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GIT SECURITY

79 824

MAGAZINE FOR SAFETY AND SECURITY

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- Video Analytics

COVER: Bosch
Leveraging the Power of AI

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Dear Readers,

Already the first look at our cover page makes it easy to understand that we are living in the world of IoT and this world is rapidly changing. In our cover story, Thomas Quante, Bosch Building Technologies new CEO, is explaining how his company is benefitting from AIot and how the technology can help their customers in a lot of areas: Cost savings, less false alarms and artificial intelligence are just some examples of what is in for you.

If you need another proof for the presence of IoT, please have a look at the winners of GIT SECURITY AWARD 2022 on page 22. Except for one product in the safety area, all the winner products can be seen as IoT devices. All these products show that the speed of change in product innovation is amazing and there is not much fantasy needed to understand that these products can really help us to cope with the business challenges we face.

There is one aspect that we need to keep in mind in this very dynamic environment. We need to spend more time and thoughts on the interoperability of systems now and make sure that all components in your safety or security system are constantly up-dated. To get this done, new products we buy need to be future-proof. In one of the most dynamic areas, access control, with the rise of mobile and cloud applications, electronic lock manufacturers are facing constantly changing technical requirements for their products. In the article on page 54, Salto is explaining how they make one of their product platforms future-proof with a clever update to accommodate access control needs of both, today and tomorrow. You will find more examples for clever updates and integrations in this issue.

Talking about interoperability: The next edition of Wiley Industry Days, our virtual event, will be held February 15 to 17 with the motto ´Innovation, Sustainability & Interoperability in Safety & Security'. Stay tuned for more information coming soon. The registration for the event is already open via www.wileyindustrydays.com.

Stay safe and enjoy reading this issue!

Heiko Baumgartner
For Wiley's Safety and Security team

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Welcome to the knowledge age

Wiley builds on its 200-year heritage by partnering with universities, businesses, research institutions, societies and individuals to develop digital content, learning, assessment and certification tools.

Wiley continues to share and deliver the answers to the world's challenges helping you to further your mission.

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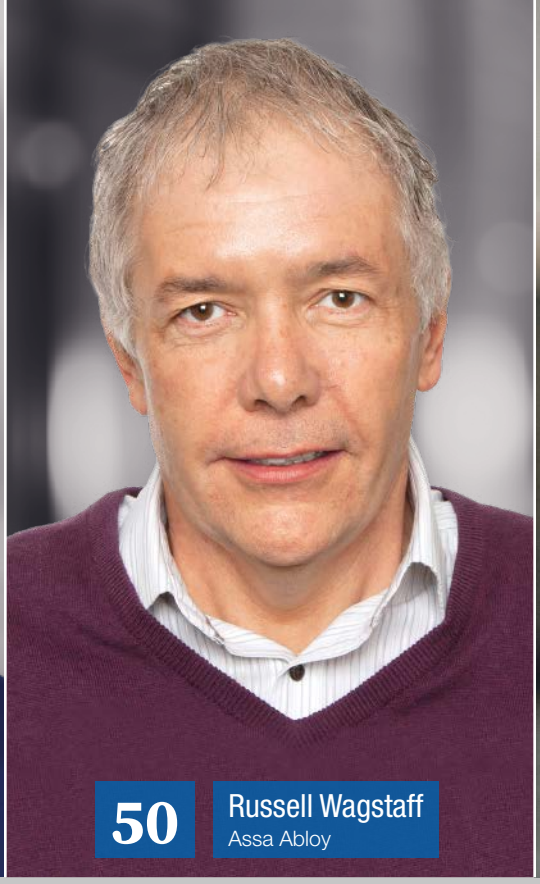
DG Connect/Euralarm



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Peter Clauss returns to IWMA Board

Peter Clauss

One seat on the board of directors of the International Water Mist Association IWMA had become vacant after Erik Christensen of Novenco had retired earlier this year. This seat is now occupied again. During this year's member meeting, Peter Clauss, the sales director for CWS Fire Safety GmbH, was elected to again become a member of the board. Clauss has over 30 years of experience in the fire suppression industry. He has worked for Kidde Deutschland, Marioff, the Wagner Group, Stöbich Brandschutz, Protection One and Johnson Controls International. He is involved in and a member of various trade associations, codes and standards organizations and approval authorities in Europe, the United States and Russia. Clauss was a member of the board between February and August 2020 but left due to a change of employer. During the same meeting IWMA president Are Wendelborg Brandt of RISE, IWMA vice-president Dirk K. Sprakel of Fogtec, Alex Palle of VID Fire-Kill and Henrik Bygbjerg of Danfoss Fire Safety were confirmed in office. So was the chairman of the IWMA scientific council Hong-Zeng (Bert) Yu. **www.iwma.net/home**

inter airport Europe 2021

inter airport Europe, the 23rd International Exhibition for Airport Equipment, Technology, Design and Services, took place from 9–12 November 2021 in Munich, Germany. A total of 332 exhibitors from 29 countries presented their latest developments and solutions for aircraft, passenger and cargo handling, security and airport IT, architectural components as well as ground support equipment at the Munich Trade Fair Centre in Germany. The most important exhibitor countries, besides Germany, are Italy, France, the Netherlands and the UK. At this year's show, visitors saw a comprehensive seminar programme which was organised in partnership with Smart Airports for the first time. **www.interairporteurope.com**

PureTech Systems Announces Successful Integration with Open Options Access Technology

PureTech Systems has announced the successful integration of the Open Options DNA (Distributed Network Architecture) Fusion Access Control Suite into the PureActiv Geospatial Command and Control solution. PureTech Systems develops AI Geospatial video analytics and command and control software products designed to help organizations secure their perimeters around critical infrastructure and country borders. This recently deployed integrated solution provides stakeholders an added level of security by working seamlessly together to monitor and manage a wide variety of perimeter sensors and access control points. Automated escalation ensures handling of critical alarms satisfy regulatory requirements. DNA Fusion takes full advantage of the distributed network architecture model and open platform control panels allowing organizations to monitor and manage several integrated systems through a single common interface. **www.puretechsystems.com**

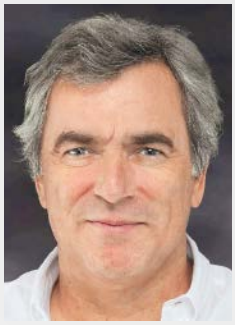
Motorola Solutions to Deploy Nationwide Digital Radio Network for Romania's Emergency Services

Motorola Solutions has announced that the company will modernize and expand the coverage of the existing nationwide Tetra (Terrestrial Trunked Radio) network in Romania to provide the country's public safety organizations with highly resilient and secure mission-critical communications. As part of the seven year framework agreement awarded by the Romanian government´s Special Telecommunication Service, Motorola Solutions will install 800 Tetra base stations across the country. The new digital radio technology will support all police, fire, ambulance and national security services with trusted, reliable communications that will enhance collaboration across frontline teams as they serve and protect the country's 21 million citizens every day. The new network will also provide an interconnection between Tetra and broadband through the next-generation, 3GPP standard-compliant mission-critical push-to-talk Wave solution. **www.motorolasolutions.com**

Hikvision partners with Gurtam to Create Comprehensive Telematics Solution

Hikvision, an IoT solution provider with video as its core competency, announced a new technology partnership with Gurtam designed to integrate its mobile products (cameras/MNVRs) with Gurtam's Wialon GPS tracking platform. This vital integration uses the latest technology to create a solution for logistics and transportation industry customers to enhance efficiency in their fleet operations, while also increasing road safety to maintain high security levels for personnel and for merchandise. Making use of the Hik-DeviceGateway protocol, Gurtam's Wialon GPS tracking platform integrates with Hikvision mobile products to offer a comprehensive telematics solution for fleet operators of buses, trucks and taxis, achieving easier and smarter supervision, scheduling, and emergency response. **www.hikvision.com**

Intersec Appoints New Head of Exhibition



Alex Nicholl

Intersec has strengthened its leadership team appointing expert industry veteran Alex Nicholl as Intersec Exhibition Head. The senior hire is a further demonstration of Intersec's investment in the significant growth of the flagship event that will mark its return in January 2022 by uniting global leaders to discuss the challenges and opportunities within the industry at the highly anticipated event. Nicholl – who has 20 years of experience in the events industry spanning India, the UAE and UK – brings deep expertise to Intersec, having held leading roles at major homeland security, aerospace and defense exhibitions, combined with almost two decades of service as a senior officer with the British Army. Christine Davidson, Group Exhibition Director at Messe Frankfurt Middle East, said: "We are delighted to welcome Alex Nicholl to the Intersec team. With the immense focus on the industry in the last 18 months, Messe Frankfurt recognises that Intersec's importance to the safety and security industry has never been greater, we are bringing the best in the industry onboard to develop the most relevant and comprehensive event for the industry. **www.intersecexpo.com**

Cumbria Police Plan for the Future with Sepura Tetra Radios

Cumbria Police have refreshed their fleet of frontline Tetra radios, deploying Sepura SC21 hand-portable radios to police officer roles and SCG22 mobile radios in vehicles. In total over 1,400 radios have been deployed to enable the force to upgrade to the latest standard of Tetra radio capability. Aware of the need to refresh their radio fleet, the force organised field trials for new radios. Feedback from officers using the new Sepura SC21 Tetra radio was overwhelmingly positive. A vital advantage for the SC21 over the previous Airwave estate being the powerful Tetra engine and receive sensitivity. These combine to allow Cumbria Police officers to maintain Airwave coverage and keep communicating in the county's many rural locations, where less powerful handsets frequently lose coverage. This deployment was further supported by the ability of the SCG22 to act as a Gateway, extending Airwave coverage where it might not otherwise reach and further enhancing the overall critical communications solution. The mobile radio was chosen as it has comprehensive deployment options, including car, van, motorcycle and desk mount options, and shares a common interface to the SC21 meaning officer training is minimised. The transition to the new Sepura devices was undertaken during the Covid pandemic in the UK, with the Sepura team working with Cumbria Police to identify safe and effective ways to support an accelerated transition. This included Sepura supporting the force with a provisioning service, meaning the radios were pre-programmed and delivered to force headquarters ready to deploy. **www.sepura.com**

BSIA: Exclusive Membership Offer Launched to NSI Gold and Silver Companies

The British Security Industry Association (BSIA) have launched a special offer exclusively to National Security Inspectorate (NSI) gold and silver installer companies inviting them to take advantage of the Association's membership and the long-term commercial value of belonging to the recognised 'voice of the professional security industry'. Companies working in the installation and service of fire and security alarms market are invited to see for themselves the five key reasons they should join the BSIA, with the extra bonus of two months free membership for anyone accredited with gold and silver status from the NSI. Mike Reddington, Chief Executive, BSIA, said: "There are many reasons to join a strong and respected Trade Association and our offer to NSI companies is a unique opportunity to become part of a group of high-quality professionals respected and represented to government, end users, specifiers, standards and legislative bodies. "BSIA membership carries weight within tender and contract bidding with many members reporting to us how they have been successful in winning crucial contracts when citing BSIA membership on their tenders. We can also help businesses to futureproof against the challenges and changes that take place in an evolving industry due to our contacts with government, regulatory and legislative bodies. This helps our members stay one step ahead in preparing and adjusting to these changes." **www.bsia.co.uk**

Perimeter Protection For a Famous Luxury Brand Factory In France

A famous luxury brand factory was being built next to the historical one. This huge project included a complete revamping of the security systems starting from the perimeter systems.

Challenges

A fence detection system was specified to protect the first line of defence of the site: i.e. a fence 2.5mt high/1.300mt long. However, as the construction process went on, the integrator Novadis discovered on site that the old fence line would remain around the perimeter of the old factory (which in fact is still running) until the new fence, which is planned to be installed on most of the property, is ready. Moreover, on the street side of the factory, the architect chose a rigid bar fencing structure at the very last minute, that is to say: of a different kind from the rest. A complex application frame for many current fence detection systems with standard features and average performances.

The "Pret-A-Porter" Solution

Thanks to the fence detection system Sioux Pro2 with mems sensors, Cias was able to stick to the original design and to provide a tailor-made solution which adapts to the different types of fences on the site, granting a superior level of detection with the lowest false alarm rates possible. Fuzzy logic algorithms in fact grants customized sensitivity levels, up to the possibility to adjust the single sensor, and 1mt pin-point accuracy in detecting intrusion attempts such as cutting, climbing the fence, and tampering the system. To complete the high-security performance level, Sioux Pro2 offers the redundancy function for cable-cut immunity, a unique feature among peer systems on the market nowadays.

Outlook

According to the project manager, later on, the historic plant will be replaced by a solar farm, at which point the old fence will be replaced with a new one. Unlike fiber optic or microphone cable systems, the advantage of Sioux is that it can be repositioned without damaging the sensors and the cable. Any expansion of the perimeter will be manageable simply by adding the required control units and relevant kits. As Antoine Coudert, Sales Engineer from Novadis, explained: "Cias has done an outstanding job by accompanying us in designing the right solution, making sure the product would be installed in a state-of-the-art manner and by making it work so quickly! It was a very professional set-up and a seamless integration in the global security supervision system." **www.cias.it**

IPS Intelligent Video Software and Sovec Sign Partnership Agreement

IPS, Securiton's technology brand, has its first French solution partner, Sovec Entreprises SA, since 15 October 2021. Sovec is active in the video surveillance market in the north-east of France and installs professional video systems to protect its customers' facilities. Alain H. Benoit, Partner Manager EMEA at IPS says: "SOVEC has an excellent reputation in the industry and we are delighted to have such a competent company as a partner, which is an ideal fit for us." With its well-known IPS VideoManager VMS software, IPS was also a good addition to SOVEC's offering. The state-of-the-art VMS with twelve integrated video analytics for perimeter protection of high-security sites, known throughout Europe for its extreme reliability, will now also be available to French customers in the future. The first measures of the partnership are the intensive product training that SOVEC will receive from IPS by the end of the year. **www.securiton.de**

YMCA Protects 'Heart Of England' Facilities with Idis

YMCA Heart of England has upgraded video systems across its busy community facilities in Birmingham, Solihull, Rugby and Coventry with a roll-out of end-to-end DirectIP technology from Idis. Part of the international YMCA movement, YMCA Heart of England supports local people, including vulnerable groups, with services from housing to youth services. Systems integrator Unison Integrated Technology was asked to replace YMCA's poorly performing mix-and-match systems, incorporating elements from different vendors, with more efficient end-to-end technology from Idis, Korea's largest in-country video manufacturer. YMCA selected Idis because the single-source model offers advantages including assured compatibility and ease of installation, lower up-front costs, ongoing tech support and long-term value, all ensuring lower total cost of ownership (TCO). At the YMCA Birmingham centre, for example, the inefficient video has been replaced by an Idis DirectIP solution comprising a 32-channel NVR; 19 Full-HD vandal-resistant IR domes; and 11 Full-HD IR bullet cameras. **www.idisglobal.com**

iLoq in Cooperation with Pohjola Rakennus

iLoq has signed a framework agreement with Pohjola Rakennus Ltd. under which iLoq's locking solutions will provide a modern and intelligent customer experience and added value to Pohjola Rakennus' customers. "The cooperation demonstrates that the benefits of digital access management are recognized and understood throughout the housing value chain. iLoq's self-powered access management solutions combined with integrable systems will make the everyday life of more and more key users easier," states Toni Päivinen, sales director, iLoq. "We are constantly improving our customer satisfaction and looking at ways to improve our customers' everyday lives. In the future, more and more residents will be able to enjoy the security and convenience of digital access management. The flexibility and integration possibilities of the digital system will create significant added value for residents in the long term," explains Risto Vihinen, Procurement Manager from Pohjola Rakennus. **www.iloq.com**

Southwest Microwave Names Don Bradfield as President

Southwest Microwave Inc., a globally active provider of outdoor perimeter security technologies and microwave interconnect products, has appointed Don Bradfield as president by the company's board of directors, effective immediately. Based at the Tempe, Arizona headquarters, Bradfield will oversee domestic and international operations of the Security Systems and Microwave Products Divisions, including Southwest Microwave, Ltd., located in Worcestershire, UK. He has more than 30 years of design engineering and operations management experience in the RF / microwave / mm Wave products industry. "It is my distinct honor to receive this new appointment," said Bradfield. In his previous role as general manager of the company's Microwave Products division, Bradfield expanded the manufacturing operation, introduced a range of high-frequency connectors for specialized aerospace and military applications, and oversaw NIST and ITAR compliance initiatives. **www.southwestmicrowave.com**

Senstar Celebrates 40th Anniversary

Senstar, a video management, video analytics and perimeter intrusion detection systems (PIDS) supplier, is celebrating 40 years since its incorporation in 1981. Headquartered in Canada's capital city, Ottawa, Senstar was established with the objective of bringing security technologies originally targeted for military applications to the commercial market. Initially a seven-employee company, Senstar now has employees and service centers around the world. Its market-leading products are found in more than 100 countries at tens of thousands of sites. "The past few years have been particularly significant for Senstar, with the addition of video management, video analytics, and access control technologies to our already extensive perimeter intrusion detection (PIDS) product portfolio," said Chief Technology Officer Jeremy Weese. "Having such a wide range of products has allowed our engineering teams to develop innovative, multi-layer security solutions that address and solve key problems." **www.senstar.com**

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RELEASE 2022

ergo-X
Outdoor Keypad

ergo-X keypad is the new user interface for lares 4.0 control panels, it is connected to lares 4.0 via the KS-BUS. The keypad case is compliant with IP65 protection degree so that it can be installed outdoors but its minimalist and simple design is also suitable for any residential or commercial type of environment.

ergo-X keypad hides the keys when it is in idle state, they light up by approaching the hand thanks to an integrated proximity sensor. It also integrates an RFID Tag reader to read Ksenia mini-tags, a multi-color LED is lit of the color related to the status of the system and to the scenario set up, feedback sound on keypress and operations. It can be configured as I/O from Ksenia Pro installer App.

