practically impossible to mask 	<ul style="list-style-type: none"> · No physical barrier · Potential intruders are easily spotted but not identified

Summarizing the different technologies and their respective advantages and disadvantages, it becomes clear that, although a thermal imaging camera is initially more expensive than a CCTV camera, fewer cameras need to be deployed to cover the same area. The civil works that need to be carried out are minimal. In some cases the cameras can even be mounted on existing structures. Furthermore, since thermal imaging cameras produce a clear image even in

the darkest of nights, no complimentary technologies such as lights or infrared illuminators need to be installed. Not only does this limit the amount of civil works that need to be carried out but it also reduces the maintenance cost.

Thermal imaging cameras also generate fewer false alarms, which is a common problem with CCTV cameras combined with Video Motion Detection or Video Content Analysis software. A case study often shows that thermal cameras are often the most cost effective solution over time.



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PERIMETER PROTECTION

True or False?

Combining Detection Technologies to Avoid False Alarms

Outdoor security systems detect intruders as soon as a protected area is entered and before intruders are able to gain access to people or valuable objects and assets. Sensors can be placed in clear zones, e.g. open fields, around buildings or along fence lines. Exterior sensors need to be resilient enough not only to withstand outdoor weather conditions, but also reliable enough to detect intrusion during harsh environmental conditions.

Traditional and conventional exterior intrusion sensors have a lower probability of detecting intruders and a higher false alarm rate than their interior counterparts. This is due largely to many ungovernable factors such as wind, rain, ice, standing water, blowing debris, animals and human activity, as well as other sources including radio transmission interference. These factors often require the use of two or more sensors to ensure an effective and safe intrusion detection screen.

The new Absolute Plus from Sicurit is a high security dual-technology barrier that combines microwave and infrared technology to enhance detection capability while drastically reducing false alarm rates. Available in 3 ranges (200/80/50 m.), it consists of a pair (TX and RX) of extruded aluminum columns in which infrared beams and microwave technology are combined into one unit. Both sensing elements are located in a single casing, and are connected electronically using a special 'AND' logic function. Since the two sensors will not detect an intrusion precisely at the same time the system has been designed to generate an alarm when both sensors produce an output within a pre-selected time interval.

The sensors can be installed along a perimeter line, a fence or a delineated buffer zone, or as a defense against intruders approaching a gate or a wall. To further enhance information performance, image/video recorder equipment can also be installed to survey the intrusion or approach zone. In addition, to increase the detection potential, this capability permits security personnel to assess the nature of the intrusion alarm immediately and remotely.

Two Technologies Maximum Detection

The Absolute Plus alarm is the result of a sophisticated combination of the two most common and reliable technologies used for outdoor applications: active IR beams and microwave technology. Surveillance is carried out by a temporary window memory circuit. The pilot circuits of both detection systems are equipped with a timer whose range is adjustable from 20 seconds to 2 minutes. The first device (usually the microwave, the activator) that receives a stimulus activates its own timer. Meanwhile, the second system is activated to confirm the final alarm. With this method of operation, nuisance alarms caused by environmental factors are completely eliminated.

The patented Sicurit synchronized, coded and bi-directional active infrared beams, the main innovation in this barrier system, represent a clear commitment to advanced research and development of forefront technology for perimeter security. A specialty of the IR beams is the bi-directional code transmission via optics with random secure-codes. Each optics transmitter sends a continuously modulated beam to the opposite receiver which is tuned to recognize only its own signal. Once confirmed, the adjacent optics (a transmitter) will then send back to its receiver a new secure-code.

Two-way Traffic

The bi-directional properties of the system enable IR beams to be totally immune to direct sunlight, often the cause of nuisance alarms in tra-



Sebastiano Vento

ditional infrared beam barriers. IR beams are also equipped with dedicated relay contacts in case of disqualification, only to inform the security personnel that the system is working as a traditional system using only the microwave detector for the disqualification period. The number of IR beams inside the column is determined by the height of the system and the application (high/medium security). Absolute Plus is provided with 2 IR beams by default, but up to 8 beams may be added to each system.

Optional Extras

Microwave is the technology that functions as the 'activator' because, in most cases, it is activated first. Its detection capacity is determined by a lobe that can be regulated with its own trimmer, reaching up to 8 m. in diameter. Moreover, as an option, 'anti-crawling' Doppler devices can be installed in case there are no overlapping columns. This covers the blind area in proximity to the columns that the microwave's elliptical beam does not cover. Planar microwaves are used in models IMN050 and IMN080.

Absolute Plus columns can be equipped with built-in CCTV cameras. They are invisible and protected by a Plexiglas cover, and are therefore completely safe from atmospheric agents. A time record of the alarm sequences can be obtained by connecting a digital video recorder or a video transmission system via telephone lines. The video system can also be integrated with the site's main CCTV system by mounting a small camera inside the column to capture pre-alert pictures generated when the alarm is triggered.

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David Tomlinson

In this article David Tomlinson, managing director for leading data security company, Data Encryption Systems (DES), takes a detailed look at how encryption can safeguard a company's reputation – and at the same time protect against unnecessary fines. Tomlinson's article explains in detail how simple encryption is to use and why it should be as common place in an organisations policies and procedures as installing antivirus software.

Loss of Reputation

In February 2007, the Financial Services Authority fined Nationwide Building Society almost £1m for failing to have effective systems and controls to manage its information security risks. The failings came to light after the theft of an unencrypted laptop from a Nationwide employee's home. The 'crime' was especially heinous when the FSA discovered that Nationwide was not aware that the laptop contained confidential

customer information and did not start an investigation until three weeks after the theft.

The Nationwide fine followed close on the heels of the revelation by the TJX Companies group in the US of a massive data breach in which an 'unauthorised intruder' gained access to its systems over an 18 month period, and made off with nearly 46 million credit and debit card numbers of customers in the US, Canada and the UK. The data loss has so far cost TJX around \$17m, not to mention its reputation. It's not unreasonable to suggest that ultimately, it may cost the company its independence as well.

When you consider the fact that The Ponemon Institute's Annual Study on Enterprise Encryption Trends (2008) found that the total average cost of a data breach has increased 28% since 2007, and the cost of lost business due to a data breach now accounts for 53% of data breach costs, as opposed to 36% in 2007, it is a problem no company can afford to ignore. At the heart of these data breaches, and particularly at Nationwide, is companies' – or their staff's – unwillingness or inability to consider using encryption to safeguard their data. The reason has until now been the reasonable complaint that encryption sounds and has been difficult to use.

Making Encryption Fit in with the Way People Work

Usage has arguably never been more vital because there is no such thing as an organisational perimeter any more. Data has to be taken out of the building, and information has to travel around between mobile workers, business partners etc. How should that data be protected? Well, encryption is the obvious answer, but there are numerous stories of customers struggling –

and failing – to use encryption effectively. The word 'encryption' even sounds daunting!

Its perceived user-unfriendliness and fears of being left high and dry without their data has left users willing to take a risk, preferring to carry their unencrypted laptops with them at all times. Here are just a couple of examples I've come across:

We had engineering staff working over the Christmas break to complete a critical project for a major client. But everything had stopped while we awaited the final system design documents. After two or three hours struggling with the then leading data security product, our customer's head of software development finally uploaded a plain copy to our FTP site and asked us to encrypt it at our end. Faced with missing a project milestone he was forced into taking a risk with extremely sensitive data.

On another occasion, we were due to take delivery of documentation relating to banking security. Although we had signed a series of tightly worded non-disclosure agreements, when we asked how the documents were encrypted, the client's senior executive explained that they were no longer encrypted. She had recently made a transatlantic flight with the same information which was to form part of a critical technical presentation and found that the content couldn't be decrypted. "I know its company policy to encrypt this information," she said, "but I haven't encrypted it because the last time I was at a conference, I couldn't access my presentation. Now, I'm 'once bitten, twice shy' when it comes to using it again. I didn't encrypt it because it was too important – I was afraid of not being able to decrypt it again."

These two examples sum up the current lack of confidence in encryption. Yet really, using en-

ryption should be as easy as driving a car. You don't need to understand the technology to be able to use it. You just need someone to make the technology usable and make encryption as second nature as firewalls and antivirus.

How do we do that? Well, at the heart of the problems with public acceptance of encryption are training and terminology issues. Suppliers are continually coining new terms that even hard-bitten security analysts find hard to understand, never mind the public. You may recall a Not the Nine O'Clock News sketch back in the 90s, which took the Mickey out of the public's lack of knowledge of hi-fi terms such as Dolby, tweeters, decks, gramophones, and amps. It's easy to lose the user's understanding with many forms of technology and encryption must be near the top of the list.

There are also those so-called encryption specialists who say users 'keep asking the same stupid questions' when they don't understand. This is because the 'specialists' simply haven't taken the time and trouble to explain things correctly. What we need to do is sensibly 'dumb down' encryption, and get rid of the terrible terminology, so that users can be confident, and not hesitant, over its usage.

How to Protect Your Data

Some might say the answer to safeguarding data is to encrypt complete hard disks. Indeed, the US government positively encourages the companies it does business with to offer full disk encryption. But is it really that simple? Full disk encryption will allow you to do stupid things with your data: leave your notebook in a taxi, bus or pub. And it will protect your data against the (probably) non-technical thieving-types. This is an important function, as demonstrated by the fact lost or stolen lap-tops represent 28% of the breaches identified in the Ponemon Institute's 2008 study, but it only

solves one part (or 28%) of the problem. Analysis of the high profile data breach incidents published over the past couple of years show that most of the information leaked was from CD's and memory sticks.

Most memory sticks within corporate environments are the private property of the user, and CDR and DVDR media is treated as a low cost consumable item. Whilst the loss of a company laptop is virtually impossible to conceal by the user, USB sticks, and other removable media represent an insignificant loss despite the fact that the information contained may be enormously valuable in itself and the damage caused by its exposure can multiply that value many times over.

While full-disk encryption protects data stored on the computer, users must be provided with 'granular' encryption tools which allow users to layer their encryption accordingly with their security needs.

Granular encryption will allow you to do clever things with your data: encrypt files and folders with different encryption keys, encrypt memory sticks, CDs and all removable data, encrypt email and attachments, make encrypted archives of your work and share all of this information securely with both exclusive and overlapping workgroups.

Taking this approach provides a further benefit, in that where a systems administrator needs hands-on access to a computer to perform a software update, for example; they are past the security provided by full disk encryption and will have access to any information stored on the computer. By selectively protecting confidential data using say, an encrypted folder, the data is protected. The IT staff shouldn't need the highest security clearance, and granular encryption means that they don't.

Should you use full-disk, or granular encryption? The answer is: use both.

Ensuring Encryption Is on the Business Agenda

The reality is that for most companies dealing with government and other large organisations, encryption is a "tick in the box they must have." And it's likely that within 3-5 years, encryption will be as prevalent as firewalls and antivirus, because if you want to be an approved supplier, you'll have to comply with the rules. And that doesn't just mean large firms - it will also affect the smaller organisations who work for those big companies. We are seeing that already happening with the need for companies to comply with the Payment Card Industry's Data Security Standard (PCIDSS) which requires merchants (and their partners) to encrypt certain cardholder information.

Most US states now have laws that require merchants to announce when they have erroneously disclosed personal financial information that was not encrypted. Indeed, Visa and MasterCard can levy fines of up to \$500,000 for breaches in which the merchant failed to implement security measures. In my experience, these fines are larger and generally occur more often in situations where the merchant failed to use encryption. So encryption should undoubtedly be on your business's agenda.

It is vital that companies give their staff encryption tools which are designed with the user in mind to ensure that once deployed, staff are able to use the tools available without it hindering their productivity and that the product selected can provide 360 degree protection to all data. After all, as Nationwide and TJX have proved, what price can you put on any loss to your company's reputation?

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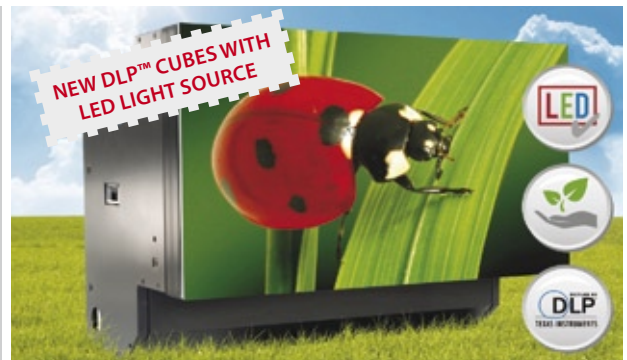
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INFORMATION SECURITY

Securing Security against the “Triple Threat”

Utilizing a Layered IT Security Approach to Combat Internal and External Threats



Byron K. Rashed

Even the best IT security technologies are useless if someone possesses the “triple threat” – the will, the means and the access to compromise sensitive company data. And, as statistics unfortunately bear out, all too often that triple threat holder is currently on your payroll. Enterprise IT professionals spend vast amounts of time, money and energy on firewalls, anti-virus software and myriad other technologies to keep people out, and far less time focusing on ensuring that those on the inside comply to an equally robust set of security policies. Internal security breaches account for a significant amount of data theft and data manipulation today, and often result in the enormous financial losses.

Under the banner of increasing productivity, corporate and government employees around the world – and sometimes across vast global supply chain networks – are increasingly being given “inside” access to highly sensitive data through the Internet and a host of new, wireless IP-based devices. And, everyone within these extended business IT environments are capable of creating security breaches, whether intentionally or unintentionally. This means that traditional security fortifications like firewalls, intrusion de-

tection systems and antivirus technologies are virtually useless if a potential breach is about to happen from the inside out.

For many organizations today, conducting business without an effective, manageable end-to-end data security platform is virtually impossible. This includes an approach where security is clearly defined in all areas, is easy to deploy and manage, and protects all aspects of the business IT environment against attacks – regardless of where the attacks originate.

The End-to-End, Layered IT Security Approach

A layered IT security approach takes into account all possible ways in which sensitive company, financial or customer data could be hacked, stolen, or otherwise manipulated. This encompasses external security that covers all access to company systems from outside interests, as well as the increasing number of employee digital access points.