DESIGN

IP65
OUTDOOR/INDOOR INSTALLATION

SMART HOME ACTIONS

AUDIO FEEDBACK ON KEYPRESS

RFID TAG READER

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EVENT

Back To Dubai

Intersec Will Mark its Return at Dubai World Trade Center from 16 – 18 January

Intersec 2022 aims to build on the success they had in 2020 with an elevated new program uniting global and regional leaders as they explore solutions for the rapidly evolving challenges facing the industry. In addition to the exhibition and the conference, visitors will see Cybersecurity and technology take centre stage, along with some of the world's best speakers in the UAE for the first time.

The 23rd edition of the event, under the patronage of His Highness Sheikh Mansoor Bin Mohammed Bin Rashid Al Maktoum, will be staged under the theme of 'Uniting the world's leading industry specialists for the safety & security of future generations.' The first industry gathering of 2022 aims to bring the entire ecosystem of emergency services, security and safety together at one time. Demonstrating Intersec's strategic importance to the UAE, long-standing Official Supporters include Dubai Police, Dubai Civil Defense, Security Industry Regulatory Agency (SIRA) and Dubai Municipality.

The Exhibition

Intersec's innovation and technology focus will include its Cyber Lab offering a vital platform for knowledge. Organizer Messe Frankfurt has worked closely with industry stakeholders, from both the private and public sector, to develop an event that reflects both their current and future needs that offers attendees bespoke platforms to gain expert insight on future capacity and capabilities.

Christine Davidson, Intersec's Group Exhibition Director, said: "There has never been such an intense focus as there is today on the security and safety industry which has been at the frontline of protecting the world's communities over the last 18 months during this time of significant global disruption. Having invested heavily to deliver an outstanding program that will address the sector's most vital issues and opportunities, Intersec 2022 brings the industry together at this crucial juncture to share knowledge from recent experiences and look to the future with the event's most powerful series of conferences including multiple platforms for strategic G2G, G2B and B2B discussions and deep dive sessions into key sector verticals."

Ms Davidson added: "The phenomenal development in the framework of the show will see the best minds in the industry come to the table with the most content-rich program ever seen at Intersec. We have the most comprehensive line-up of international and regional speakers, dynamic networking opportunities, coupled with world-class exhibitors to bring the most relevant value to Intersec's attendees. We have built a world-class team to deliver this event and over the coming weeks we will be sharing further details of our elite speakers and conference program that will demonstrate the extraordinary value of the event to our attendees."

Seen as a nexus for the industry, Intersec plans to bring together thousands of its most powerful stakeholders for bilateral government and business discussions on mitigating and addressing vulnerabilities of the future. They will be joined by leading regional and international brands exhibiting innovative systems and solutions in a dynamic environment that will enable face-to-face and virtual exchange through interactive roundtables, workshops and 'closed-door' confidential conversations.

Cyber Security is one of seven product sections at the annual event, joining Commercial Security;

PERIMETER PROTECTION

International Exhibition for Perimeter Protection, Fencing and Building Security

perimeter-protection.de

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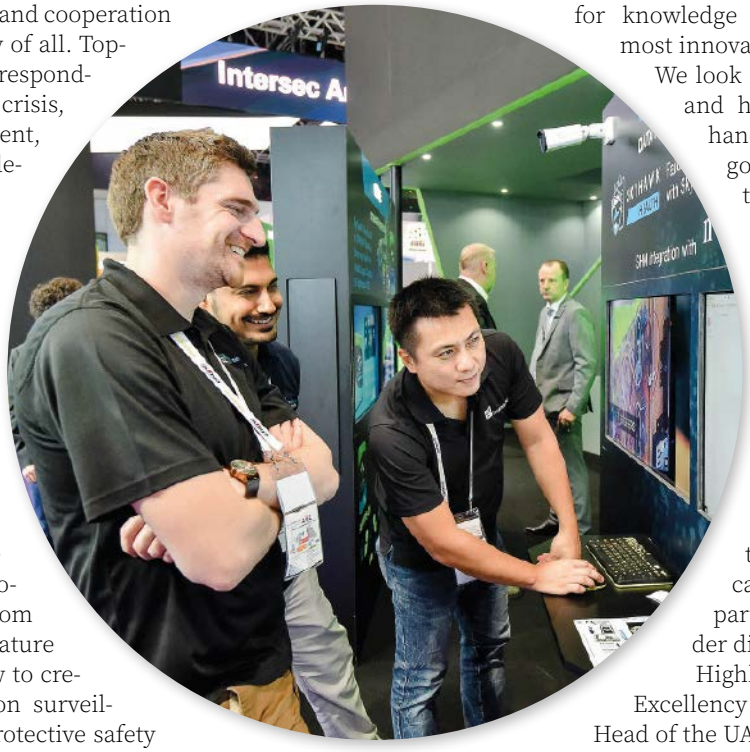
Intersec Conference

In 2022 Intersec conference promises a unprecedented 3-day conference program with six content pillars targeting emergency services, security, and safety professionals. Each of the six pillars features its own dedicated conference, packed with new content material and speakers, offering attendees a platform to benchmark, innovate, collaborate, ideate, and be inspired. The conferences which will run simultaneously between the 16 – 18 January 2022, include:

- 'Global Security Leaders Summit' – a hard-hitting summit featuring global security leaders discussing, debating, and exchanging perspectives on global security challenges, strategic initiatives, and cooperation to foster safety and security of all. Topics to be featured involve responding to national shifts and crisis, the future of law enforcement, and leadership in civil defence among others.
- 'Protecting Future Connected Cities and Citizens' - brings together global government leaders, municipalities, policymakers, consultants and technology experts to communicate, share ideas and identify solutions required to create and maintain safe and resilient cities using the latest cutting-edge technologies and best practices from around the world. It will feature case studies, demos on how to create safe venues, insights on surveillance tools, principles of protective safety and more.



- 'Agile First Responders Conference' - a direct reflection of the industry's most pressing issues, the conference will cover best practice, shared learnings, innovations, tactics and strategy for planning & preparedness, operations and emergency response, resilience & business continuity planning and technical rescue while looking at the industries state of the art technologies to protect lives and assets. Topics in the spotlight include emergency planning and preparedness, operations & emergency response, best practices to manage risk among many others.
- 'Nexus Workshops' - provides emergency responders an opportunity for practical benchmarking and knowledge exchange on drills, policies, procedures, and practical training and will cover the before, during and after of incident management.
- 'Safeguarding Critical Infrastructure' – a forum to identify potential threats to critical infrastructure, building security and smart construction. Dubai has identified 11 critical infrastructure sectors, this conference in particular has been designed to highlight defence, preparedness, and response strategies for each one.
- 'Kingdom of Saudi Arabia Focus Day' – this focused program presents Saudi Arabian mega projects, planning and strategy. Project leaders, government stakeholders and experts will share exclusive insights into the current challenges and opportunities presented by the rapid expansion of the region's largest market.

Commenting on the outstanding program, Alex Nicholl, Messe Frankfurt Middle East's Head of Intersec, said: "For 22 years, Intersec has been renowned for being the only event in the region which brings the entire ecosystem of emergency services, security and safety together at one time. This elevated conference program is a strong sign of our commitment to ensuring that those who attend derive clear value from the show, by having the ability to immerse themselves and contribute to conversations that will shape the future of the world and their respective industries. The industry is going through exponential rapid change, Intersec 2022 is meeting the demand for knowledge sharing and presenting the most innovative solutions for the industry. We look forward to welcoming visitors and having them experience firsthand the immense work that has gone into making this edition the most compelling show yet."

Cybersecurity and Technology

The UAE Cyber Security Council has announced a strategic partnership with Intersec to introduce the first ever Cyber Security Lab at Intersec 2022. The new Cyber Security Lab was developed to focus on investigative techniques, forensic capabilities, and public-private partnerships to prevent cross border digital terrorism.

Highlighting its importance, His Excellency Dr. Mohamed Al Kuwaiti, Head of the UAE Cyber Security Council, will be inaugurating the Cyber Lab conference. His Excellency said: "The Cyber Security Council aims, during its participation in the global event, to shed light on the UAE's innovative and advanced initiatives in cybersecurity and the country's efforts to establish effective global partnerships, exchange experiences, and unify global efforts to address cross-border cyber-attacks to enhance global digital security."

The cyber program will include discussions on rapid changes in the industry, key trends and the growth in emerging innovations and technology advancements. An innovative line-up of live activities including an interactive three-day hackathon will include some of the region's most ambitious students and exciting Start-Up's. Also new to the program is the Intersec Cyber Awards recognising global and regional talent. A significant focus on diversity in Cyber Security will feature throughout the program, plus the role of education and academia in growing talent.

CONTACT

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EVENT

Inside the Perimeter

Europe's Largest Exhibition for Video Surveillance, Access Control, Fence Technology, Building Security and More Opens in January

From 18 to 20 January 2022, international experts in perimeter protection, fencing technology and building security will gather for what will already be the seventh round of Perimeter Protection in Nuremberg. Designed in partnership with leading industry associations such as the VfS (Association for Security Technology) and the Quality Association for Metal Fence Technology, the exhibition is a perfect fit for the needs and aspirations of the security industry.

Expanding into two halls, the exhibition will present the latest trends in fences and fencing systems, electronic alarm systems, and drone detection and defense. Frank Venjakob, exhibition director of Perimeter Protection, is satisfied with the number of registrations and feedback from exhibitors so far: "Despite the ongoing pandemic, there is immense anticipation and optimism about the trade fair. Our exhibitors are still very keen to meet and interact face-to-face." The event is being planned in line with the local safety and hygiene regulations currently in force.

Early warning of approaching drones/UAVs and defensive measures can prevent significant financial loss

Expert Forum with High-caliber Presentations

The accompanying forum, at which high-caliber speakers will present practical solutions, offers attendees plenty of opportunities for professional knowledge-sharing and discussions with experts over the three days of the event. The forum is being organized in partnership with the VfS (German Association for Security Technology), UAV Dach (German-speaking Association for Unmanned Aircraft) and CURPAS (Civil Use of Remotely Piloted Aircraft Systems) and is an ideal complement to the exhibition.

These forum highlights have already been confirmed:

- The smart gate as part of your security concept
- The latest on the standards for doors and gates; status and outlook
- Drones: improve your security concept with dynamic systems
- Drone detection: key outcomes from a field trial

Greater Reach for Drone Technology

The integration of U.T.SEC@Perimeter Protection as a new platform within Perimeter Protection serves as an extension of the established special display

Drone observation methods are becoming ever more effective

Forum at Perimeter Protection 2022 – Excerpt from the Programme

- 15 different video analyses in comparison (Markus Piendl and Rene Steinkeller)
- Drone detection, spotlights from a field trial (Hans-Peter Stuch, Franhofer FKIE)
- Penetration protection of glass (Gerald Lomp, formerly with the LKA Niedersachsen)
- The complex requirements for the protection of access roads (Christian Schneider, technical expert, Initiative Breitscheidplatz)
- The latest on the standards for doors and gates, status and outlook (Matthias Demmel, PfB Prüfzentrum für Bauelemente)
- Standard for external perimeter security systems – Part 7, Code of Practice (Jürgen Schiller, CEO Plan E)
- Presentation by Michael Wieland (UAV DACH Association for Unmanned Aviation)
- Air law for the operation of UAVs to provide security for industry (Christopher Klann, Luftfahrtbundesamt)
- Requirements for modern fence detectors (Sam Berlemann, Berlemann)
- Drone detection at critical installations (Jan Peter Schween, Dedrone)
- The legal situation for the approval of drone flights on the basis of practical examples (Josef Metz, U-Rob)

Practical solutions to everyday perimeter protection problems will be discussed in the accompanying forum

area for drone detection and neutralization. It covers the various technical, legal and practical aspects of detecting, using and neutralizing drones and other unmanned technology and represents the future topic of unmanned vehicles with a focus on their use by security authorities. Security-relevant topics around unmanned technology will be presented and intensively discussed at the U.T.SEC conference.

The organizers have provided plenty of information on the event website about getting to Nuremberg and where to stay: www.perimeter-protection.de. Here you can also purchase entry tickets in advance. Ticket sales and the voucher redemption will take place exclusively online – the tickets are available on mobile devices, allow contactless access and assist the health authorities in their task of ensuring a safe event.

Photos © NuernbergMesse: Thomas Geiger / Heiko Stahl

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2 Questions for…

… Frank Venjakob, Director Perimeter Protection

GIT SECURITY: Mr Venjakob, how has the nature of Perimeter Protection developed over the last few years?

Frank Venjakob: Perimeter Protection has certainly developed significantly over recent years in the subject of electronic security. According to the exhibitors, the growth here was around 15% compared to the previous event. This confirms once more that the combination of mechanical, electric and electronic protective measures, as well as the subject of combatting drones, rounds off the security palette at this trade fair. The Forum, which holds numerous presentations full of useful tips and the experiences of respected industry experts in store, will greatly enhance the content available at Perimeter Protection and will thereby contribute to an exchange of knowledge. As from 2022, the U.T.SEC – the Summit for Drones, Unmanned Technologies and Security – will be integrated into Perimeter Protection in a special area. It concentrates on the technical, legal and practical opportunities for the use of and protection against drones and other unmanned technology.

In your opinion, what effect will the continuing pandemic have?

Frank Venjakob: We have been allowed to open trade fairs again since August 2021 and we have already successfully passed the practical test of doing this with the Fach Pack, it-sa, Feuer Trutz and Kommunale events. Our trade fair venue is well prepared. The NürnbergMesse has developed a sustainable hygiene plan together with the Bavarian state government and the Bavarian trade fair companies that enables a safe visit to Perimeter Protection. We are very optimistic because we have already seen that trade visitors who are interested in these subjects are coming to the events.

COVER STORY

Leveraging the Power of AI

Bosch Building Technologies' CEO on AIoT, Market Challenges and Green Deal

In June, Thomas Quante took over as president of the Bosch Building Technologies division. Before that, he has already been a board member for the division with responsibility for the international system integrator business as well as for the fire alarm systems business within the global product business. Prior to that, Thomas Quante was heading the communication systems business unit of Bosch Building Technologies in Burnsville, USA. Since 2019, he is also an appointed member of the managing board of directors of the ZVEI association. GIT SECURITY had the opportunity to talk to Thomas Quante about his start as CEO and the future of Bosch Building Technologies within the security industry.

Mr. Quante, you started your CEO role in June 2021. What is your motivation each day when you drive to work?