The key principles of this layered approach include the following elements:

- Foundational security: Every node in the network, be it IBM Mainframe, Unix, Linux, Windows Server, PC, point-of-sale system, smart-card, or smart-phone should incorporate security as a foundational design consideration. Also, while the power of today’s networked systems are increasing dramatically, IT network designers must take into account security performance considerations early on in the planning process.
- Encryption: It is important to encrypt all data and file transmissions between and across today’s large, multi-site, diverse platform networks. This requires a new class of nimble, yet powerful technologies to accommodate the broad range of system platforms, as well as new and rapidly evolving applications.
- End-to-end communications security: This includes securing and encrypting all files and data transmissions from the source to the

destination, not just within the perimeter or from firewall to firewall. This approach, called “end-to-end communications security,” secures all data from application server-to-user, or any combination of two secure endpoints exchanging information throughout the enterprise’s internal network, and through encrypted transit through the Internet between systems at different physical sites.

- Robust authentication: Even if all network data were encrypted, it does little to ensure security if an employee with authorized access can disrupt or tamper with it. Therefore, new and better types of authentication technologies, coupling passwords with active certificate-based or physical tools and devices, are required to close this potentially dangerous loophole. In addition, service providers, banks, retailers, and other organizations interfacing with consumers should implement authentication solutions that provide a flexible, dimensional architecture to manage security behind the scenes, while offering employees and customers user-friendly features that automatically comply with needed security measures.
- Session/file transfer monitoring: In today’s IT environments, the possibility of accidental security breaches, or worse, malicious activity by internal sources, are very real threats to corporate data integrity. And, increasingly it’s the IT security managers, system administrators and other individuals with unfettered access and limited oversight that are the biggest threat. As such, IT security safeguards are a must. For example, real-time session and file transfer monitoring technologies, such as SSH Tectia Guardian, provide an easy-to-deploy, layered approach to establishing, maintaining and monitoring the security of sensitive corporate data in transit, while keeping system administrators and IT security managers in check.
- Security management capabilities: With the increased frequency and sophistication of se-

curity attacks – both internally and externally – it can be extremely tedious and time consuming for IT managers to manage their enterprise security solutions. An easy-to-use, automated security management platform is needed to enable IT managers to efficiently deploy security products and upgrades, enforce security policy, and monitor technical issues from a central location. Also, an automated management solution can lower overhead costs, while simultaneously reducing human errors.

- Regulatory compliance: IT security managers must also make sure that their systems are in compliance with the relevant government regulations and industry standards. Designed to help enterprises protect against security threats, measures like the Payment Card Industry (PCI) Data Security Standard (DSS), the Gramm-Leach-Bliley Act (GLBA), Sarbanes-Oxley (SOX), and Federal Information Security Management Act (FISMA) add a valuable framework for protection and oversight to the IT security process.

Tools of the Trade

When dealing with sensitive company data, you can never be too safe. All devices that store or transmit sensitive data must adhere to the highest data security standards.

And, equally important is providing safeguards against data theft or manipulation – either accidentally or intentionally – by company employees, contractors or anyone else with security clearance and privileged access. This is particularly critical in today's difficult economic times, where drastic budget cuts and widespread layoffs provide a fertile ground for a new crop of disgruntled employees.

Almost 15 years ago, data security pioneer Tatu Ylönen understood the importance of securing critical corporate data to prevent damaging security breaches. After developing the original Secure Shell protocol – now used by millions of individuals and businesses worldwide – he founded SSH Communications Security to continue developing robust, flexible security solutions to protect organizations'

sensitive data while keeping up with the ever-changing demands of the IT security industry. The SSH Tectia solution is one such security solution to address today's enterprise IT security needs. It enables enterprises and government agencies to effectively secure all data across the enterprise from end-to-end, enables secure remote access, secure file transfers and secure data-in-transit, and allows centralized deployment, maintenance, monitoring, and auditing capabilities. And, the new SSH Tectia Guardian solution can be used to deliver a layer of unparalleled visibility and auditing capabilities to easily monitor all activities of internal or external file transfers and remote access. Given the size and complexity of today's enterprise IT networks, SSH Tectia supports all popular enterprise computing systems, including Unix, Linux, Windows, and IBM mainframe, allowing IT managers to deploy and administer robust security throughout the enterprise. SSH Tectia also helps companies to meet key compliance regulations requirements, including PCI DSS, GLBA and SOX, to protect critical consumer and corporate information.

Security at the Forefront

Data security has come a long way over the years as a result of technological advances, increasing threats and the changing corporate IT environments. However, if history teaches us anything it's that certain aspects of human nature – both good and bad – are unlikely to change. The "bad guys" will continue to do their best to find new ways to wreak havoc on corporate computing systems from every possible vantage point. The good news is that technologies continue to adapt to the changing enterprise security landscape. By incorporating a layered IT security approach, organizations can effectively protect their IT environments against both internal and external attacks.

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FIRE PROTECTION

Residential Fire Sprinklers

A View across the Ocean: How the U.S. Promote the Installation of Fire Sprinklers

The majority of fire deaths in the United States, about 85 %, occur in the home – the place where we feel the safest. Adding to this tragedy is the astounding property loss. The total dollar loss from fire in homes each year in the USA is over \$ 6 billion! Something most people never even think about is the devastating effect this fire problem has on the environment, from the huge amount of water spewed from fire hoses to extinguish house fires, to the energy used to rebuild, to the diesel fuel used in heavy fire suppression equipment, to the non-recyclable building materials going to landfills, to the carbon dioxide emissions filling the air.



John Viniello, President of the National Fire Sprinkler Association (NFSA).

The Solution

As a response to the growing fire problem in the U.S., the International Code Council (ICC) introduced an addition to the 2009 International Residential Code (IRC) which will mandate residential fire sprinklers in all new home construction beginning in 2011. The IRC is part of the International Building Code (IBC) that is widely adopted as law throughout the United States. This initiative could prevent more than 3,000 fire-related deaths and 60,000 serious fire-related injuries across the USA each year. In fact, the new sprinkler regulations are being endorsed by the U.S. Fire Administration (USFA), which is an entity of the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA).

Other fire service professionals across the country back this endeavor, including the International Association of Fire Chiefs, the National Fallen Firefighters Foundation, and the International Association of Firefighters. Fire officials agree smoke detectors are no longer enough in residential fire protection, as lightweight construction has become more prevalent, house contents are more flammable than ever, and the time available to escape a house fire has reduced from 17 minutes 20 years ago to three minutes today.

The Question of Cost

The primary opposition to this mandate in the USA has been the National Association of Home Builders (NAHB), which views residential fire sprinkler requirements as unnecessary and too expensive for the benefits they provide. BUT, a study conducted for the National Fire Protection Association (NFPA) concluded that the presence of fire sprinkler ordinances has NO negative impact on the number of homes being built. Data for the analysis included annual single-family building permits, surveys of housing and households, local documents and news reports released before and after adoption of residential sprinkler requirements, as well as reviews of other housing regulations. Interviews with key builders, trade association staff and local government officials were also conducted.

The US housing crisis during 2006–2009 has nothing to do with the cost of fire sprinklers. The

nation's housing crisis is directly related to mortgage availability or lack thereof. The cost of installing residential fire sprinklers in a new home is estimated at \$1.61 per square foot, which is approximately 1 % of the value of the home, according to the FEMA benefit-cost analysis on residential fire sprinklers. When the cost is spread over a 30-year mortgage, it comes down to less than the price of a cup of coffee per week. This is a small price to pay when it comes to saving lives.