Thomas Quante: First of all, as a supplier of security, safety and building technology, we are in a great market environment: the demand for safety, security, comfort and energy efficiency will continue to grow in the coming years. My motivation is to enable us to seize the opportunities this presents for our customers and our company and to continue our success story. With our products and solutions, we make a great contribution to the environment and help people feel safe and comfortable in commercial buildings and public spaces. We help protect human lives, build-

ings, and assets. That in itself is worth getting up for every single day. That's what drives me – and our associates – to show a high level of commitment every day for our customers, partners, and our company. Bosch Building Technologies' mission statement, "Building solutions for a better life", reflects this excellently.

With Bosch, we have an owner at our side who supports us in our long-term strategy. As one of Europe's largest foundations associated with a private company, a large part of operating profits flows back into the company to drive innovation. A yearly dividend goes to the Robert Bosch Stiftung and benefits social projects and thus the common good. Developing the business further on this basis is very motivating for me.

Last but not least, we have a great team across all divisions. A company's people are what define it, and Bosch Building Technologies is no exception. Every day, I look forward to working with our associates, customers, and partners as well as exchanging ideas with my colleagues on the board of management.

What are your strategic priorities for the coming years?

Thomas Quante: When it comes to our strategic priorities, we make these assessments very close to the market. What are the trends, what are the current and future needs of our customers? These are the questions we consider every day.

The most important topics here are connectivity and digitalization. Against the backdrop of digital transformation, which has been strongly accelerated by the Corona pandemic, I see great opportunities for our company: through the interaction of Artificial Intelligence (AI) and the Internet of Things (IoT) – we are talking about AIoT here – we can generate added value for our customers with innovative, connected products and digital solutions. Driving these topics forward is a high priority for me. The topic of digital services also falls into this area. In our system integrator business, we have the direct customer interface and see exactly what the customer needs. This puts us in an excellent position to further expand our digital service offering in the coming years. To make this happen, we have also launched an internal accelerator program: ambitious, young employees act as intrapreneurs here and are 100 percent dedicated to building a new digital service offering.

Could you provide an example of one of your digital service offerings?

Thomas Quante: One example is the "HVAC Performance Analyzer" – a digital service for HVAC systems, meaning heating, ventilation and air conditioning systems. This ranges from analytics and monitoring solutions to IoT services that can improve the energy efficiency of the HVAC system.

Which brings me back to the subject of trends. There are other trends that are highly significant to me as they have a big impact on buildings as well as on the people who live and work inside of them. Here, the topics of sustainability and CO_2 footprint are particularly important. Buildings need to become smarter in order to reduce CO_2 emissions. There is also a growing need for comfort, safety, and security, with new working environments emerging. All this has an impact on buildings. We are already actively shaping this segment and continue to work on innovative products and solutions that generate added value for our customers and thus ensure greater energy efficiency, comfort, safety, and security.

In a nutshell: There are numerous exciting challenges for our company. And this leads to a large potential of the kind of innovations that we offer and continue to advance.

You already mentioned the term AIoT. Bosch is promoting this topic across all divisions, meaning the connectivity of physical products and the application of artificial intelligence. Can you tell us more about this with regards to Building Technologies and your progress here?

Thomas Quante: AIoT is a very important topic for the Bosch Group overall, as our cross-divisional collaboration attests. Internally, we call this "Leveraging the Power of Bosch". Bosch employs 34,000 software developers worldwide. That alone shows the level of

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relevance. The catalyst for the group-wide application of AIoT at Bosch was the establishment of the "Bosch Center for Artificial Intelligence" in 2017. The center currently employs around 300 experts at seven locations working on more than 180 projects and supporting the business sectors in the development and application of AI. We at Bosch Building Technologies are also benefitting from this.

When it comes to security and building technology, we want to use AI to empower our customers to attain a better understanding of events and to be able to anticipate future events. This allows them to act predictively. Let me provide two concrete examples: in the area of "Video Surveillance as a Service" (VSaaS), we have developed a digital AI service in the cloud that significantly reduces false alarms from cameras. This allows security operators to better focus their attention on actual threats. Further, our "Aviotec" fire detection system is also a great example of AIoT. It provides video-based fire detection that uses AI algorithms to enable reliable early detection of flames and smoke.

Can you give us examples on how your customers benefit from these developments?

Thomas Quante: As part of our VSaaS offering, we are able to minimize costly false alarms in video security systems from Bosch or third-party providers. We can also better detect and identify people and objects. In addition, Bosch cameras can be configured and maintained fully remotely. So, all in all, VSaaS is an efficient and cost-saving solution that contributes significantly to more security. We are currently preparing for the 2022 launch of our VSaaS offering, including alarm verification in the cloud for perimeter protection as the first AI use case.

Thanks to AI algorithms, our video-based fire detection system Aviotec detects a fire directly at its source. In doing so, Aviotec works reliably within seconds. This technology is helpful, especially in high rooms, where it would take a long time for smoke to rise to the conventional detectors, as well as for highly flammable material such as pulp and paper. That's why Aviotec ensures particularly fast and reliable fire detection in aircraft hangars, paper mills and warehouses where packaging material is stored, for example.

Overall, the more data available, the more AI can do. Hence, further advancements of AI will be provided with software updates. Our AIoT products and services thus receive new functionality remotely and thereby always stay up to date, serving the interests of our customers and the environment.

Bosch is an expert in the sensor business across all industries. Where do you see the strengths of video as a sensor and how do you use Bosch's expertise in sensors for your division?

Thomas Quante: The Bosch Group has been developing intelligent video sensors for the automotive sector for many years, where they are currently used in driver assistance systems and automated driving applications. We apply the same technology in our security cameras, bringing artificial intelligence to applications for our customers. Thanks to the use of AI, video cameras are transforming into intelligent, context-sensitive

sensors that can understand what they are seeing. The underlying AI algorithms developed by Bosch are key components, for instance in intelligent traffic systems, critical infrastructure, and the manufacturing industry. Far beyond mere security applications, our cameras can be used for intelligent queue management at airports, for example, ensuring shorter waiting times, compliance with hygiene concepts, and efficient personnel planning. The AI algorithms are already integrated into Bosch cameras out of the box. The data is processed directly "at the edge" – on the raw video stream of the camera sensor – and therefore does not require a central analytics server. This saves time and resources, thus ensuring an efficient and cost-saving solution.

As you already mentioned, Bosch Building Technologies is not only providing products but is also active as system integrator in certain countries. How do these two entities benefit from each other?

Thomas Quante: Compared to pure product providers, we enjoy the great advantage of having a direct customer interface and thereby understanding customer needs and use of our products and systems. Our product and our system integrator businesses work closely together. I plan to intensify this cooperation even further in the future.

Customer feedback, or user experience, flows directly into our product development. And I mean this in two respects: on the one hand, the needs of the end customer, and on the other hand, the needs of the system integrator. Through our system integrator, we are in turn also our own customer, allowing us to analyze our products in everyday use in the field across their entire lifecycle.

Our system integrator, on the other hand, also benefits from the optimized products. Take, for example, the important topics of "Ease of Installation" and "Ease of Use," which are particularly important to us. Moreover, we are not only interested in product quality, but also in quality throughout the entire life cycle, in other words efficiency in operation and maintenance – which, by the way, also contributes to sustainability. This also includes backwards compatibility, which is very important for many customers. That is why we focus on the installed base at our customers in all our development projects.

I would like to mention another very important point: we are only active in selected regions with our system integrator business. However, our worldwide integration partners naturally also benefit from our own system integrator business, as they receive solutions from us that have already been tested in practical use.

There are a lot of interesting initiatives in the market regarding green buildings, sustainable building management and energy efficiency. What is your approach in this field?

Thomas Quante: Energy efficiency and sustainability are key topics for us. As you probably know, the Bosch Group has set itself ambitious goals – and has been climate-neutral since spring 2020 as the first multi-national industrial company with more than 400 locations worldwide.

We have made an important contribution to this climate-neutral position with the "Energy Platform" from Bosch Building Technologies. The Energy Platform is a comprehensive cloud-based application that uses a customizable management dashboard to analyze energy data in real time, helping to track and optimize energy consumption. For example, intelligent algorithms predict energy consumption and prevent peak loads. The Energy Platform is already in use at more than 120 Bosch plants and sites. Across all of these projects, up to 100,000 data points are currently being tracked to determine key figures that can be used to optimize energy consumption. For instance, our Bosch plant in Homburg, Germany, was able to reduce carbon dioxide emissions by 6,700 metric tons, or 12 percent, in the first two years after implementing the Energy Platform. The success story extends beyond the Bosch organization: the Energy Platform is currently also saving energy for external customers in more than 80 projects.

In addition to the industrial sector, the building segment itself accounts for a significant proportion of global greenhouse gas emissions, currently estimated at around 40 percent. This is where we come in. In recent years, for example, we have expanded our portfolio in the direction of building automation through acquisitions in the U.S. and Germany. For us, building automation represents a growth area, and we want to help our customers with intelligent solutions to become more energy efficient. We offer various solutions such as automatic presence control, intelligent indoor air conditioning and ventilation control, intelligent lighting and automatic sun shading control. They allow our customers to optimize their building operations and directly benefit from cost savings while conserving resources and making their buildings 'greener' overall.

We are currently encountering significant tailwind from political frameworks in terms of sustainability. Along these lines, the European Union's "Green Deal" with the ambitious goals of reducing CO_2 emissions unlocks opportunities that we are keen to explore. We are also strongly involved in ZVEI, the German Electrical and Electronic Manufacturers´ Association, where I am a member of the Executive Board. In our new 'Platform Buildings', which is an initiative bringing together building-related sectors organized in the ZVEI, our experts from Bosch Building Technologies and Bosch Thermotechnology play key roles. Through the ZVEI, we not only foster exchange with colleagues from other sectors, but also encourage a dialogue between industry, politics, and other stakeholders regarding the requirements for modern and sustainable building technologies.

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SECURITY MANAGEMENT

Next Generation PSIM

Introduction of BKS Connect – Gemos advanced PSIM and Gemos Access

One of the key advantages of a connected Physical Security Information Management (PSIM) solution is the centralization of security sensitive information and the managed control of critical safety systems across multiple sites. The next generation of the Gemos advanced PSIM is technically mature and is based on well proven redundancy features and a real-time synchronization of alarms and event messages across multiple company locations.

The new product generation of BKS Connect – Gemos advanced PSIM and Gemos access were introduced at the official opening of the new BKS showroom "BKS Connected Worlds" in Velbert, Germany, on November 3rd. The international introduction to the market will follow in Offenbach/Germany, Dubai/UAE and in Poznan via the Polish partner Co. Ela-compil. At Intersec 2022 in Dubai in January, the product updates will be presented to a broad audience.

Gemos advanced PSIM

Gemos advanced PSIM looks back on a series of far-reaching developments that bring it to the level of 'Generation 5' (Gemos 5) with some fundamental extensions of the application scope. There are several product enhancements planned for 2021/2022 including:

Video Module

The newly developed HTML5 video module provides native support for HTML5/WebRTC video streams in several video-related operations and management. As a 100% web-based Gemos advanced PSIM, a number of browsers are used as active clients. Therefore, a change in browser technologies has an immediate impact on changes and developments of Gemos. It became necessary to follow the replacement of the previous OCX based technology and to replace it with a new one. With the new HTML5 video module Gemos adv. PSIM is now future-proof and technology-independent. The new video solution provides an interconnectivity platform for all types of VMS systems, regardless of whether the VMS supports new formats or not. To this end, the Gemos video solution also provides an integrated latest generation proxy server.

Cyber Security

The new cyber security concept provides comprehensive cyber protection:

- TLS 1.3 - AES256 encryption is used by default according to BSI specifications to secure communication between system components (e.g. servers, workstations and Gemos interfaces)
- Physical separation of Gemos networks and customer networks
- Platform and vendor independent browser based client application with highly encrypted server connection (HTTPS)
- Server-side protection and monitoring of application configurations and data against unauthorized changes
- High-availability server solution for maximum operational security and automatic switchover to backup systems
- Encryption of the relational database with the AES256 encryption standard

> *Both platforms can be synchronized back into one system at any time.*
>
> **Fedja Vehabovic,** Head Of International Sales at BKS GmbH

- Regular IT security checks by external bodies (penetration tests, security audits and independent certifications)
- Protection of the relational database against unauthorized access
- Product LifeCycle Management

Visualization

Gemos gets a new multi-layout and multi-function module called 'Mosaic'. This new multi-functional PSIM module provides various building layout visualizations, functions and operation options. It is possible to display multiple buildings on a site (e.g. airport, prison, military, campus, etc.) with support for multiple lay-out standards and formats. The easy navigation allows to zoom into available building layouts, including a simple floor navigation. The display of video pop-ups and a video playback functionality are possible in conjunction with the VMS systems and connected video cameras depending on the VMS integration. Other options are:

- On/off functionality for individual and grouped sensors including layers.
- Definition and activation of alarm areas within building layouts using only a PC mouse
- Control of door functions including evacuation (when GPS devices are integrated)
- Tracking of GPS controlled objects (when integrating GPS devices)
- GIS module with multiple GIS formats supported

In addition Gemos 5 offers a modern, redesigned GUI, includes a next generation SQL database, a new redundancy solution and a new enterprise concept.

Gemos Access

Gemos adv. PSIM and Gemos access for access control are both 100% web-based and share the same core and data base. PSIM and Gemos access simultaneously provide a logical, system-integrated solution with PSIM and access control system architecture.

The two systems Gemos adv. PSIM and Gemos access can work as individual independent security systems or as a fully integrated security system (PSIM and access control in one system). Whatever solution the customer chooses, even when operating separately, both platforms can be synchronized back into one system at any time by adding a single software license. This flexibility makes Gemos adv. PSIM and Gemos access unique.

The 21/22 version of Gemos access offers a variety of new features and integrations such as an OSDP protocol integration in addition to the existing PHG and Wiegand protocol support and new BKS product integrations like for example the escape door control 'FTNT' and electronic cylinders "ixalo". Gemos access also provide own integrated burglar detection platform using own hardware as well as new HTML-based card printing layout and support for desktop, long range and biometric readers. Overall there are 28 different optional software modules for different installations and requirements available.

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GIT SECURITY AWARD

GIT SECURITY AWARD Winners 2022

The excitement is mounting, When it's called again: "And the GIT SECURITY AWARD goes to ... ? Okay, maybe it's not quite as glamorous as the Oscars, but it's nearly as significant – at least when it comes to security and safety. If you don't believe that, let me remind you that the nominated finalists have already passed the rigorous examination of a neutral jury of experts. The rest was then, as always, up to our readers. Honestly: Who could judge more qualified?! And so we are pleased again this year to choose three winners from six categories. We, the editorial team of GIT SECURITY, congratulate.

Category A

IT Security and Safety for Automation, Cyber Security

1. Winner

SICK: scanGrid2

LiDAR Multi-beam Scanner

With scanGrid2, SICK is offering an economical safety solution for small, line-guided AGCs (Automated Guided Carts): The world's first LiDAR multibeam scanner with safe solid state technology. Thanks to its excellent price-performance ratio, large fleets of AGCs can not only offer efficient protection up to performance level c, but can also be made more productive. scanGrid2 enables the elimination of mechanical barriers as well as higher driving speeds and heavier loads on the AGCs. Its compact design and smart functions also ensures quick and simple installation, configuration and diagnostics.

3. Winner

Schmersal: AZM40

Electronic Solenoid Interlock

With dimensions of 119.5 x 40 x 20mm, the AZM40, according to Schmersal, it is the smallest electronic solenoid interlock in the world. Despite its small size, the AZM40 has a high locking force of 2,000 Newtons. The solenoid interlock is suitable for applications up to cat. 4/PL e/SIL 3 (interlocking function). A series connection is possible without reducing the level of safety. The RFID-based safety sensors developed by Schmersal allow individual coding, therefore, the AZM40 offers the highest protection against manipulation according to the requirements of DIN ISO 14119. The AZM40 also operates according to the bistable principle, i.e. it maintains the current position even in the event of a power failure. This ensures safe operation in any operating state of the machine. At the same time, this reduces power consumption because the guard locking only needs to be energized when the door is to be locked or unlocked.