Not All Home Builders Disagree

The fire service community commends those homebuilding companies that have embraced residential fire sprinklers, as they realize that safety comes first for the people who live in their homes. Furthermore, blocking the adoption of the code requirement for fire sprinklers in new homes creates a greater exposure to liability for the homebuilder. The homebuilder has an obligation to build a fire safe home regardless of what government does or does not mandate. Blocking local government from adopting fire safety standards for new homes simply deepens the liability hole for the homebuilder. The California Building Industry Association has taken a position of support, largely due to the potential construction defect lawsuit, a possible result if California had not adopted these requirements, which are now „national standard“ (NFPA-5000, NFPA-101, and ICC-IRC) and someone were to have died in a fire in a newly constructed home which did not have residential fire sprinklers.

When false alarms are worse than inconvenient

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WORLD CLASS FIRE SOLUTIONS

Myths and Facts

Myth: New homes are safer than older homes

Fact: Lightweight wood truss construction is being used more and more in home construction today because it offers builders savings in construction costs. Trussed roofs and floors commonly used in modern home construction are especially prone to collapse in a fire, putting firefighters and residents at extreme risk.

Myth: Sprinkler systems require a lot of maintenance

Fact: A properly installed fire sprinkler system typically requires little or no maintenance and/or expense on the part of the homeowner. Properly installed sprinkler systems require no more maintenance than other systems in the house, such as electrical or plumbing.

Myth: Smoke sets off fire sprinklers.

Fact: Fire sprinklers are activated by heat, not smoke. In fact, the heat necessary to set off your average fire sprinkler is anywhere from 150 to 165 degrees, in other words only the kind of heat a fire would create.

Myth: A fire sets off all the fire sprinklers.

Fact: Only the fire sprinkler closest to the fire, the one affected by the initial heat of the fire,

will activate. In 81% of structure fires, only one or two fire sprinklers activated.

Myth: Fire sprinklers cause excessive water damage.

Fact: The average fire sprinkler only produces 55–95 liter of water per minute, versus 570–950 liter produced by a fire hose. In structures with fire sprinklers, the average property loss by fire is cut by one-half to two-thirds, and in some cases even more, than structures without. In most cases, structures without fire sprinklers are heavily or completely destroyed by the mix of fire and water damage caused by fire hoses.

Myth: Fire sprinklers are unsightly.

Fact: Modern advances in fire sprinkler technology have enabled architects, contractors and designers to install fire sprinklers into residential properties and businesses in ways that are aesthetically pleasing. In fact, most people do not even notice that the building or room they are in is protected by fire sprinklers.

The Benefits of Fire Sprinklers

Properly installed and maintained automatic fire sprinkler systems help save lives. Because fire sprinkler systems react so quickly, they can dramatically reduce the heat, flames, and smoke produced in a fire. Benefits include:

- Reduced risk of injury and fatality to civilians, EMS and fire service professionals
- Mortgage interest tax deduction
- Increased present value of resale proceeds
- Local tax savings
- Direct uninsured property loss averted
- Indirect uninsured costs averted
- Insurance premium credit
- Positive effect on the environment

Fire safety in the home should include a working smoke alarm, an escape plan and fire sprinklers. Fire sprinklers save lives and property!

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Flexible Toxic Gas Monitor

Honeywell launched Vertex M, a cost-effective and flexible toxic gas monitoring device designed to deliver 8–24 points of detection. The device is optimized for use in a variety of locations, providing the capability to deliver physical evidence of a gas release, using the company's Chemcassette. With a small and flexible design, which provides 8–24 points of detection, it also offers a comprehensive communications platform (Lonworks, Devicenet, Controlnet, Modbus Plus, DF1 and 4–20 mA compliant), making this device suited to both standalone use, and integration into an existing system. "Vertex M offers all the same benefits as the original Vertex model but comes in a smaller format," said Steve Forrest, Strategic Marketing Leader (EMEA) for the company. The instrument has the capability to monitor over 40 toxic gases down to ppb levels (parts per billion). It also offers flexible configuration options and allows for the integration of one to three Chemcassette monitors or one Chemcassette and one pyrolyser unit.
www.honeywellanalytics.com



Gas Detection Website

The Honeywell Analytics website has been re-designed and re-formatted to offer more functionality and accessibility to its audiences. A major change to the site is the provision of additional language versions meaning that English, French, German, Dutch, Italian, Spanish and Russian sites can now be accessed. The inclusion of an additional information resource covering detailed aspects of gas detection provides audiences with new support and knowledge.
www.honeywellanalytics.com

A League of Its Own

Kentec has been chosen to defend another two of England's top soccer stadiums against fire with major fire protection systems at Aston Villa's redeveloped Villa Park, and at West Bromwich Albion's Hawthorns stadium. Both installations are centered on the company's Syncro Fire Control Panels installed by Argus Services. At Aston Villa's ground a networked system of seven 4 Loop Syncro Control Panels use Apollo's open protocol fire data communications. Similarly, at West Brom's Hawthorns stadium, the system is supported by Apollo's Protocol linked to over 700 Apollo XP95 devices, and comprises four Kentec Syncro panels, with the system integrated to shut-downs, shutters and other safeguards. The decision to specify Kentec Control Panels widely in the football sector is based on their performance, reliability and ability to operate with a range of mixed Apollo devices without any problems. And the installers' considerable sports stadium expertise ensured that these fire system installations were carried out with the minimum of disruption to home matches and within tight budget restraints.
www.kentec.co.uk

Ring Bus Elements

The use of fire alarm systems with ring bus elements of the Opal-series by Notifier offers the installation contractor concrete advantages with the installation, operation and problem-shooting of fire alarm systems. The 5 mm lower universal base facilitates cabling access and offers a universal solution for on-wall and in-wall wiring. A plastic platelet can be taken off and used as a mounting for the labeling of the alarm. The ring bus elements of the series include a transmission protocol with complete new digital transmission, as well as the current CLIP-protocol. The addressing of the alarms, modules and alarm activators still takes place via the tested and proven decade switch. However, the address area for the alarms and the modules/alarm activators has now been extended to 159 addresses.
www.notifier.de



FIRE DETECTION

On the Right Track

Polish Yacht Manufacturer Chooses Bosch Smoke Detectors



Thanks to their strength and resilience, polyester-glass and epoxide-glass laminates have become extremely popular with yacht manufacturers. Working with these materials, however, presents a challenge – specifically, a risk of fire due to the presence of inflammable solvents, such as acetone, combined with a dusty environment that can cause problems for fire detection systems. To meet this challenge, Polish yacht manufacturer Delphia Yachts turned to Bosch Security Systems, and has installed more than 200 of the company's flush-mount Series 500 Smoke Detectors to protect its valuable manufacturing facilities.

Based in Olecko, Poland, Delphia Yachts is one of Poland's foremost manufacturers of yachts and motorboats, and exports its broad range of luxury products all over the world. The shipyard consists of three manufacturing workshops, a warehouse connected to offices, and a gatehouse. All areas, especially the workshops, were recently equipped with smoke detectors to protect the company's property and assure the staff's safety.

A Dusty Problem

Since the manufacturing process at Delphia generates a large amount of dirt and dust, the company had a special need for smoke and fire de-

ectors guaranteeing fail-safe operation even in such a challenging environment.

The significant risk of fire due to the presence of highly flammable materials used for production, such as wood and acetone as well as packaging material like foils, meant that the company needed highly reliable and sensitive detectors. At the same time, however, since the manufacturing process generates a large amount of dirt and dust, including gel-coated dust in some areas, to avoid false alarms in these dusty and dirty surroundings, the detectors should not easily attract fibers and also had to provide effortless cleaning.

Moreover, it was important for the sensors to be able to differentiate dust from smoke, which more or less ruled out traditional smoke detectors.

Dual Function Detection

To meet Delphia's demanding requirements, Gdańsk-based installers PW Janrom chose the Bosch 500 Series Smoke Detectors and installed more than 200 throughout the manufacturing workshops and offices, all connected to a Bosch 5000 Series Modular Fire Panel. Several other peripherals, such as the 420 Series Fire Detectors, have also been installed at Delphia Yachts in less exposed areas.

The 500 Series detectors use a virtual smoke measuring chamber by monitoring two independent light areas in open space. This makes them extremely reliable as the two independent

light areas assure reliable and fail-safe operation. In addition, the detector's lens and software prevent it from reacting to stray light and an anti-masking feature tells the fire panel if the detector lens gets covered. The versions chosen for the Delphia Yachts solution also include a gas sensor for detecting carbon monoxide. A major benefit of this system is that the sensitivity level of the chamber increases when carbon monoxide is detected, making the unit equal to or better than standard commercial photoelectric smoke chambers, while significantly reducing false alarms when the gas is not present.

Maintaining Appearances

In addition, since there is no optical chamber inside the smoke detectors, they do not protrude from the ceiling. So the smooth, flush-mount surface does not gather the usual visible dirt in rooms with high dust build-up, making the sensors easy to clean and saving service time and costs. When the face plate lens does get dirty, an internal contamination sensor automatically informs the control panel that cleaning is required when a certain threshold is exceeded – which is as easy as wiping the flat face plate off with a soft cloth. And if a detector requires more extensive servicing, with minimal effort it can be exchanged utilizing a new push/remove system.

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MACHINE AND SYSTEM SAFETY

Ready to Go?

Machine Manufacturers and Operators Must Be Prepared for the New Machinery Directive



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John McAuliffe
General Manager of
Pilz Ireland

As the European Union has grown closer together there has been increasing harmonisation of laws, regulations and provisions. The Machinery Directive has special significance in terms of the functional safety of machinery. Essentially it defines the standardisation of the European machine safety requirements and, along with other directives, aims to guarantee freedom of movement within the EU. With effect from 29.12.2009, the current version of the Machinery Directive – 98/37/EC – will be replaced by the new version – 2006/42/EC – and there's no transition period. That will mean a number of changes for manufacturers and operators.

According to estimates, approximately 500 million working days plus the corresponding turnover are lost each year in the EU as a result of industrial accidents. Even if industrial accidents occur only rarely when operating machinery, they still entail very high costs in terms of their effect on individual staff, the employer and the company. Studies produced by the Swiss organisation SUVA and the German Institutes BGIA (Institute for Occupational Safety and Health) and BAuA (Federal Institute for Occupational Safety and Health) describe how these major accidents still happen in our high-technology environment, with its strict safety requirements. Their report states that from more than 680,000 accidents involving machinery, 380 were fatal and 25 per cent of the accidents were attributable to manipulation of the safety systems.

Further studies showed that:

- Safety concepts that do not obstruct machine operation are not normally defeated.
- The probability that an inappropriate protection system will be defeated is directly proportional to the benefit that a machine operator expects to achieve from the manipulation.

The new Machinery Directive calls on machine manufacturers to consider the existing hazards and potential manipulations from the outset and deal with them appropriately in the machine design. Effective machine safety depends on compliance with directives and standards and on machine designers and manufacturers co-operating with those responsible for the safety con-

**Practical Example:
Upgrading a Production Line**

An operator wishes to upgrade his production line and put it into service in 2010. The production line will then consist of existing machinery, new machinery and new robot cells; the latter are to be regarded as partly completed machinery. Operators need to access the plant area for the necessary cleaning and maintenance work, and this represents a potential hazard. In accordance with the new Machinery Directive, this production line is to be regarded as an interlinked plant comprising machinery and partly completed machinery. As a result, the operator of this production line becomes the manufacturer, and performs a risk analysis for the entire line. A safety concept must be drawn up in accordance with the essential requirements of the Machinery Directive (Annex 2), and this must guarantee that the control system's safety components provide a safe concept for the entire interlinked plant. As operators have to access the danger zones and not all areas of the production line are visible from the control station, the safety concept must be designed in such a way that the plant will not start if there is a person in the danger zone. This can be guaranteed by new technologies such as the safe camera system SafetyEYE. Once the plant is finished, trained personnel must perform the necessary machinery safety risk assessment and risk estimation and produce the documentation.

cept, as well as machine operators and their supervisors. Pilz has always followed this approach, which incorporates the whole process as well as everyone involved. This approach is also evident in many of the changes in the new Machinery Directive.

Changes in Fundamental Areas of Safety

The new Machinery Directive involves some fundamental changes. These relate to the risk analysis procedure, technical documentation, safety system requirements, conformity assessment procedure and changes for machine manufacturers outside the EU.

Risk Assessment

The process of risk assessment has now been incorporated into the Machinery Directive: the machine manufacturer must ensure that a risk assessment is carried out. Through an iterative process of risk assessment and risk reduction, the manufacturer is called upon to exclude hazards and associated risks by taking the appropriate safety measures. This assumes that the machine's risk assessment is carried out by a member of staff with an appropriate level of technical competence, who is able to perform the risk assessment and risk estimation as intended. Machine manufacturers must guarantee that this process is implemented effectively, record this in the machine's documentation and refer to it in the operating manual.

Documentation

The safe operation of machinery depends on having clear instructions. From 29.12.2009, the machine manufacturer must not only describe the machine's intended use in the technical documentation but also consider each foreseeable misuse. The documentation must be changed on the effective date, 23.12.09. Projects occurring around the time of the effective date will generally need double documentation; at the very least, certificates will need to contain references to both directives.

Control Systems

One requirement of the Machinery Directive is that a failure or fault in the control system must not lead to a hazardous situation. A new feature is that potential "foreseeable human errors" are also considered. The resulting demand for ergonomic operation is to be considered at the safety system's design stage, so that operators do not feel the need to defeat or manipulate the system.

Harmonised Standards

In a new article on "Presumption of conformity", the new Machinery Directive highlights the benefit of achieving conformity through the standards. The standard EN 954-1 that describes the design and application of safety components in control systems is actually scheduled to cease on 29.12.2009. The final decision whether the transition period will be extended for three more



Pilz carries out all the actions and processes required to produce the necessary compliance strategies, safety designs and documents.

(Photo: Pilz GmbH & Co. KG)

years will not be reached before December 2009. To be on the safe side machine manufacturers should apply either of the two standards EN ISO 13849-1 or EN/IEC 62061 to achieve compliance with the new Machinery Directive. The new standards take into account the increasing tendency to use electronic and programmable control systems within safety systems.

New Procedure for CE Conformity Assessment

New conformity assessment procedures have been defined for machinery listed in Annex IV of the Machinery Directive and for "partly completed machinery". Manufacturers of machinery listed in Annex IV can now carry out self certification on the basis of the new, harmonised standards EN ISO 13849-1 and EN/IEC 62061.