2. Winner

MB Connect Line: mbNET.rokey

Industrial Router with Security Chip and Secure Boot Concept

The mbNET.rokey industrial router enables secure access to machines and devices via the Internet. Thanks to hardware-based storage of certificates and encryption, data communication and the router itself are much less vulnerable to attack. A security chip (secure element) serves as a secure safe for passwords, certificates and keys. These can neither be read out nor manipulated. Process and application data are each stored in an encrypted container. The security of the router itself is ensured by a hard-coded boot loader (Secure Boot), which only accepts signed firmware updates that match the stored security certificate (Secure Firmware). With mbNET.rokey, plant personnel decide directly at the machine which connection type is possible: Offline: no communication possible, online: Data acquisition active, but no remote maintenance possible, remote: data acquisition active and remote maintenance enabled.

Category B

Fire and Explosion Protection, Industrial Safety

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1. Winner

Assa Abloy: ePED

Panic Touch Bar

The design-oriented ePED panic touch bar combines panic bar and escape door control terminal in a single functional unit. A separate terminal on the wall is no longer necessary minimizing the wiring effort. The escape door system is controlled via the integrated terminal with touch display. It replaces four modules: escape route icon, emergency button, authorized operation and display of the time delay. If the ePED touch bar is combined with a suitable lock, the burglary protection can also be increased. The system solution can be delivered and set up completely by the door manufacturer. The ePED push bar can be easily integrated into the door technology via Assa Abloy's Hi-O bus technology.

2. Winner

Bosch: Avenar Panel

Fire Alarm Systems

The new Bosch fire alarm systems Avenar panel were developed from the start with the stipulation of IoT connectivity and optimized usability. The already integrated 4-way IP switch reduces the need for additional hardware and supports convenient and cross-functional networking with voice alarm systems as well as integration into building management systems. Remote services via mobile apps for IOS and Android devices complement handling during operation, maintenance, and alarm management. The two fire alarm control panels Avenar panel 2000 and 8000 follow a modular concept and can each be equipped with up to 46 modules and up to 32 loops. Avenar panel offers a distributed architecture for campus solutions and can be equipped with multiple interfaces for an extended range of applications. The new eMatrix function gives clear feedback, shows the status of each evacuation zone as well as the fire protection equipment.

3. Winner

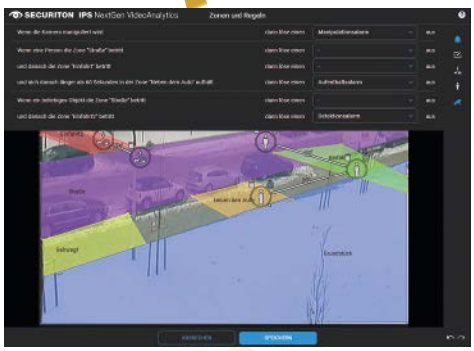
Munk Günzburger Steigtechnik: Multi-purpose Ladder

Ladder with Steps

The 3-section multi-purpose ladder with steps has been developed in line with the latest version of TRBS 2121 Part 2, therefore meeting the stricter TRBS requirements. The result is a versatile all-rounder with added workplace safety. The ladder is equipped with 80-mm-deep steps from top to bottom (with double-wide step in the overlapping area), nivello ladder shoes, and stabiliser for extra-secure footing with 2-axis inclination technology and replaceable base plates as standard. The clip-step R13 step padding brings maximum slip prevention (slip class R13). Yellow signal markings highlight the area precisely where particular care must be taken when stepping onto the ladder. The 'roll-bar' can be ordered additionally for ergonomic means of transport and is sponsored by BG BAU.

Category C

Video Security Systems (VSS)



Securiton IPS: NextGen VideoAnalytics

Video Analytics

The new IPS video analytics combines various analytics applications in one module and has a novel, intuitive configuration. Whether an intruder is to be detected in an area to be monitored or attempts to manipulate the camera are to be recognized – with the help of symbols for objects or persons, which are simply dragged and dropped into the zone to be monitored, a corresponding rule is automatically created. The rule describes the respective application and is clearly displayed as text above the video image. The associated alarm type to be triggered can also be selected there. It is also possible to activate several rules. In this way, operators can keep an eye on even complex scenarios.

2. Winner

Hikvision: The 4G stand-alone surveillance solution

4G & Solar Monitoring Solution

The 4G stand-alone monitoring solution is perfect for areas that cannot be reached with power supplies and network, but require a robust solution. The integrated battery is charged by the included solar panel. The internal battery management and various protection mechanisms allow a runtime of up to 7 days during continuous operation. The internet connection is easily realized by the built-in 4G modem and supports all common mobile phone providers. The camera itself delivers up to 30 images in 1080p resolution. Further features like 120db WDR performance, integrated IR LEDs, remote activation, VCA analytics and a protection class of IP67 allow a self-sufficient surveillance.

AG Neovo: SX series

Display Solution

3. Winner

Video security systems need a professional screen for real 24/7 use. AG Neovo's SX series fulfills video images without stretching or compression but with original colors and attention to details. In the proven many times 4:3 format, images remain meaningful and usable. In addition to the picture-in-picture function of many signal combinations, the new firmware of the SX-xxG models from AG Neovo includes a night mode (e.g. for marine and theater), an extra CCTV mode (video image sharpness), an OverDrive Mode (for clear images when quick moves) and the EcoSmartSensor for optimized power consumption. AG Neovo continues to make these classic 4:3/5:4 displays with the latest generation of panels available to its partners exclusively on the market. The patented NeoV protective and filter glass, the metal housing and anti-burn-in remain the safest benefits.

Category D

Access Control, Intruder Alarm, Perimeter Security

Ksenia Security: matrix

Universal Transmitter

Matrix is a bidirectional universal radio interface connecting low-power third-party motion detectors with the IoT control panel lares 4.0. It is designed to convert any motion detector into wireless systems thanks to the two dedicated inputs detecting the sensor's sabotages and/or alarms. matrix can be equipped with 3 batteries to power the connected device, providing up to 4500mAh autonomy. Its interface is fully compatible with BXS, VXS, WXI, WXS and QXI Optex motion detectors, and it communicates with them wirelessly through radio signals.

1. Winner

Perinet: MultiSense

Perimeter Intrusion Detection, Monitoring and Control

MultiSense is a holistic solution for perimeter intrusion detection, monitoring and control. The basis of the MultiSense system is an encrypted network (PeriNet) which was specifically developed for the application in outdoor areas. In terms of intrusion detection, different types communicate via the PeriNet network with the centralised server where the decision making takes place. In addition, the PeriNet network interconnects all accesses such as gates, barriers or turnstiles. The browser-based software visualizes the perimeter, informs about intrusions or escapes and offers the possibility to control all accesses intuitively via a digital control panel.

2. Winner

Sorhea: Solaris

Autonomous Active Infrared Barrier

The Solaris is an active infrared barrier consisting of a network of columns that create an immaterial and invisible wall of detection around the site to be protected. The columns communicate an alarm when an intruder cuts the infrared beams as well as filtering any unwanted alarms. Traditionally, IR barriers need cables for power and to send alarm information. The Solaris is an 100% autonomous infrared barrier that is powered by a solar panel and built-in battery. The alarms are communicated via an encrypted mesh radio network to the Maxibus hub that in turn relays the alarm information to third party systems. The Solaris is designed to equip existing sites where there is a real practical or economic interest in removing the civil works.

3. Winner

Category E

Safety and Security Management, Services and Solutions

Bosch Sicherheitssysteme/EVI Audio: Dynacord Promatrix 9000

Public Address and Voice Alarm System

1. Winner

Promatrix 9000 from Dynacord is a new efficient and fail-safe public address and voice alarm system which is currently only available on the German market (as of April 2021). The system provides planners, installers and building owners with excellent audio quality for announcements or music to all areas of the building with low latency. It can be operated via an intuitive user interface on the call station or via personalized software installed on a tablet or PC. The intuitive user interface of the call station ensures optimal operation through touch screen and selection keys. Clear user guidance with feedback on progress and status ensures convenience and user-friendliness. The technology concept is all IP-based, enabling fast installation times and lower implementation costs. All system components are located within an IP network – this ensures maximum flexibility and scalability, from small centralized to large decentralized systems.

2. Winner

Genetec: Streamvault

Turnkey Security Infrastructure Solution

Streamvault is a turnkey security infrastructure solution and includes all-in-one and rack-mountable appliances, storage solutions and workstations designed for unified video surveillance and access control systems. The Streamvault portfolio ranges from simple workstations to scalable rackmount solutions and custom video analytics appliances ideal for a variety of installations and decentralized locations. Since the unified Security Center software is pre-installed, the devices are ready for immediate use. The integrated configuration wizard and automatic update function make system maintenance as efficient as deployment. Streamvault provides an easy way to plan and set up a unified security system. Pre-validated and pre-installed with Genetec Security Center, Streamvault enables easy integration of video surveillance, access control, automatic license plate recognition, communication, and analytics.

Kemas: Handover Systems

UV-C Irradiation Against Sars-Cov-2 Viruses

3. Winner

Since a classic application of disinfectant liquids is not possible in self-service transfer systems, the properties of electromagnetic radiation in the UV-C range are used to deactivate Sars-Cov-2 viruses on surfaces. Only UV-C emitting LEDs are used as UV-C radiation sources in key transfer systems. These are integrated in the compartments known as Kemas-Keybox and activated by the transfer system depending on the process. This radiation source, consisting of an array of several LEDs, is located behind a UV-permeable quartz glass panel and enables active irradiation of the closed compartment. In the course of containing global virus pandemics, Kemas is already making an contribution with systems for self-service and quasi contact-free transfer of objects.

Category F

Special Category Smart Home & Residential

1. Winner

Ksenia Security: Energia

Consumption Management System

Energia is a BUS peripheral designed to manage the power of single-phase electrical systems by measuring the electric consumption. Each Energia module has two distinct lines where voltage and current are supervised, both lines support up to 6kW loads. Two energy consumption thresholds can be programmed: when the first is exceeding, alerts are generated – and sent also via push notifications. If the second threshold is exceeding, Energia generates the alert and starts to disconnect the loads according to the chosen sequence previously set. Each module has 4 relay outputs capable to drive external relays for disconnecting loads or used as control panel generic outputs. Energia fully complies with current policies and norms on energy efficiency, thanks to the electrical loads management and the energy consumption balance. The module is designed to collect the electrical system data and provides a visual representation through graphs showing consumption time trends.

2. Winner

Dormakaba: Resivo

Access Management in the Cloud

The new Resivo access system for Real estate management from Dormakaba considerably simplifies access management of properties, facilitates handover of the apartment and solves the question who in an apartment building has access to where, simple but differentiated. The cloud solution for property management enables all rights to be easily and flexibly organized using the app. Property managers are able to conveniently manage and assign access rights to tenants for communal doors, such as entrance doors, doors to the underground car park, to communal areas etc. from the office. Tenants manage the access rights for their apartment themselves. The smartphone is transformed into the secure key, but users can also use a RFID medium for entry. New building projects are increasingly being planned with digital access. The new Resivo access system from dormakaba was developed for smart residential buildings of the future.

ABB Stotz-Kontakt: Busch-Welcome IP

Project Door Communication System

At 180 meters, the Grand Tower in Frankfurt is the tallest high-rise residential building in Germany. Smart and secure access to the elegant premium-class building is controlled by the Busch Welcome IP door communication system from Busch-Jaeger. The innovative system with HD video communication can be used for exterior, interior and remote monitoring of residential and functional buildings. In the Grand Tower, it grants residents access to the building via a smart card in the parking garage, at the barrier and at building doors. Especially the possibility of bidirectional communication between residents and concierge is a very useful function. The additionally available smartphone app Busch-Welcome gives the system even more possibilities. Busch-Welcome IP in the Grand Tower is according to the supplier the most extensive installation to date in Germany in a residential building.

3. Winner

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REGULATIONS

AI Rules

Euralarm releases Position Paper on EC Proposal for a Regulation on Artificial Intelligence

Euralarm recently released a Position Paper on the EC proposal for a Regulation on Artificial Intelligence. The Position Paper follows some informal discussions with DG Connect and contains proposals on several articles in the Regulation on Artificial Intelligence. Following the release of the Position Paper Euralarm spoke to Gabriele Mazzini, lawyer of DG Connect and in the lead for the proposal.

When asked to briefly explain the Regulation on Artificial Intelligence, also called the Artificial Intelligence Act, Gabriele Mazzini replied that the Artificial Intelligence Act is the result of a process a preparatory work that started in 2018, when a high-level expert group on artificial intelligence was appointed to provide advice to the Commission. The overall aim of the proposal is to make the rules for the development and use of AI consistent across the EU and thereby ensure legal certainty, encourage investment and innovation in AI, and build public trust that AI systems are used in ways that respect fundamental rights and European values. In 2020 the Commission adopted a White Paper that was sent out for consultation and got more than 1200 comments. That input helped inform the proposal for the harmonized regulatory framework on AI, which based on the NLF approach. The AI Act is currently the first-ever proposed legal framework on artificial intelligence.

> *"The higher the risk, the stricter the rules."*
>
> **Gabriele Mazzini,**
> lawyer of DG Connect and in the lead for the proposal

Broad Definition

The history of Artificial Intelligence goes way back. The term was first used in the 1950s. Gabriele Mazzini explained that, on the basis of a recent report by the Commission Joint Research Center there are more than 50 definitions of AI, making it very complex and difficult to find common grounds. Considering that the greatest majority of EU countries are members of OECD as well as others non-European countries, it was decided to take inspiration from the definition of AI adopted by the OECD in its principles on Artificial Intelligence. In the Artificial Intelligence Act AI is defined in Article 3 and this is supplemented by Annex I, containing a suite of software development frameworks that encompass machine learning, expert and logic systems, and Bayesian or statistical approaches. A software product featuring these approaches and meeting the requirements of the definition stated in Article 3 will be considered AI for the

purposes of the Act. The Act distinguishes three categories of AI uses: prohibited AI uses, high-risk AI uses, and systems with transparency risks. The proposal does not regulate the technology as such, but specific uses. In general, the approach is that the higher the risk, the stricter the rules (risk-based approach).

Prohibited Uses of AI

When asked which uses of AI are prohibited, Gabriele Mazzini replied that there are four main categories. The first two relate to the manipulation of a person's behavior or exploitation of a person's vulnerabilities due to their age, physical, or mental disability. Also prohibited are the uses consisting in forms of social credit scoring by governments. The fourth category relates to real-time remote biometric identification in publicly accessible spaces by law enforcement. An exception is made for certain time-limited public safety scenarios such as serious criminal activities. It is up to the member states if they want to make use of the exception. The AI Act is intended to apply as lex specialis with respect to the rules on the processing of biometric data contained in Article 10 of the Law Enforcement Directive. Also, the uses of remote biometric identification are already regulated by existing law, namely the GDPR."

High-risk Classification

The AI Act also defines high-risk AI uses. Gabriele Mazzini explained that the AI Act considers an AI system high-risk if it is used as a safety component of a product that is covered by existing single market harmonization legislation and the product is required to undergo a third-party conformity assessment. These mandatory third-party conformity checks will incorporate the AI Act's requirements after the legislation is passed. In addition, other specifically listed AI systems deployed in number of sectors are also deemed to be high-risk to safety or fundamental rights. The Commission can expand this list through a simplified process without new legislation. The Act relies on member state regulators for enforcement and sanctions, but consistency will be ensured by a European level board.

Fruitful Cooperation with Stakeholders

When asked how important the comments and suggestions of stakeholders have been for the drafting of the AI Act, Mr. Mazzini answered that their contributions were very important. It is important to consult and as far as possible have a dialogue with stakeholders during the design of regulatory frameworks. Now the proposal is out to the European Parliament and the Council, which will pursue their own debates. Parliamentary committees, responsible for the preparatory work and the Parliament itself meet in public, so stakeholders can follow the discussions on the proposal and make sure that their voice is heard by the decision-makers.

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SPECIAL FOCUS
PERIMETER PROTECTION

More Than Meets The Eye

The Many and Various Applications of Video Analysis

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SPECIAL FOCUS

While video surveillance is being used all over the world for general security purposes, the active analysis of video material can discover valuable, meaningful and sometimes surprising data. GIT SECURITY has compiled a compact summary of some of the vertical markets benefiting from taking a closer look at what the cameras deliver, and the technology that provides the results.