Machine Manufacturers

Outside the EU

Machine manufacturers outside the EU who wish to import machinery into the EU must commission a person established in the EU to compile the machine's technical documentation. The easiest way for machine manufacturers without a base in the EU to meet this requirement is to name an "authorised representative". So the authorities have a better way of following the conformity procedure and machine operators have greater security.

Timely, Careful Preparation

The new Machinery Directive shows operators and machine manufacturers a way to avoid serious accidents. In the initial phase, however, the legal changes are bound to cause some uncertainties. As there is no transition period, machine manufacturers and operators as well as manu-

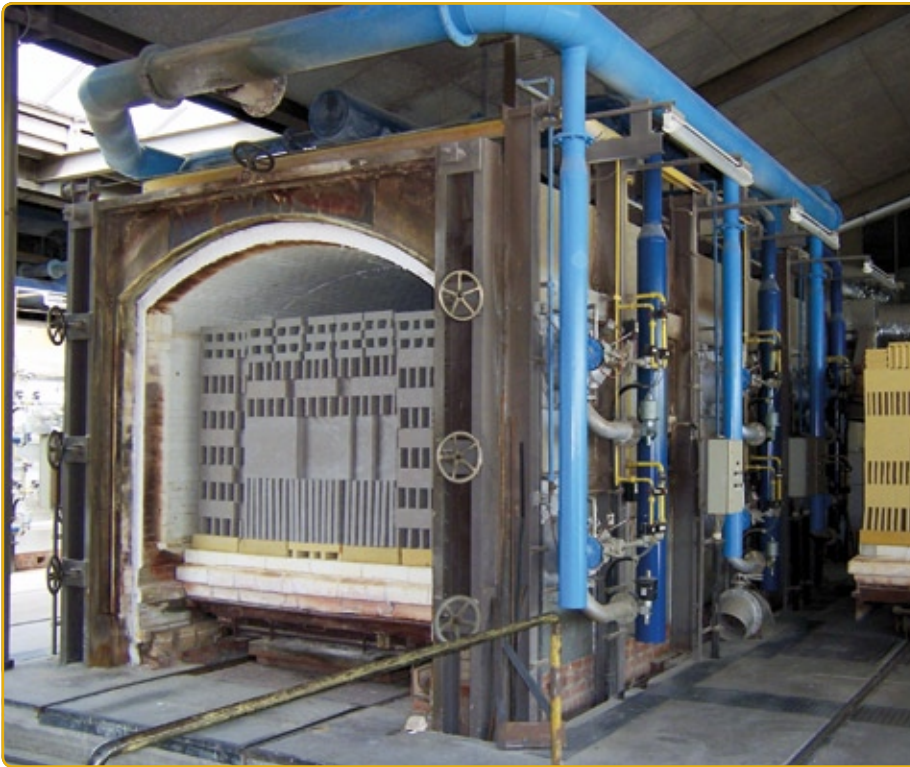
facturers of partly completed machinery must start to prepare themselves now for the amended provisions and procedures. It's also important to consider the new standards such as EN ISO 13849 in parallel.

Pilz provides services in CE marking and certification as well as training. These help machine manufacturers and operators to meet the requirements of the new Machinery Directive and ensure that machinery will comply on 29.12.2009. As machinery safety expert Pilz offers a comprehensive range of services for all phases of the machine lifecycle: from identification of the danger points through to implementation of safety concepts and integration of safety measures. Working together with a company's own technical staff, Pilz's safety experts will guarantee compliance with legal requirements throughout the whole machine lifecycle. Pilz monitors the processes required to generate the necessary compliance strategies, safety designs and documents. As an authorised representative, Pilz takes responsibility for the administrative procedures required by the directive.

SPS/IPC/Drives, Hall 9, Stand 350

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◀ Fig. 1: The dried moulded tiles are stacked on rail-mounted hearth shuttles, pushed into the pottery kiln and then fired at 1000 to 1,400 °C.



MACHINE AND SYSTEM SAFETY

Safety Solutions that Fit European Standards

Retrofitting of Presses to the Latest Safety Standards

In 2008, the family business Kandern Feuerfest GmbH in Germany has finished retrofitting all presses with the latest safety technology from Sweden, in order to reach all over the highest safety category 4 according to EN 954-1, PL e according to EN ISO 13849-1, and SIL 3 according to EN IEC 62061. In addition to the Pluto safety PLC's and BT51 expansion relays, Vital safety modules, Eden electronic safety sensors, Focus light curtains and Smile emergency stops are used. Thanks to the further usability of the existing presses and innumerable moulds (tools) as well as the use of maintenance-free and wear-resistant safety components from Jokab Safety considerable savings could be realised.

Production of Moulded Tiles

After drying, the moulded tiles are stacked on rail-mounted hearth shuttles and pushed into the pottery kiln (Fig. 1), where they are fired at a temperature of 1,000 to 1,400°C. Then follows an approx. 36 hours long cooling-down phase, where programme-controlled fans are blowing cool outside air into the firing kiln. In order to save energy, the hereby generated waste heat is used in the large-capacity drying plant. The finished moulded tiles are finally discharged, palletised and commissioned.

Special Crank and Hydraulic Presses Provide High Quality

The operating processes in the presses are decisive for the quality and dimensional accuracy of the moulded tiles and are based on decades of experience. During the mechanical conception of the presses, the technical manager Frank Szczurek (45) was significantly assisted by the shop mechanic Fritz Renk (52). One of the crank presses is used to compress the moulded blanks and press out the residual air. Already here, the observance of the narrow tolerance of the end measures requires to take into account the

shrinkage which occurs during drying and firing. High productivity is achieved by using a multiple press, which can be operated from both sides and enables either continuous or single-stroke operation. At the hydraulic press, two operators can work at the same time.

Safety Solution from One Supplier

The presses are fully equipped with safety components from Jokab Safety and all of them meet the requirements for the highest safety category 4. Since the presses are also operated by sub-contracted workers, the protection of persons was designed to be particularly safe. The safety control of all equipment (Fig. 2) is performed by the Pluto B46-6 safety PLC's with 46 inputs and outputs in total, some of which are connected to BT51 expansion relays for increasing the number of output contacts and additional inputs are connected to Pluto B16. For monitoring the position of hatches, covers and machine parts, dedicated electronic safety sensors Eden with a dynamic output signal (Fig. 3) are used. Their mounting proved to be particularly time-saving thanks to the high tolerance for misalignment and offset. They replace the formerly used electromechanical limit switches which needed to be replaced every eight months.

The Focus safety light curtains in use have a high resolution of 14 mm and protection heights of 300 mm, 450 mm and 600 mm. Some light curtains are directly monitored by 1 RT9 safety relay each, or muted by an Eden safety sensor and a Vital safety module. For emergency situations, Smile emergency stop pushbuttons with two double NC contacts or a built-in Tina interface have been provided.