Image analysis is going on all day, every day: in warehousing and retail environments, in industry and logistics, in security and safety situations – a detailed list of applications could fill this page. And yet, not everyone who could take advantage of image analysis is already doing so. There is still plenty of potential for the video surveillance market to 'fill out', to make better use of the resources that already exist and to create systems that will increase security, efficiency and safety, all at once.

Take it to the Edge

There are essentially two ways of analyzing images: either at a central location where the images are viewed and stored, or already out 'at the edge' within the camera itself. Thanks to the dramatically increased processing power available these days, remote cameras can already take a load off the central systems and limit the volume of data traffic being transported across the network. Activating video motion detection (VMD) in cameras will also reduce the central system's video storage requirements. Take a look at your cameras' specifications to see if you are missing a trick. Currently, both approaches enjoy equal popularity although the majority of new professional-grade cameras coming onto the market these days already have at least a few tricks up their sleeves. The marketing battle is now not so much over resolution, but over capabilities.

Hanwha Techwin's QNO series come with motion detection and ONVIF support on board

A flip through the catalog of Hanwha Techwin confirms this trend as their Wisenet cameras come pre-loaded with various useful applications and intelligent video analytics. Cameras at the high end of the range include AI-supported – and therefore learning-capable – video analysis.

Security Beyond Borders

According to a study commissioned by the NW Security Group, just over forty percent of English medium and large businesses that are using video surveillance systems have already made use of facial recognition. The captured images are compared with a database to establish authorized access, to prevent known criminals or troublemakers entering events or for general public safety. That means there is still plenty of potential for more facial analysis to take place, or, looking at it commercially, the market is only forty percent saturated. Their study is very enlightening on the state of video surveillance generally.

The opportunity to find and track people in the many millions of vehicles on the road is met by ANPR systems (Automatic Number Plate Recognition). Where camera surveillance is used

to protect a perimeter, around a third of these systems currently also identify arriving vehicles by using ANPR. Wavestore solutions, for example do not just read license plates in the multiple different formats and character sets used worldwide, but also identify the make or model of a vehicle and its color.

AI-based image processing is particularly easy to realize with the IDS NXT cameras and Lighthouse training software

Marketing in Detail

Checkout statistics provide marketers with the bare numbers of how well a product is selling, but cameras and analytical software reveal the psychology behind shopping and the decision-making process that influences consumer choice. Switched on retail chains already use this almost free 'heat mapping' function of their surveillance system to see where shoppers walk more slowly, showing interest in a product, or at least the display material around it. Combined with intelligent shelving, this data delivers the complete story of a shopper's experience. One such movement analysis system is provided by Wavestore. Version 6.28 of their centralized VMS introduces intelligent event rules as well as a powerful forensic search capability. Reporting rules can be defined to combine object class and position metadata delivered by any open ONVIF-supporting cameras.

Crime Prevention

Urban areas, sports arenas and public transport terminals are frequently the location of crime and vandalism. The ability for security personnel to virtually follow a group of people or an individual as they move through the area is therefore highly desirable. Tyco's Pro Gen4 PTZ cameras move very quickly and do not lose a subject of interest when it passes very close to the camera position. The palette of available analytics functionality includes object detection, abandoned or removed objects, crowd formation, dwelling and perimeter protection. Deep-learning means that objects can be classified (identified) by their shape, color and further distinguishing characteristics. Puretech Systems has refined this capability to search quickly and find persons of interest or vehicles being tracked from within video sequences while ignoring vehicles, wind-blown trees or heavy rain.

Hikvision collaborates with a number of partner firms to provide, amongst others, tailored solutions for the retail industry to reduce so-called 'shrinkage' – which is nothing other than blatant theft. Their Veesion-developed product analyzes gestures typical of shoplifting activity while the iRetailCheck solution applies AI video analytics and deep learning methods to discover undeclared items at the checkout.

Crime Analysis

Every good old TV detective series has a scene where they ask for a CCTV recording of the event and, wondrously, it appears immediately on the screen. In reality it was not so quick, but

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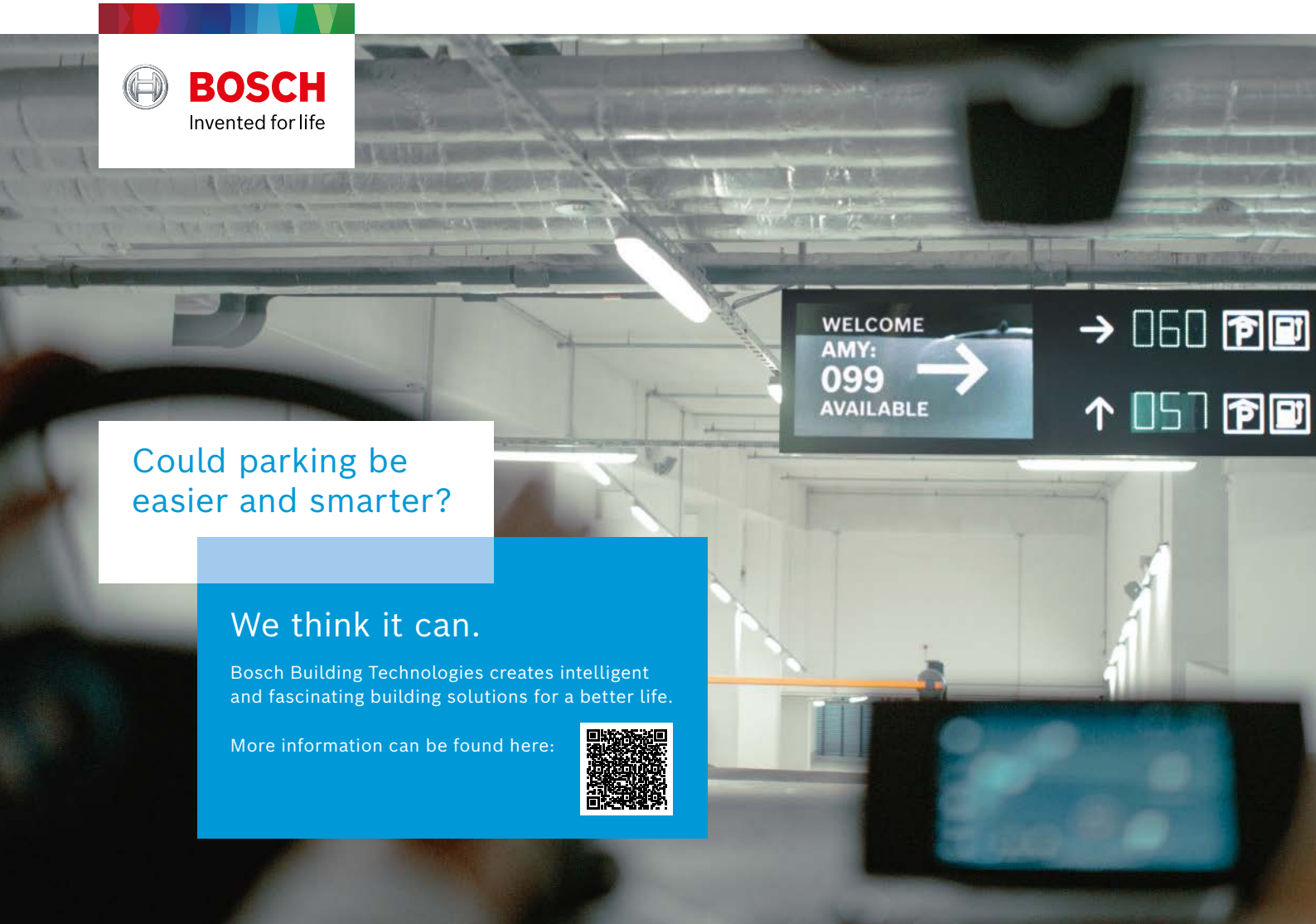

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today's analysis algorithms assist the search using object, pattern and event recognition to reduce the search time to just minutes or less. Axis Communications enables such 'forensic' searches together with their partners for video management systems, the Milestone XProtect and Siemens Siveillance. They either apply the metadata from Axis components about motion in a scene, classify objects with the company's own object analytics package, or use the ONVIF Profile M open object classification together with camera metadata to quickly locate scenes of interest.

Industrial Efficiency Improvements

Can you remember a time before bar codes? Probably not because they have been around since 1948, though they first started to find widespread usage as from the eighties. Lasers and cameras can read them, and now also their successors, the QR codes that contain much more information. Pattern matching, color verification and identifying defects during production are all increasing yield and reducing wastage. Teledyne Flir have a very large selection of cameras built specifically for these jobs, also thermal cameras, and don't stop at just the camera but also provide the software packages behind them. The NXT camera range from IDS also covers a broad spectrum (excuse the pun) of industrial applications that apply image processing and artificial intelligence to solve everyday problems such as, among many others, parking management or waste disposal analysis in Smart Cities, or environmental analysis in agriculture.

Aviotec cameras from Bosch Building Technologies detect fire and smoke at the source under changing weather and light conditions

Sporting Highlights

Sometimes hated for its game-changing enlightenments, the video assistant referee is a wonderful example of image analysis in football. Tennis fans will know the video line judge that either confirms or refutes a human line judge's call. While those single events are relatively easy to capture, Sport Performance Analysis take a meticulous look at the video taken of sports events and produce wide-ranging performance data – numbers – from it. Spatial data and player tracking can all be extracted, and the recent addition of RFID, radar and GPS-produced data increases the accuracy. AI helps here to analyze broadcast video, rather than video obtained right at the venue, transforming pixels to trajectories and deducing expected metrics.

Physical Safety 24/7

Particularly in public transport scenarios, surveillance image examination through the creation of virtual 'red lines' can detect movement in potentially dangerous areas, such as in the 'Bernoulli effect' area at the edge of a platform where high-speed trains pass. Although the functionality of movement direction detection is readily available, the NW Security Group report revealed that only 31% of users have already deployed it to see in which direction a person – or an object – is actually moving, or going beyond a predetermined boundary.

Video analysis specialists IPS have already implemented many systems around the world on servers or in cameras that look out daily for people being where they're not supposed to be: intruders, hospital patients, visitors, staff in potentially dangerous places, in tunnels, on building sites and in schools. Qognify's Ocularis 6.1 VMS provides a platform for application-specific content analytics modules. As well as highly developed solutions for many common analysis tasks, the system has now been enhanced with a module for the processing of drone images, which dramatically extends its potential areas of application.

Johnson Controls supplies the Open Blue series of digital platforms and the well-known Tyco Illustra Pro PTZ cameras. Taking image analysis to the edge, they feature AI-enabled analytics that detects and classifies objects such as people, bicycles, buses, cars and motorbikes. It can of course also be applied for people-counting purposes to check that COVID safety regulations are being upheld.

Fire protection is another discipline that is benefitting from image analysis and artificial intelligence – the latest firmware version 7.81 of the Aviotec cameras from Bosch Building Technologies comprises AI algorithms that can now detect fire and smoke at the source under changing weather and light conditions. They have been developed particularly to ensure detection in sheltered outdoor areas where wind might prevent smoke from even reaching conventional detectors.

Modular Addition

The increasing use of artificial intelligence in cameras has taken 'computing at the edge' to new heights. If some of the applications mentioned above relate to your business, then maybe you are looking for what the Germans call the 'eierlegende Wollmilchsau', literally the 'egg-laying woolly milk pig', which delivers everything you need at the same time. Well, it seems that Security & Safety Things (S&ST) has recognized the need and compiled their Application Store. This already contains 100 ready-to-use apps that offer video analytic solutions for retail, manufacturing and logistics, commercial office space, parking and stadium environments, with more apps constantly being added. They run on smart cameras using the S&ST open camera operating system and open IoT platform. Cameras can then simultaneously run a variety of applications that perform different functions. The camera OS is based on the developer-friendly Android Open Source Project (AOSP).

We hope to have opened your eyes to some new and interesting applications for further analysis!

Suppliers

Axis – www.axis.com
Bosch Building Technologies – www.boschbuildingtechnologies.com
Hanwha Techwin – www.hanwha-security.eu
Hikvision – www.hikvision.com
IDS – www.ids-imaging.com
IPS – www.ips-analytics.com
Johnson Controls – www.johnsoncontrols.com
NW Security Group – www.nwsystemsgroup.com
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5x3 Special Focus

Video Analytics for Perimeter Protection

1. What video sensors do you recommend for an effective perimeter protection?
2. What is the biggest challenge for a video analytics system in perimeter protection and how do you approach this challenge?
3. Please describe a success case where you implemented your system for perimeter protection?

Niklas Rosell
Global Product Manager, Analytics at Axis Communications
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1. Thermal cameras with edge-based intrusion detection analytics provide effective perimeter protection over long distances and in challenging scenarios, including in complete darkness. Visual cameras with intrusion detection analytics are also a good choice in areas with sufficient light. To detect, identify and deter intruders, a combination involving different types of cameras with analytics, security radars and speakers can be used. Choosing the most suitable solution depends on a number of factors, including the coverage area, lighting conditions, level of threat and security, type of response (active or passive) and budget.

2. The biggest challenge is achieving high detection accuracy with few false alarms in demanding scenarios. Achieving high accuracy depends on securing high video quality. To approach this, ensure that cameras deliver high-quality, usable video, even in difficult lighting conditions, and offer camera-based (edge) video analytics that enable analysis at source using the best possible video quality, instead of having analysis done elsewhere after video has been compressed for transmission. Having analytics operating on the camera is also cost-effective, enabling scalability and savings in bandwidth, storage and server requirements.

3. RC Willey, a U.S. home furnishings chain, deployed Axis security and business intelligence products at its distribution centers and retail stores. Axis components include intrusion detection solutions involving thermal and visual cameras with edge-based analytics and security radars with built-in analytics, network horn speakers that enable automated audio responses for deterrence, and video management software. At its Las Vegas distribution center alone, RC Willey reported that theft and vandalism expenses dropped from $40-$50K/year to zero and it has saved $100K/year on private security. It also had a positive impact on logistics and customer satisfaction since deliveries are no longer delayed due to vandalism.

1. There are three main technologies: Classical video motion detectors comparing contrast changes from image to image, object tracking algorithms following moving objects for a certain time before alerting and AI based systems trained to discern humans from other moving objects. Each has its pro and cons, in terms of reaction time, false alarm rates, sabotage vulnerability and of course cost. For example: Contrast comparison can easily detect very fast motion but is susceptible to false positives from headlights of cars passing by. An AI can be tricked by disguised intruders – depending on the quality of the neuronal network.

2. There is no one fits all solution. It is important to define the exact individual security demand: Do you need certainty that any motion is detected, like objects thrown over a fence or slowly crawling intruders? Do you expect intruders to try and "disguise" to avoid detection (e.g., cover in a huge carton box to trick the AI)? What are the light conditions (visible, IR, or thermal)? What is the budget available? We approach this challenge by offering all three sensor technologies as well as a combination of them. Additionally, we offer to link video to other technologies like radar or fence detection systems.

3. Most challenging was the perimeter protection of ESA spaceport in Kourou with 5000+ cameras. With our partners, we implemented an integration of fence detection with our VMX video sensor, in itself a combination of contrast change detection with object tracking. All along the fence is IR lighting with day/night cameras. Pre-alarms initiating video display in the control room for increased attention are triggered by video or fence detection alone. Simultaneous detections from both systems lead to an immediate high-level alert. In essence, we combined three technologies for maximum security with minimum false alerts.

Katharina Geutebrück
Managing Director at Geutebruck
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Wanda Nijholt
Manager Marketing und Communications at i-PRO
https://i-pro.com/eu/en/surveillance

1. For effective perimeter protection it's essential to look at the best possible overall solution and scenario in the settings given. One important factor is clearly a good and proper IR-LED to be able to generate clear visibility of distant objects even at night in the dark. i-PRO is offering long distance IR illumination PTZ Cameras Built-in with IR LED and visible light cut filter enabling detection of irregularities in the dark. Even in challenging lighting surroundings, the IR LED light and the visible light cut filter can capture clear images making it possible to discern the movement of an object 350 m away in an unlit place at night. The 40x optical zoom clearly captures details and characteristics of distant subjects as when monitoring large parking lots or large-scale facilities such as power plants and dams, where the installation location of cameras is often limited, and both the monitoring of distant areas and wide-area monitoring are important. The camera's advanced image stabilization suppresses blur even when using the high-power zoom, so no slight vibrations do disturb the image.

2. The challenge is simply by nature itself: we have changing light conditions, bad visibility with rain and fog and huge differences in temperature between summer and winter that the camera all needs to endure. To tackle these challenges in the outdoor surrounding, i-PRO has developed a lot of proprietary technologies that serves their reputation for reliability. One of them is the Anti-Condensation System: i-PRO outdoor models have a built-in dehumidifier device to lower the internal humidity for preventing cloudiness due to condensation. Due to the i-PRO ClearSight coating technology water drops cannot stick to the dome cover and therefore hinder the shooting of clear images. These technologies help to make the picture as sharp and clear as possible – the only reliable basis when we look at running video analytics. Here, the biggest challenge is not to generate false alarms. i-PRO AI-VMD is based on deep learning, so this will increase accuracy. We can specify to generate alarms only when human shapes are detected and send the alarm, i.d. to avoid raising alarms on animals, objects that are flying around, shadows, reflections, flickering lights or similar.

3. As for intrusion detection or defining forbidden areas or single and multiple crossing lines for perimeter protection, this topic has been on the radar of traditional video surveillance for a very long time already, but now with AI and its huge advantages these operations can become way more proactive rather than reactive before. So now, systems can be set up combining video surveillance together with the fence detection through i-PRO's AI application offering a clear benefit vs. historical solution, as in one device users are only able to create alarms when intruders enter the site, but can also have visuals of the area, especially accompanied by powerful IR-LED PTZ cameras offering the whole range of security for perimeter protection. And with the open i-PRO SDK and the high-performance AI engine the same device can even perform customised applications specifically developed towards the needs and requirements of each surrounding and business customer.

Pom Chen
Thermal Product Marketing Manager at Hikvision
www.hikvision.com

1. There are various factors that change the security needs of perimeter protection. For example, a place surrounded by thick foliage, fences or outlying buildings, or a surrounding that there are no street lights in the area. All of these things make perimeter security harder, especially for traditional optical cameras that rely on line of sight and at least a low-level of light to spot intruders. It's these scenarios that benefits greatly from another technology – thermal imaging.

2. The two most common challenges in traditional perimeter protection are frequent false alarms and poor imaging quality in limited light. Environmental factors like changing lights, zero light, smoke and fog, rain can impact the identification of true threats and reduce the accuracy of video analytics, resulting in false alarms.

To counter this, we recommend thermal cameras, as they can "see" objects in virtually any weather and under any lighting condition. Further, Deep Learning technology can be used in combination with thermal imaging. It enhances video analytics to distinguish humans, thus reducing false alarms and the associated operation costs. When detection rules are triggered by a human being, for example Line Crossing and Intrusion Detection, the camera can instantly raise an alarm to the operator. Hikvision thermal cameras like the HeatPro series is a good example.

3. When Foxlake Dundee, a new water adventure centre opened in the heart of the Scottish city, Webster Security & Fire approached the facility's management with a novel after-hours surveillance proposal: using thermal cameras from Hikvision instead of a manned guarding option. The resulting video surveillance system has proven immediately successful. The concern was that accidental or deliberate damage or vandalism to the water park equipment was a real risk – and along with that came the danger of injury or worse to those attempting to exploit the park, at night, in the dark, unsupervised on the water. Hikvision's thermal cameras utilise behaviour analysis technology, so figures moving into specific zones in the image can automatically generate alarms. Operators check the live cameras to confirm that intrusion has occurred and contact police if needed.

1. We highly recommend the use of cameras together with efficient video analytics – either thermal cameras which help to detect threats early on, even in darkness or adverse weather conditions. False alarms are reduced as they react on change of temperature and not shadows or fog. Or another alternative is the use of PTZ cameras which are highly flexible and able to cover large areas. It is advisable to add advanced video analytics to any video management system to be able to detect and track moving objects automatically within the protected area.

2. The biggest challenge is surely to secure high detection reliability without increasing the false alarm rate. In addition, the operator must be supported to avoid human errors. With intelligent filters, the number of false alarms can be reduced considerably. With our 3D technology an operator receives further support when confronted with an intruder. The PTZ camera automatically tracks the alarm object, without any need for operator intervention. When the object leaves the camera's field of view, the 3D technology automatically hands over to an adjacent linked camera, which continues tracking.

3. One of the largest network operators in Germany relies on video security from IPS. The company successfully uses the IPS video management system with its multi-site management function to secure various sites with over 200 installed cameras. It links each of the sites with the head office and an operator can easily manage all sites from one single workstation. The company also installed the proven IPS video analytics for outdoor areas which detect unauthorised access to the premises in real time and alert before too much damage is done.

Peter Treutler
Director IPS
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Advancis Acquires Irish Security Company

Advancis Software and Services GmbH, manufacturer of the open Physical Security Information Management Software (PSIM) WinGuard, has acquired the Irish software company Cruatech, one of the leading experts for physical security integrations solutions. Cruatech, based in Dublin, Ireland have eleven years of experience in the security industry and provide individual integration solutions in physical security to customers in all business sectors, e.g. governmental, finance and data centers. They are a software company that, in addition to their own products, offer integration services for leading manufacturers from all over the world and have already developed over 250 integration modules. Cruatech will remain as an independent company and will further expand their development department in the future, possibly supporting Advancis in the future as a 'Development Partner' within the Advancis Ecosystem and developing specific interface modules for WinGuard projects. **www.advancis.net**

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PERIMETER PROTECTION

Tips & Tricks For Perimeter Protection

The need for Perimeter Protection is commonly seen in many industries and living scenarios. To establish the most successful perimeter protection, users may need these tips and tricks for smooth installation.

Choosing a Suitable Installation Site

The installation site should provide a large visual field in an open space, without drastic changes in lighting conditions. The scene should be free of visual distractions and frequently moving targets. It should not include large obstacles around the target area that can block the view of intruders.

Sites with clearly-defined borders are ideal for installation, such as gated communities, store entrances, garage entrances, railways, and highways. The absence of a physical barrier doesn't impede one's ability to protect a defined perimeter, however. Perimeter protection can be used to detect people falling into bodies of water or intruders on rooftops. The target filter can quickly distinguish a car driving on a sidewalk or people walking on a freeway on-ramp.

Selecting the Right Installation Type

The installation type is also essential to successful perimeter protection. Cameras should be installed at a high position perpendicular to the area being monitored. The recommended installation height is greater than 9.8 feet (3 meters) and the maximum height varies with different lenses. The recommended installation angle is 0°– 45°.

Consider what the scene will look like at night. If the camera will be capturing vehicle headlights head-on, the drastic change in lighting conditions will negatively impact detection performance. If ambient light is not bright enough, detection accuracy may be impacted.

Using the Right Lens

The recommended lens is one with a focal length that's wide enough to cover an entire perimeter if possible. If not, you can design using multiple perimeter protection cameras to provide full area coverage. Make sure the lens you choose is within the installation distance reference below. For fixed lenses, use this reference table:

Lens focal length (mm)	2.8	3.6	6.0	8.0	12	30
Installing distance (m)	6	8	13	17	26	65
Installing distance (ft)	19.7	26.2	42.7	55.8	85.3	213.2

For vari-focal lenses, follow this guide: When the installation distance is between 16–72 feet (5–22 meters) from the target, select a lens with a focal length of 2.7mm~13.5 mm.

Video Tips

When you are ready to give it a try, we recommend to watch the following step-by-step video instructions on how to set up perimeter protection:
https://bit.ly/3CCwRT2

Dahua Technology is recognized internationally as a video-centric smart IoT solution and service provider that offer highly efficient, reliable, and cost-effective visual systems powered by AI and constantly improved with cutting-edge techniques to ensure high-quality performance. Recently, to better meet various demands of users, Dahua Technology introduced the latest innovations in highly accurate perimeter protection. This technology greatly enhances tripwire and active deterrence functions by including a target filter, a highly accurate way to distinguish between people and vehicles. Targets that cross a defined line can be categorized as humans or motor vehicles, making it easier to search for the target and allowing the option to set up alerts for specific types of intrusions. This solution has reached high standards of accuracy, farther detection, alarm target classification and quick tracking.

More info about Dahua Technology's perimeter protection solution and its application are summarized in this video:
https://bit.ly/2U7KhoG

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GIT SICHERHEIT · GIT SECURITY EMEA

VIDEO MANAGEMENT

Hide and Seek

Qognify Adds Real-Time and Post Incident Investigation Capabilities to their Cayuga Video Management System

The ability to act quickly during a live security/safety incident is vital to a successful outcome. Security operators need tools at their fingertips that are instinctive and intuitive to ensure that they respond appropriately, regardless of their knowledge and experience. Tracking persons of interest across a camera network in real-time requires a deep understanding of where cameras are located and the ability to rapidly switch between them. This is where Click2Track comes in – a new, advanced investigation capability added to Cayuga R17.

Qognify has launched the latest version of its renowned Cayuga video management system (VMS). Cayuga R17 provides control rooms with powerful new person tracking, masking and camera forwarding capabilities to improve real-time incident handling and post incident investigation. It enables operators to easily follow persons of interest, either in a real-time monitoring situation, or as part of a post incident investigation, across every camera connected to the VMS. The operator simply activates Click2Track and clicks on the appropriate highlighted area (depending on the direction of travel) displayed on the screen. They are then automatically presented with the next camera feed, the moment the subject is in its field of view, ensuring the subject is always kept under close observation.

Carsten Eckstein, Head of Product Management for Cayuga states: "Click-2Track enables any operator to focus their full attention on managing a situation to obtain the best possible outcome rather than having to know where and how to locate the next best available camera and juggling between feeds and screens."

Looky Here

Another feature added to R17 enables operators to work together easier. The new camera sharing feature allows a camera feed to be shared instantly with other operators, in just three clicks. "It can often be the case that live footage needs to be shared with another operator or stakeholder to take a decision on a course of action. In such time-critical circumstances, there is no need to involve an administrator to amend user rights, but temporary sharing can happen instantly whenever it is vital that the transition is made on the fly," adds Eckstein.

The need to mask footage prior to exporting, for example because of GDPR requirements, is another time-consuming process that is improved significantly with Cayuga R17. Click2Mask automatically detects people in the camera's view and creates a mask together with a movement trajectory that preserves a person's anonymity in accordance with data-protection and privacy laws. Click2Mask enables multiple areas to be masked at the same time, and it can also be applied to obscure parts of the video that could potentially leak commercially sensitive information, or compromise security. Eckstein adds: "Using Click2Mask can be as much as ten times faster than the slow, manual masking process that will be familiar to many operators working in control rooms right now."

Manager in Control

Other new features in Cayuga R17 include one-click alarm categorization, enhanced support of multi-sensor devices and integration with the new Bosch INTEOX camera platform. R17 also makes it easier to upgrade camera firmware through the use of Qognify's web-based management and monitoring platform, Umbrella. It contains language support for Japanese and Romanian now, increasing the number of available languages for the user interface to seventeen.

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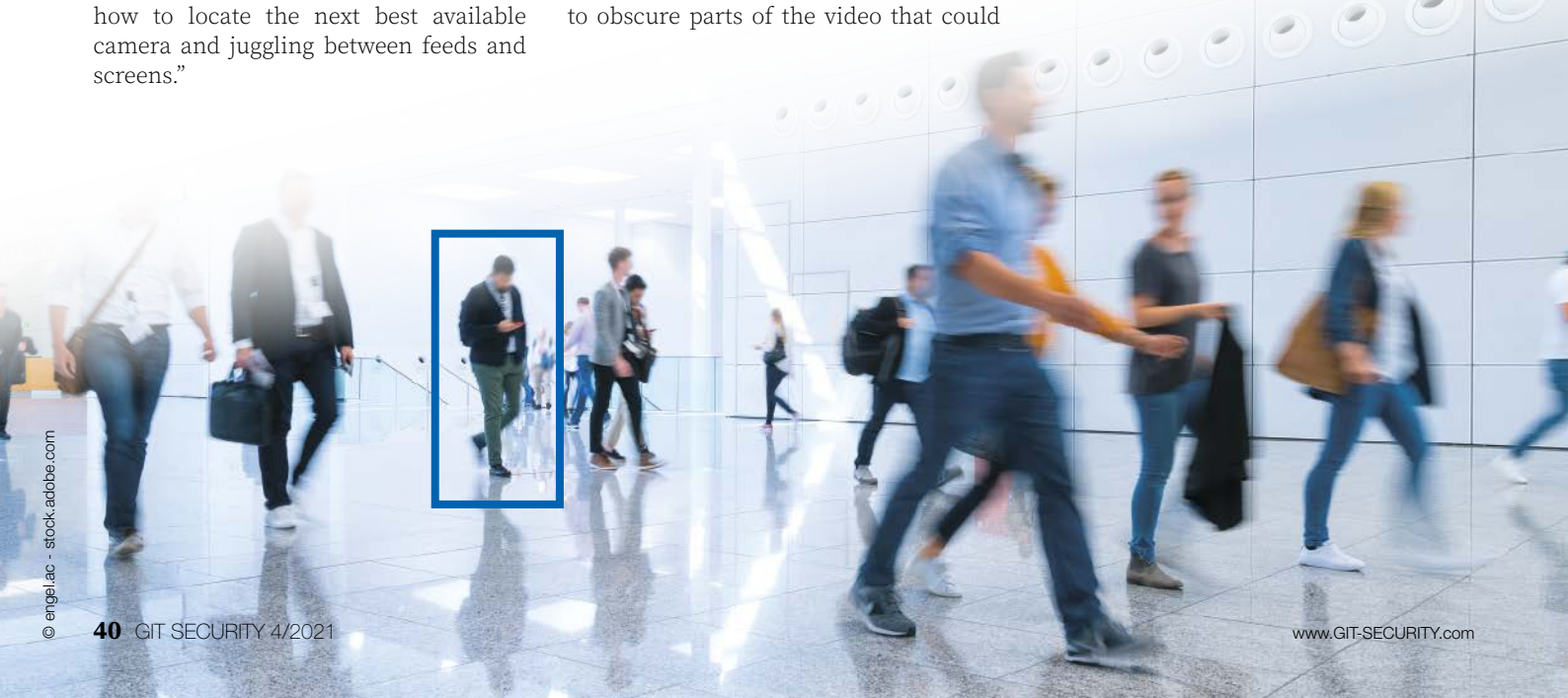

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High-Quality Communication, Video and Audio

Hanwha Techwin has announced their TID-600R that brings together the company's high-quality camera functionality with audio features and analytics. The new intercom has multiple applications, from acting as a help point for queries and emergencies, to access control or seamless communication with a control room or a front desk reception. The SIP compliant product features a 2MP fisheye lens with a wide horizontal 180° field of view (114° vertical), low light performance (IR provides 16 feet/5 meters of infra-red illumination), and WDR for challenging lighting scenes. Additionally, the intercom is NDAA compliant. The intercom is suitable for many different sectors, notably healthcare settings where touchless access control is prioritized, car parks and transport settings to improve visibility and communication, and office locations and residential settings for seamless entry and exit. **www.hanwha-security.eu**

Super Sensor

Cias microwave, infrared, triple technology barriers and fence detection systems are currently used to protect the perimeter of nuclear power plants, high-security prisons, military and civil airports, banks, and large factories but also used for the protection of detached houses, apartments and shopping malls. Cias cooperates with many of the leading names in the security industry to provide comprehensive and integrated perimeter defense solutions. The market needs to integrate video systems to perimeter devices, which was the inspiration to create Synapses, practically a new 'super sensor' system capable of taking advantage of the embedded AI to harmonize the performance of the whole perimeter protection solution. It performs various video-analysis algorithms, including Deep Learning. The field of view of each connected camera can be deployed into 8 different areas and paired to 32 field devices. Via the RTSP IP video stream, it is able to distinguish different targets within the video flow such as humans, a car or an animal. The response is sent back to the sensor, which will dynamically adapt the thresholds to optimize its own detection behavior. **www.cias.it**

4K Video Cameras Address Challenging Application Scenarios

Sony has announced further additions to its popular FCB video camera range. The EV9500 series consists of three different models, with each being based on the company's 4.17M pixel 1/1.8-type Starvis CMOS image sensors. The EV9500H has an HDMI output, while the EV9500M and EV9500L have MIPI and LVDS interfaces respectively. All three of these camera blocks feature a 30x enhanced optical zoom, plus a 12x digital zoom, with no image deterioration being experienced when these functions are used. The sensor has an anti-reflective coating which mitigates ghost effects and ensures that images are captured correctly. Its elevated spectral sensitivity performance in NIR/IR frequencies means these cameras are optimized for surveillance deployment. With compact dimensions, the EV9500 Series camera blocks can be incorporated into space-constrained application settings. **www.image-sensing-solutions.eu**

Accelerated Car Park Access Control With Simultaneous Vehicle/Driver ID

The new STid Spectre nano multi-technology reader enables simultaneous and remote vehicle/driver ID to keep employees, visitors, and motorized traffic moving without compromising on security. STid has announced the release of its new Spectre nano reader, which is expected to set a new standard in perimeter access control and simplified visitor management. The multi-technology reader quickly recognizes employees, visitors, vendors, and their vehicles – simultaneously – for smooth, hands-free access control without compromising security. This is a great solution for facilities such as car parks, industrial sites, campuses and any other secured environment where a mix of people and vehicles needs to be identified to enable instinctive, smooth yet very secure access control.