Fig. 2: The Pluto B46-6 and Pluto B16 safety PLC's with connected BT51 expansion relays are accommodated in the control cabinet and supervise the safety of all equipment. ▼



Safety PLC System with Additional Functions

The only 90 mm wide Pluto B46-6 safety PLC from Jokab Safety (Fig. 2, left) complies with the highest safety category 4 according to EN 954-1, Performance Level e according to EN ISO 13849-1, and SIL 3 according to EN IEC 62061. Thanks to the technology implemented by Jokab Safety, at a single Pluto input 10 switches can be supervised according to the highest safety level. With the conventional technologies of other safety PLC's, 20 inputs are required for this. Pluto B46-6 has a total of 46 I/O's, 6 of which are individual safe outputs. Moreover, 16 I/O's can be used either as inputs or outputs, and 24 inputs are provided for safety components and other sensors. Since the programming is via the intuitive Pluto Manager software in the ladder diagram, Pluto can be used both for safety monitoring and for controlling smaller machines. An operator panel (Human-Machine-Interface HMI) can be connected directly to the serial interface or to the safety CAN-bus. Using a gateway, the information can be transferred from one Pluto network to other bus systems, such as Profibus DP, CANopen, DeviceNet or Ethernet, thus creating larger networks.

Slim Safety and Expansion Relays

The 22.5 mm wide safety relays BT51T (Fig. 2, right) are intended for the connection of safety components, such as emergency switches, and for increasing the number of outputs. With 4 NO safety outputs, test input with complete internal supervising, and hardwired selectable delay times from 0 to 1.5 seconds, the BT51T is quite unique. The test input is intended to supervise



◀ Fig. 3: The Eden electronic safety sensors have a sensing distance from 0 to 15 mm. Thanks to their large tolerance for misalignment and offset their mounting is totally uncritical.

Photos: Jokab Safety

that contactors or valves have dropped out/returned before a new start can be permitted. The test input can also be used for starting and the start button can be supervised.

Electronic Safety Module Vital

For simpler tasks, the only 22.5 mm wide electronic safety module Vital is used instead of the Pluto safety PLC. Vital forms the heart of a new concept, which makes it possible to install and dynamically supervise many different types of safety devices connected in the same safety circuit and still achieve safety category 4 according to EN 954-1. It also has automatic or manual supervised reset, dual NO safety outputs, an information output for reset indication, and status information for PLC's. The modules have an LED indication of power ON, presence of dynamic signals and output status. Detachable connector blocks make it easy to change a module. Vital can supervise up to 30 Eden or Tina devices. The 2 outputs have a switching capacity of 6A/250Vac/1500VA/150W.

Positive Experiences

Chief electrician Frank Szczurek (45) has been with the company for 16 years and is responsible of all measurement and control techniques at Kandern Feuerfest. Frank is fully enthusiastic about the safety solution from Jokab Safety, as it ensures the highest safety category 4 on all machines and has in no way reduced the high productivity of the plant. Since all presses and the extensive stock of moulds can continue to be used, it was not necessary to invest in new machines and moulds or in long training courses for the operators. The easily mounted, user-

friendly safety components all come from one single source and work totally free of maintenance and wear despite frequent shocks, formation of dust and oil splashes.

In the centre of the safety solution is the Pluto safety PLC with its high functionality and versatility. Whereas many other suppliers charge high prices for the software and every future update, the Swedish manufacturer offers all this free of charge. If contrarily to all expectations the replacement of a Pluto should become necessary, the existing programme is simply and automatically transferred from one active device in the network to the new safety PLC.

Frank also praises the good service and the competent advice from the relatively nearby German subsidiary in Spaichingen as well as the European approvals, the reduced occupation of space in the control cabinet and the attractive prices. Ask for a detailed documentation on the safety components from Jokab Safety with various circuit diagrams.

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Control without Driver

ERP/PPS and inventory control systems such as SAP are usually highly limited in their communication capabilities with respect to standard distributions. Expanded communication possibilities – even simple ones – must be purchased expensively in the form of separate software modules. The W&T ERP-Gateway 2 x Digital enables simple control tasks to be carried out with no special drivers or software. With the patented Wayback procedure, only the generally available FTP protocol is used as a utility. Switching commands are sent simply as part of the FTP login procedure by means of the user name and the password.

www.wut.de



Gas Detection Device

Honeywell announced the launch of Sensepoint XCD, an internationally certified gas detector that offers a number of robust solutions for the detection of flammable, toxic and oxygen gases in potentially explosive atmospheres. It offers excellent flexibility and is suited to a wide range of industrial applications. The device can detect flammable, toxic or Oxygen gases in a 3-wire 4–20 mA format with relay outputs. This wiring configuration makes the detector suited for retrofitting other older generations of the company's gas detectors including the 1050 series, Series 2000 Flammable, the Sensepoint Pro as well as many other models. Suitable for use in both internal and external hazardous industrial areas, the operation of the device can be modified using the LCD and magnet switches without ever needing to open the unit. This enables one man, non-intrusive, operation and reduces routine maintenance time and costs.

www.honeywellanalytics.com



Hand Injuries Reduced

Ansell Healthcare presents enhanced-visibility gloves featuring a water-based coating. The Hyflex11-402 comes in a bright yellow, which offers a stark contrast to its eco-friendly manufactured black coating. These comfortable, flexible gloves are recommended for improving workers' visibility in varying light conditions. The gloves' fingers are ¾ dipped – reinforcing finger protection – in water-based polyurethane. Unlike solvent-based PU, this does not penetrate the glove liner, leaving hands in contact with only a soft, flexible liner. Poor visibility poses a safety hazard to many workers, including builders, airport personnel, watchmen, emergency units, road crew workers, tow truck drivers, longshoremen, container handlers and anyone working in the vicinity of heavy machinery.

www.ansell.eu

Gas Detection Resource

Sensidyne has released a new web site, showcasing their stationary gas detection products to users and sales channel partners globally. It includes information on point gas monitors for toxic and combustible gases, and oxygen; open path gas detection for toxic and combustible gases; and flame detection for hydrocarbon and non-hydrocarbon fires. The web site was developed to assist safety and plant engineers in their quest for solutions to their gas monitoring and flame detection requirements. The focus throughout the design and content population stages was a commitment to quality and easy access to information. Glenn Warr, Sensidyne Vice President, said „the website is critical to providing current and future customers easy access to the information needed to make informed decisions regarding their gas and flame detection needs. This was accomplished by adding an interactive library and database of gas detection resources and application information.“

www.SensidyneGasDetection.com



Signal Data Logger and Network Switch

W & T introduced its Web-IO Digital Logger. Nearly a million switching events over time can be retained in the internal memory, since only the individual switching events with their respective time stamp and not the cyclical process images in a fixed time interval are stored. The six digital signal inputs can be connected to switching voltages of up to 30 V DC. Potential-free contacts may however also be used for driving the inputs. This makes the system suited for operating and machine data acquisition and many other monitoring tasks. In addition to general data logging, 12 alarms can be defined. An alarm message can be sent, depending on configurable IO patterns or a defined number of switching operations, via standard TCP/IP services such as e-mail, SNMP trap or http-request.

www.wut.de



Explosion-proof Version of Trapped Key System

Schmersal Group offers an explosion-proof version of its SHGV-system. The central units of the series for six or ten keys are suitable for use in Ex Zones 1 and 2 (Gas-Ex) or 21 and 22 (Dust-Ex), as are the interlocking devices for the safety guards of the Ex-SHGV type. Furthermore, individual key-operated selector switches (EX-SHGV/ESS), which are certified for the Ex Zones 2 (Gas-Ex) and 22 (Dust-Ex) and which enable interrupting or switching off automatic mode, are available for fitting onto the machine. With these components, the machine builder can set up a robust complete system, which can be operated smoothly. As the safety-relevant information is transferred through the key, no electric signal wires are required – an essential advantage in potentially explosive areas.