This next generation, hands-free reader increases speed of entry for anyone – or anything – on two feet, two wheels, four wheels or a whole fleet. It reads windshield tags, key fobs, cards, smartphones, or wearables using UHF and Bluetooth to leverage end-user preferences for easier adoption. It is also part of the STid Mobile ID ecosystem, which turns smartphones into virtual cards for both vehicle and pedestrian access control. Compatible with all access control systems worldwide, STid designed the Spectre nano for easy integration, regardless of managers' tech expertise. The outside packaging is as rugged and durable as the technology to ensure the reader can stand up to harsh environments – everything from shock, heavy rain and dust, to salt, frost and fire. Spectre nano offers customized branding options to fit in at a bus station, a corporate office, or private community, and is suitable for use in high-security industries. A cost-effective solution, the new reader can be installed and (almost) forgotten, with no maintenance or batteries required.

"The Spectre nano reader may be small in size, but is a full-blown, long-range UHF reader combined with the Bluetooth technology that is used in our powerful and versatile STid Mobile ID solution" said Vincent Dupart, CEO of STid. "It is the missing link between vehicle identification and smart identification of people. There is no longer a need to install multiple readers at entrances where employees, visitors, contractors and their vehicles enter the facility. It can easily be integrated with any access control system or parking management system, which basically means that any perimeter entrance can now be easily equipped with our STid Mobile ID solution and our vehicle identification solution. And since it supports both solutions simultaneously, it is now also possible to identify the vehicle using UHF, and the driver using STid Mobile ID. This prevents the car from being used as a modern-day Trojan Horse."

Designed for global customers, Spectre nano uses OSDP and SSCP protocols and has EAL5+-certified storage. Data authenticity and confidentiality are ensured using encryption methods recommended by worldwide organizations, and it is ANSSI and FIPs compliant. Encrypted, signed credentials provide anti-cloning and anti-replay protection and managers can quickly erase security keys, when necessary. Spectre nano will be available by the end of the year to help speed car park access control. **www.stid-security.com**

Intrusion systems based on radar technology only record security-related events (and not curious neighbors or roaming animals).

INTRUSION DETECTION

Why Intruders Prefer PIR Over Radar

Efficient Motion Detection Technology

Over the years, the demand for an efficient and convenient way to protect buildings increased. For most use cases, there is no way around motion detectors to prevent intrusions. They are aware of every single movement around the building and trigger an alarm when people come close to the building. These security systems have a deterrent effect. They put the intruders to flight or cause further security measures like video surveillance or transmitting the incident.

Especially when looking for low-budget solutions, passive infrared measurement technology is dominating the market. But some detection situations are challenging for cheap PIR sensors and cause false alarms. Latest radar solutions are now entering the battle of the pole position. They promise a more efficient performance and useful features for intruder detection. So it is time to discuss the advantages and disadvantages of both technologies and have a closer look at their application fields.

What are PIR and Radar Capable Off?

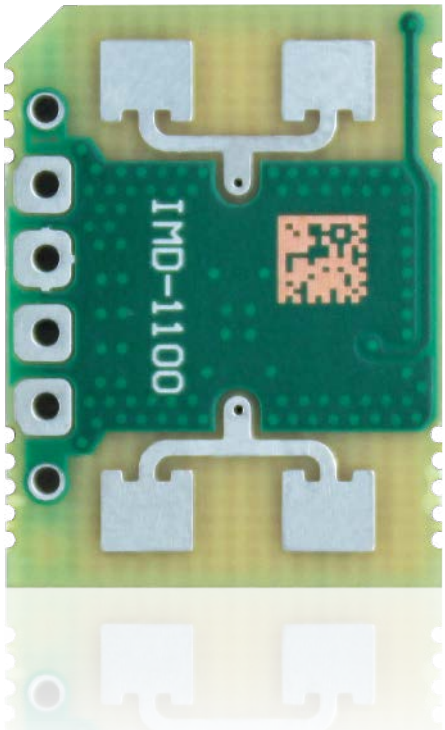
Passive infrared sensors (PIR) use heat radiation and detect movement based on body temperature. It measures changes of the thermal image of its environment over time. As a passive detection method, the sensors do not transmit signals but receive data from a heat-emitting target in motion. Stationary objects or still standing people cannot be detected.

Radar is an active measurement principle and uses electromagnetic waves in the high-frequency range. The sensor sends pulses and receives an altered reflection for analyzing the change in the response signal. Radar technology is not only used for motion detection, it can also locate targets within the detection range and determines additional information like speed, movement direction and distance.

As a result of the differences in operating principle, PIR and Radar come with different capabilities and challenges.

PIR is excellent at detecting living beings that move across to the sensor field and also can be used for measuring temperatures. The maximum range is typically 10 meters. The technology is extremely cheap and consumes very little power. Light sources similar to infrared and high temperatures cause detection problems.

Radar sensors for commercial use can have detection ranges of several 100 meters and output further object data. Advanced products allow the monitoring



The latest addition to Innosent's radar range: The IMD-1100 radar, the smallest 24 GHz radar available in their portfolio

of stationary and moving objects in a three-dimensional environment over time. Also, low cost sensors do an excellent job in detecting objects or people moving frontally towards or away from it. Weather and heat conditions do not have an impact on the detection. However, the technology is more expensive and consumes more power.

Positive and negative technical characteristics in a nutshell

Radar:

- + more data
- + detection of movement frontally to the sensor
- + passes through materials
- + high range
- + multi-target capability
- + weather- and light-independent
- – detection of objects crossing at 90° angle to the sensor
- – higher-cost
- – consumes more power

PIR:

- + detection of objects crossing at 90° angle to the sensor
- + very low-cost
- + little power consumption
- – detection of movement frontally to the sensor
- – difficulties with high outside temperatures
- – heat-insulating clothing reduces likelihood of detection
- – limited range
- – no distinction between object types (person or animal)
- – weather-sensitive

Progress in Motion Detection

For many years, the question of which sensor technology fits best for an application was easy to answer. When searching for a cheap and uncomplicated motion sensor, PIR was the choice. For commercial intrusion detection and alarm systems the integrators often had only a low-budget. So they accept the possible troubles of PIR in outdoor applications. Radar was only used for more sophisticated functions.

But now radar sensors are tackling the low-cost segment. They became smaller and cheaper, but also offer more features. This development could disrupt the market of motion detection. Especially for intruder detection, radar convinces with additional functionality which make the application more efficient and reliable.

Radar Motion Detection for Intrusion Alarm

Between modern radar sensors and PIR, only a small price gap is left. This persuades security technology companies to leave behind negative presumptions from the past and consider radar detection for their alarm system.

So what can they expect from new radar devices? The sensors working under difficult environmental conditions like dust, dirt, rain, snow, heat or cold. It is possible to notice the presence and the movement of vehicles, animals or people. The determination of moving speed and direction and also the distance optimizes the detection efficiency. It allows to make individual adaptions to the use case scenario. This reduces false alarms and improves the performance of the security system.

Intrusion systems based on radar technology only record security-related events (and not curious neighbors or roaming animals). For example it is possible to sort out irrelevant events like passing cars. With configuration of the sensitivity small animals like cats can be filtered out, so they won't trigger an alarm.

Innosent Motion Detectors

Innosent has been developing sensors for motion detection since it was founded in 1999. After their achievements in advanced security radar solutions, they also wanted to provide progressed radar devices for the low-budget market. With the latest radar product series IMD, the experts now offer modern technology for cheap prices.

One of the newest solutions is the IMD-1100 radar front end. This sensor is the smallest 24 GHz radar available in their portfolio, maybe even the smallest of its kind. The size is a game changer for many applications. It is so tiny, that it can be placed even behind a light switch, in a window frame, a wall or a door bell without being noticed by intruders. The efficient radar technology will not miss any intruders around the building.

More information about the product and radar technology you can find on the corporate blog at
https://radar-blog.innosent.de/en

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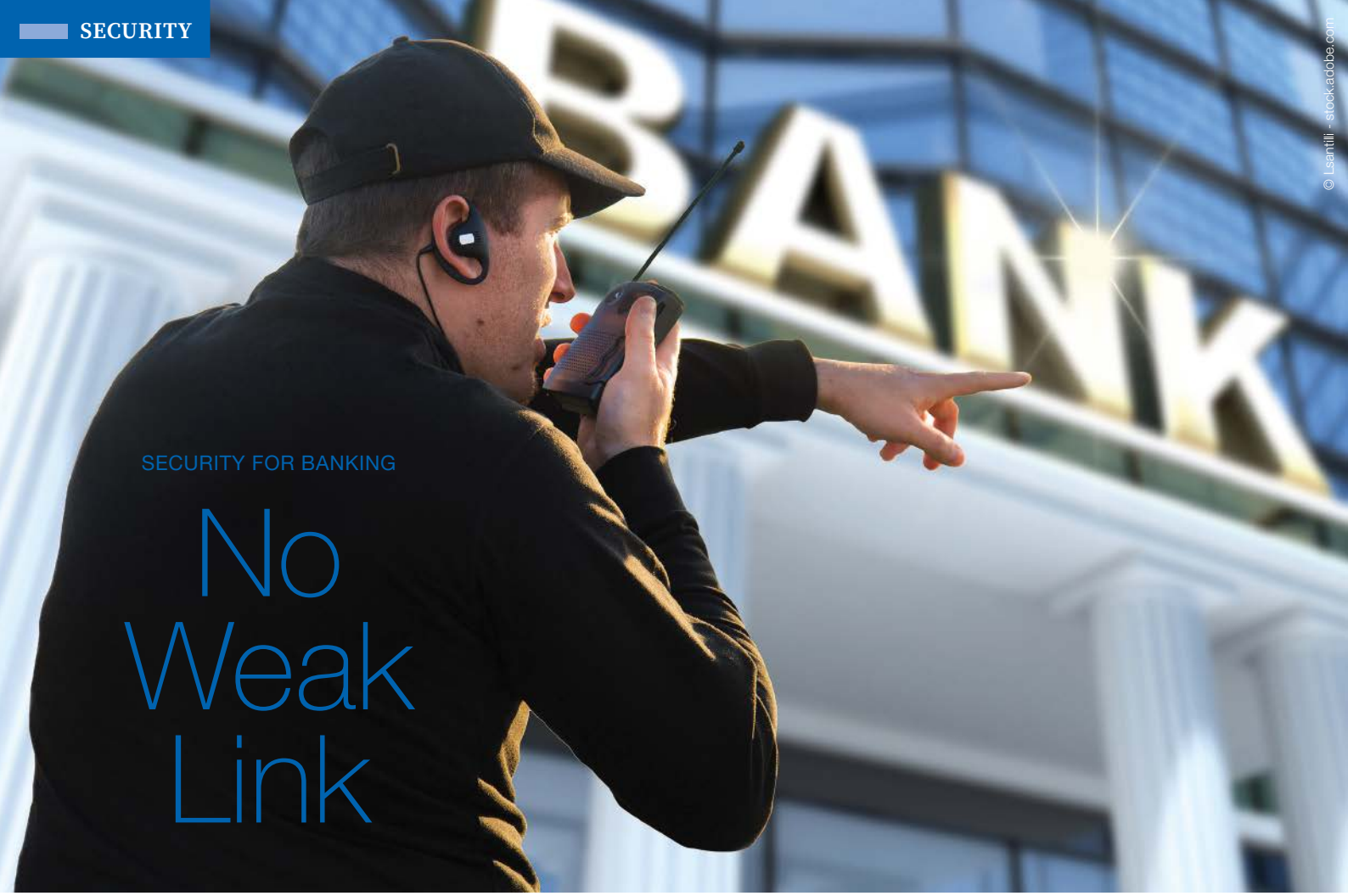

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SECURITY FOR BANKING

No Weak Link

Securing the Future of Banking with Smart Security Systems

Banks are constantly in a cat-and-mouse effort to stay ahead of potential theft and fraud. Criminals are becoming increasingly sophisticated and organized, while banking becomes more complex and distributed. Richard Joslin, senior director of sales at Pacom Systems UK explains that although cybersecurity has recently come to the fore as a significant risk for many financial institutions, the physical security of bank branches, offices, ATMs, and other assets remains business-critical.

J Edgar Hoover, the first Director of the FBI once said, "Banks are an almost irresistible attraction for that element of our society which seeks unearned money."

The damage from attacks on ATMs in 2017 was estimated at over £150 million, with rural areas increasingly at risk. The number of attacks is predicted to triple between 2016 and 2025.

Then there's the risk of insider fraud and theft. A Gartner study on insider threats found that 62 percent of insiders with malicious intent are looking for supplemental income – and they can be found at all seniority levels. One high-profile case of this saw JP Morgan Chase employees access ATM cards for 15 elderly and deceased bank clients. Over two years, they stole over $400,000 from accounts by creating bank cards and withdrawing funds from ATM machines.

New Security Solutions

Thankfully, as the range and complexity of security threats have increased, so too have the physical security systems used to protect our financial institutions. And with recent pressures and changes in behavior due to the pandemic, physical bank security is set to evolve again.

Conventional security systems don't work effectively for banks. Each bank and branch requires different technologies and procedures. The security requirements of a city center branch will differ from a town center location. Branches at motorway locations can be more attractive due to the ability to make a quick getaway. The busyness of individual branches will also influence risk, as well as the number and type of resources on-site (for example, if they hold a lot of valuables or cash). Another consideration is the security of remote ATMs and other resources. ATMs are an attractive target for criminals as they are seen as high-reward, low-risk, and have lower penalties if caught compared to branch theft.

Security technology, therefore, needs to be adaptable to many different situations and requirements. Depending on branch procedure, a security system may have to adjust to certain cleaning schedules, cash deliveries, and understand which employees should be on-site, where, and when.

Flexible and Integrated

Forward-thinking bank leaders, therefore, are investing in solutions that are highly flexible. Solutions that can integrate easily

with other systems will add value to a bank's security system (for example, by integrating with a cash management system for greater insights into insider fraud) and also provide extra future-proofing for emerging technologies and risks.

Having an adaptable and flexible system also increases overall institution security as each branch will have different processes, sensor and alert systems, and access control to navigate. Criminals in organized crime networks will swap intel on how to access different branches and banking systems – but if each location has differing physician security, this lessens the risk of this occurring.

Some solutions can integrate with a building's lighting systems. This can help to improve energy-efficiency as well as deter criminals. When an alarm system is armed, for example, the lights can be automatically turned off. If the alarm is then tripped, lights will go on automatically to spook the intruders. Local police can also be told that if a bank's lights are on at a certain time, to automatically go and investigate. This can reduce the response time to a burglary and catch offenders on-site. Likewise, integration with access control systems can lock intruders in a certain part of the building until police arrive.

Supporting On-Site Staff

Today's physical security systems work seamlessly with on-site staff to make their jobs easier. Many branch employees are required to keep the bank secure while also dealing with customers. As someone goes to open the vault, they may be stopped several times by customers with inquiries. With a smart security system, their jobs become easier as the system can be set to disarm the vault after a certain time, allowing employees to go away and deal with customers. The system can also automatically flag persons-of-interest and suspicious behavior so branch staff know to be on their guard. Other concerning behavior, such as an individual scoping out elderly customers can also be flagged for immediate review and action.