www.schmersal.com

SPS/IPC/Drives, Hall 9, Stand 460

Safety Light Curtain with No Dead Zones

A compact, and low-cost Type 4 Safety Light Curtain has been introduced by Banner Engineering. The EZ-Screen LP (Low Profile) provides continuous protection for the entire length of the screen, with no dead zones. Its two-piece design (emitter and receiver) with integrated controls eliminates the need for a separate controller. The curtain is designed for easy mounting and reliable operation on machinery used in a wide range of industries including automotive, electronics and semiconductor, materials handling and metalworking. Screens are available in safety yellow, brushed anodized aluminum for a more aesthetic appearance where yellow is not required, and a nickel-plated ESD (electrostatic discharge) safe housing for semiconductor applications.

www.bannerengineering.com

SPS/IPC/Drives, Hall 7, Stand 351



Light Curtains and Light Grids

Schmersal Group extends its program of optoelectronic safety guards through the acquisition of Safety Control and Safety Protec. These companies, which will trade under the name Schmersal Safety Control, will become the Center of Competence for optoelectronic safety switchgear of the company group. The series, which are integrated as innovations in the program, include the – according to the company – most compact safety light grid in the world for control category 4. Other highlights of the program are designs for very rough ambient conditions or hygiene-sensitive applications, e.g. the SLC/SLG 220 IP69K and SLC/SLG IP69K series.

www.schmersal.com

SPS/IPC/Drives, Hall 9, Stand 460

A+A SHOW

Focus on Gas Detection

New Technologies and the Question of Buying or Renting



GIT SECURITY's editorial team was at "A+A" – trade show for safety, security and health at work – in Duesseldorf to look for the latest news in work safety. One of the exciting issues addressed at A+A was gas detection. Read about some highlights we discovered there for you.

Portable Gas Detection

MSA presented the next level of advanced technology in portable gas detection: The Altair 4X multi-gas detector with "MSA XCell Sensor Technology". The Altair 4X is a reliable multi-gas detector that measures O₂, H₂S, CO and combustible gas. A rugged housing provides unsurpassed durability, including the ability to survive a 6 m drop test onto concrete. "And with

large, glove-friendly buttons and a high-contrast display, the 4X is easy to operate in any work environment, even in low-light conditions", says Nicole Schmitz, MSA's Manager Marketing Communications for Europe. Contact: Nicole.Schmitz@msa-europe.com.

Gas Detection as a Service?

"What do you do when gas detectors go down and you're waiting

for them to be serviced?", Werner Tilling, Managing Director of Industrial Scientific-Winter, asked at A+A in Duesseldorf. "Our product 'iNet' solves these common gas detection problems. It keeps people safe by providing visibility into your alarms, exposure and usage. It keeps gas detectors working without costly and time-consuming maintenance. And you don't have to buy the gas detectors when you subscribe to iNet." For a monthly fee, you can receive Gas Detection as a Service instead. Contact: Werner.Tilling@eu.indsci.com.

Reliable Supply

Now that you've got your gas measuring devices, here is a hint how to manage the storing of your equipment. The Rental Robot by Dräger automatizes the release and return of all safety-related equipment. It makes masks, portable gas measuring devices and consuma-

bles available at any time – without the need for human interaction. The Rental Robot keeps records of how often devices are used and, thereby, supports the material planning process. More information wanted? Contact: christine.reimann@draeger.com

Flexible Toxic Gas Monitoring

Also to be seen at A+A was Vertex M by Honeywell Analytics, a cost-effective and flexible toxic gas monitoring device designed to deliver 8-24 points of detection. Vertex M is optimised for use in a variety of locations, providing the capability to deliver physical evidence of a gas release, using the industry's most sophisticated "proof of detection" technology, Honeywell's Chemcassette. "Vertex M offers all the same benefits as the original Vertex model but comes in a smaller format", said Steve Forrest, Strategic Marketing Leader (EMEA) for Honeywell Analytics, at A+A. Contact: Andi.Thompson@honeywell.com.

Steffen Ebert

WORK SAFETY

Electric Arc Protection from Head to Toe

PWG has launched a High Energy ARC kit made from Nomex that introduces the latest technology in protective clothing against electric arc. The kit consists of a jacket, trousers, hood and gloves that can be used in conjunction with respiratory equipment.

Safety engineers from DuPont production plants recognised the need for a high energy arc kit because of the risks faced by them whilst carrying out operations such as changing switches in electrical distribution systems or maintenance routines in low voltage environments. These could be prone to electrical arc hazards resulting in incident energies of up to 40 cal/cm² and an individual who is not

sufficiently protected may receive life threatening burns. As a result safety managers called for full body personal protective clothing including high performance protection for the head and hands. PWG designed the High Energy ARC kit that features jacket, trousers, a hood and gloves. The kit has been successfully tested and certified as electric arc protective clothing with ATPV > 40 cal/cm². The ATPV indicates the maximum thermal energy to which a fabric can be exposed without the wearer suffering second degree burns. Unprotected human skin may show such an injury when exposed to about 1.2 cal/cm² energy.

Three Layers of Nomex

The material selected to achieve both high protective performance and maximum comfort. A combina-



tion of two layers of Nomex Comfort was selected plus one layer of

Nomex felt. The three layer construction combines high inherent flame and heat resistance with durability and electric arc protection against incident energies up to 40 cal/cm². Despite its high protective performance, the suit allows freedom of movement and can be adapted to the body with Velcro fastenings in the lower end of the back.

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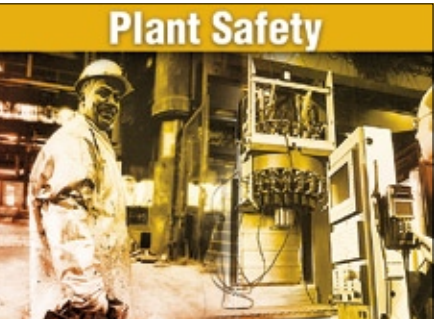
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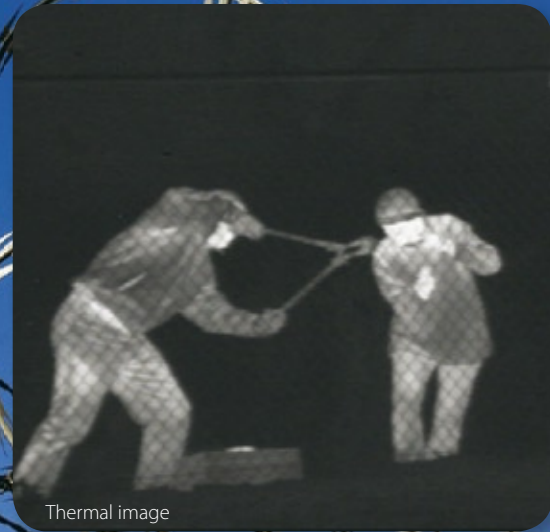
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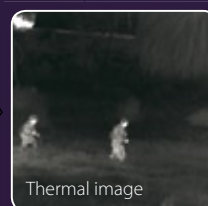
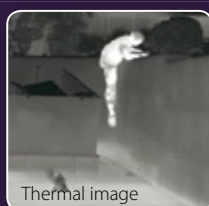
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