Video feeds and sensor data can also be relayed to central control rooms. This can be useful out-of-hours to inform access on-site for cleaning and cash replenishment. It can also be used for investigations if a crime was to occur and to flag any potential insider threat.

Unset Modes for Smarter Out-of-Hours Access

A further benefit comes through new 'unset modes' offered by some security solutions to automatically grant access to authorized cleaners, guards, and other employees. The system can be programmed to unlock certain areas for a specified time – for example, the front door and lobby area for a guard to make a 10-minute stationery and mail delivery.

Cleaner mode can be activated at certain hours to allow staff to enter general areas. This partially armed system is highly flexible. Timings can be altered day-to-day and access can be granted based on physical cards, biometrics, pin numbers or Bluetooth smartphone credentials. The risk of a cleaner passing their credentials to an unknown person is also mitigated, with automatic ID checking so central control can ensure the person entering a branch is the same person on their ID. This data can also be stored to later verify who was on-site if a crime occurs.

Conclusion

This is but an overview of some of the functions that today's physical security systems can achieve. They now go beyond what people expect from an alarm system – and this helps to improve the in-branch experience for employees and customers, while deterring and catching-out criminals – ensuring that your bank's physical security isn't a weak link in your overall defense against the rising tide of financial crime.

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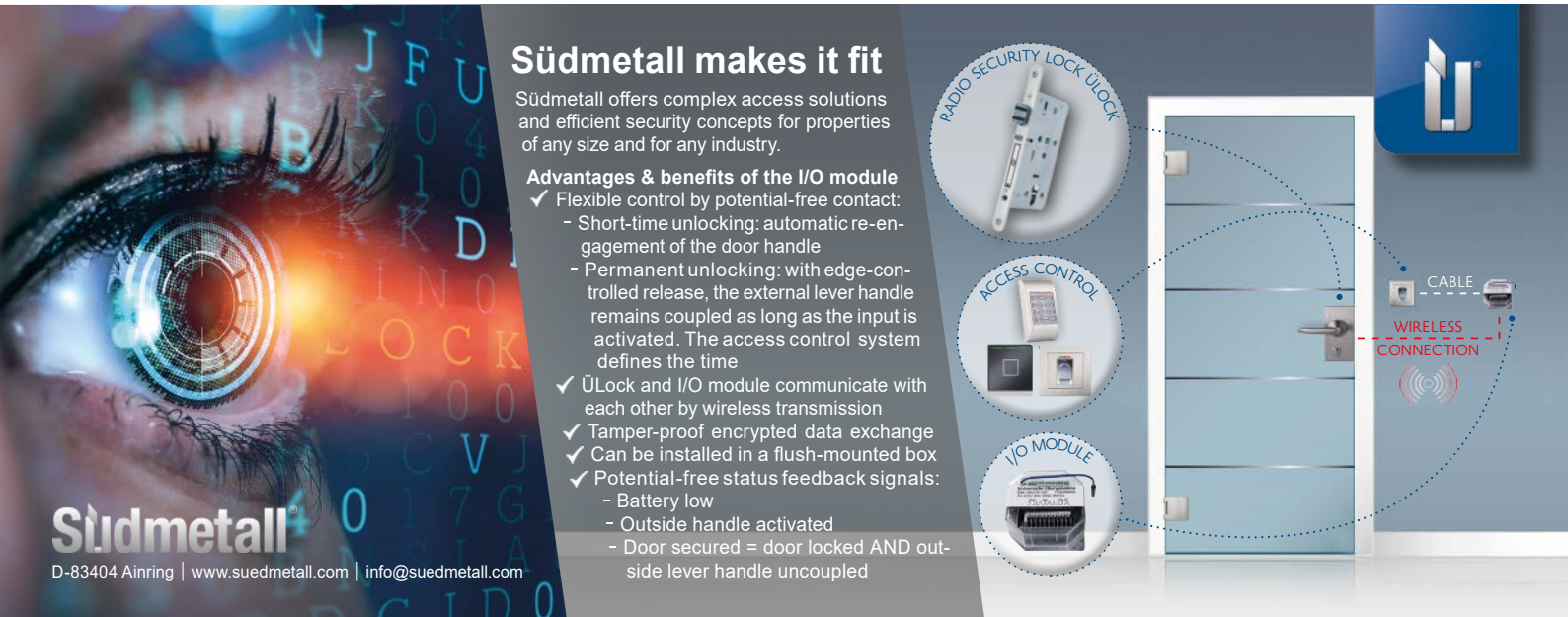
Access Management Software Extended

Integrated security manufacturer TDSi has launched additions to its GARDiS integrated access management software in the new Version 2.2. New features include integration with the STid Bluetooth Low Energy mobile device authentication portal, integration with the RS485 wireless locks from Assa Abloy and SimonsVoss, integration with the TDSi GARDiS VU VMS software, and a new Cause and Effect Engine. Tina Baker, Software Project Manager at TDSi comments, "GARDiS is designed to evolve, anticipate and cater for a rapidly changing security/safety landscape. Both integration with the STid BLE portal and support for RS485 wireless locks provide greater flexibility in deploying highly secure, touch-free access control." The all-new Cause and Effect module fully automates a response to one or multiple inputs (such as an intruder panel for example), so the security operator is assured that the system will enact the required action without the need for human intervention. **www.tdsi.co.uk**



ACCESS CONTROL

The Art of Integration

NTT Opens New Office Embedded with Mobile ID Technology

NTT Research, part of NTT, recently inaugurated new offices in Sunnyvale, California to support its rapid growth and host the area's diverse high-tech talent pipeline. The state-of-the-art technology complex features an exceptional integration of security, infrastructure, and operations solutions such as access control, modular turnstiles, visitor management, video analytics, climate and air quality monitoring and smart windows from renowned brands such as STid, Genetec, Splan, Mobotix Dormakaba and others.

Integrating products and systems from various vendors into a reliable and modern building solution can be quite a challenge. In this case, STid Group, a leading manufacturer in next generation contactless high security, has been chosen by NTT Global Sourcing to cope with this challenge. NTT Global Sourcing is a wholly owned company within NTT, established to create global strategic partner relationships and expand their market share. "We acknowledge the importance of challenging conventional norms in electronic security, NTT Global Purchasing strives to create a convergence and global strategy to actively enhance the competitive position of the company through their numerous top-level suppliers", said Arvind Kumar, VP, Global Head of Indirects at NTT Global Sourcing.

An important factor in this project was the ability of STid's Architect Blue readers and the STid Mobile ID App to provide user-friendly identification solutions by transferring the user's access card onto their smartphone, to work alongside or replace their RFID card. ‚New factors are starting to become increasingly important when designing high-security buildings. As staff members are more concerned about having an exceptional experience at work, they start to consider the building environment', commented Matthew D. Ireland, Chief Information Security Officer at NTT Research.

Strategic Partners

This strategic partnership ensures a comprehensive security level and interoperability due to STid's multiple interfaces and open protocol options. STid offers a unified identification across diverse systems such as Corporate Access Control, Printing, Vending Machines, Visitor Management, Lockers, Cashless Restaurants, Time and Attendance, OEM, among others.

Alex Valadez from Houston-based Innovati Inc., a company that offers project design with high technical and financial value for corporate customers, commented on this strategic partnership: ‚Companies are exposed to the constant global risks that involve damage to the company's reputation, heavy economic losses or even the well-being of employees. We offer all kinds of technological solutions to improve and streamline internal processes and guarantee the well-being and safety of the company. We have a profound expertise in supporting companies incorporate instinctive readers and cards to enhance their businesses. We are collaborating with NTT to implement a comprehensive security management autonomy and increasing the global mobility NTT requires.'

A large number of desktop bluetooth readers are being integrated at Sunnyvale to comply with NTT challenging variety of user profiles: ARCS-B/BT: Keypad/RFID/Bluetooth/NFC readers, and ARCS-AQ/BT: Standard/Bluetooth/NFC/QR Code readers plus a couple of ARC-D/BT readers.

‚We commiserate with NTT and Innovati Inc. core values, our firm commitment to our clients shaped by our outstanding customer service, our quest for technical excellence archived by only deploying top of the range components, and our passion for cutting edge technology with ambitious character will be the foundations of our alliance', explains Pierre-Antoine Larrera de Morel, Vice President at STid Group Global.

Mobile access terminal at NTT Research

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www.stid-security.com

www.saltosystems.com

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ACCESS CONTROL

Shared Access

An Access Control System for Rented Office Space

Hopfgartner Kunststoff and Umwelttechnik creates innovative special solutions made of plastic. They are used in areas where liquids or gases must be captured, collected, cleaned or routed. The Hopfgartner workforce now occupies a new company site at Ilmendorf, near Ingolstadt in Germany, which comprises a large office complex together with production, storage and cold halls.

The economic combination of classic online access control at the external access points with mechatronic offline locking devices for internal doors was chosen by the developer of the company premises, Fairnett. The choice was the modular AccessOne access control system by CES.

Not every door in the building requires cabling, yet the user still expects the highest level of security and ease of use at all doors. Planning foresight helped to determine the customer's specific solution that can also accommodate future developments. The three-storey office building offers plenty of space, not only for Hopfgartner but also for three other commercial tenants. The façade of the office complex has a refined, rust-colored look that makes an interesting contrast to the exposed concrete of the adjacent production hall.

Door Controller

The AccessOne controller, located in the technical room of the building, maps a wide range of different door situations as well as controlling and monitoring the doors. It is equipped with an emergency power supply and can operate

Headquarters of Hopfgartner in Ilmendorf, Germany

Updater in Siedle Vario housing at the main entrance

The main door to each of the rental spaces is secured by an electronic cylinder.

autonomously in the event of a server or network failure, continuing to function without interruption. The controller operates on an entirely standalone basis, ensuring the reliability and security of the doors at all times.

Individual access rights to all of the doors, personnel access gates and roller doors can be defined and managed within the access management software. The access movements – in both temporal and spatial terms – of authorized persons are stored here. The software can also be extended later with numerous additional functions: a multi-client function, time and attendance registration, visitor administration and various others. This allows each tenant to configure an access control plan appropriate to their individual requirements and to integrate additional systems via interfaces.

Update Readers: Always Up-to-Date

The cabled update readers are installed in the immediate vicinity of the two entrance doors and both personnel access gates. These constantly exchange data with the controller via a data cable. The update readers are built into Siedle Vario housings and linked to the intercom system via the AccessOne interface. To enter the building, employees hold their ID cards (RFID transponders – Mifare, DESFire) in front of the update reader. The authorization on the ID card is checked and updated by the reader in an instant. After this daily update at the site boundary, employees can then use their ID cards to open all other doors for which they are authorized. Information is then exchanged between the cabled access control devices and the offline mechatronic locks via the ID cards. The newly occupied premises of the plastics manufacturer are generously spread over three floors.

The reception, archive, foreman's office, changing area and common room, plus the technical, server and cleaning areas are all on the ground floor. The two upper floors comprise offices, a kitchen, meeting rooms and the offices for the management and secretaries. These doors are secured with mechatronic locking cylinders that are equipped with batteries and not cabled. After their initial programming, the locks do not need to be individually reprogrammed again, even if the room is used for a different purpose later. This is a decisive time and cost advantage for the system operator.

Blocked When Lost

If an ID card is reported as lost, authorization for that ID card can be instantly cancelled by marking it in the software as blocked. All other ID cards also receive information about the lost 'colleague' from the update readers and pass this to the doors in the building. This prevents even the offline locking cylinders from being opened using the lost ID card. The security of the rented areas therefore already begins at the outer doors.

Growing With Demand

Many additional features are available through either the hardware or software; these can be purchased and integrated or installed at a later date. The same applies for interface expansion to other systems. The AccessOne access control system grows on a modular basis along with the requirements of the premises.

Mario Hopfgartner, Technical Director of Hopfgartner Kunststoff and Umwelttechnik said of the manufacturers, "From the genuinely competent advice and project planning, through to the user training and commissioning of the access control system, I have found CES to be a long-term and reliable partner."

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Gallagher Opens Doors for Small to Medium Businesses with Release of Key Tags for Access

Gallagher launched Key Tags to the Australian and New Zealand markets – an alternative access credential for their small to medium business security solution (SMB). Designed to simplify the security operations of small to medium businesses, Gallagher security for SMB is a cloud-based security platform that provides business owners with the freedom to manage their security from anywhere, with an easy-to-use mobile app. The Key Tags feature was developed in response to feedback from customers that while they enjoy the ease of mobile credentials, physical tokens still have their place, for example if a staff member leaves their phone at home. The current use of mobile credentials within the SMB app minimises the cost and effort involved with managing physical access control credentials such as keys and pin codes – as credentials are managed online and emailed directly to the end user's mobile device. While mobile credentials have many benefits, sometimes a physical credential is preferred. "Although SMB was designed as a mobile-first solution we understood from working with our customers that an alternative access credential to the phone was required," explains Lisa Tubb, Senior Product Manager for SMB at Gallagher. "With Key Tags, customers of our small to medium business solution now have the flexibility to choose an additional credential technology that may better suit their business and their people."

www.security.gallagher.com

ACCESS CONTROL

Digitalisation and Integration

To build a house, to go inside and move around: that is one of the oldest activities that signifies human behavior and culture. Even when architects and building engineers made enormous progress very early on, and even though materials, technology and project management have since been refined – we have experienced a leap in development on a whole new scale in recent years. Specialized subsystems of building technology and building security are being networked together and, thanks to digitalization and automation, the building gains a sort of intelligence.

This development is not only being driven by efforts to make the use of buildings more convenient. These days, it is also about such important trends as climate protection and the efficient use of scarce resources, the raised level of security in buildings – but also the change in the type of usage, keyword 'urbanization', and new ways of working. Above all, from the point of view of the accountants, the integration of functions in comparison to the operation of separate 'silos' with their individual functions of lighting, air conditioning and heating through to alarms and access control is beneficial, because it saves costs.

The basis of all of this is the improved collection and usage of data. The access control system actually generates large amounts of data that can be relevant for the entire building management system. Their interoperability can make processes more efficient; security can be improved; costs can be reduced.

We look at how this development is being driven forward – technically and through cooperation with other players in the security industry – in conversation with Assa Abloy, one of the most important manufacturers of (digital) locking systems. Significant examples of this are the cooperation of Assa Abloy with Siemens and Genetec. GIT SECURITY spoke with Russell Wagstaff, Platform Director at Assa Abloy.

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Get Connected

GIT SECURITY Interviews Russell Wagstaff, Platform Director at Assa Abloy on the Long Availability but Slow Spread of Building System Integration

GIT SECURITY: Mr. Wagstaff, integration of different systems in buildings is one of the most discussed issues in the entire security industry and beyond. Buildings are becoming smart, which is not only a question of convenience but also of security, process and cost-efficiency, and also sustainability. This is all quite complex – so let us start by specifying the subject of our interview: what does 'integration' imply from an access solution provider's point of view?

Russell Wagstaff: The essence of 'integration' is about being joined up. Joined-up systems and technologies enable an organization to handle multiple processes together — to save time and money, reduce errors, operate more efficiently and so on. The value of integration is quite simple — and access control's role is central. If a building 'knows' who is coming and going, where they are, how many are in

specific areas at certain times, then systems such as lighting, HVAC and video can react accordingly. The system integration is where it all begins.

You have recently found out in a survey that companies regard integration as particularly important for their respective business. On the other hand, many companies have not really implemented unified building management systems. So pushing the integration topic in the market is apparently an important part of Assa Abloy's overall strategic approach?

Russell Wagstaff: Indeed. In an EMEIA-wide survey of security professionals and end-users conducted for our Wireless Access Control Report 2021, over 90% of respondents identified the importance of integration across building functions. Half or more said they would prioritize electronic access system integration with CCTV, alarm and visitor management systems. Yet for many, deeper integration of building systems remains an unfulfilled wish. The report survey investigated what was holding them back. For most it is cost (59%) or a lack of technologies developed to open standards (27%). For over a quarter of respondents (26%) however, one roadblock they identified was a lack of knowledge – highlighting a need for better market education.

This is an area where we have deep expertise to share. We have been doing integration for a very long time: our Aperio wireless locks, designed to expand almost any access system, have been available for over a decade. The range is still widening and the technology improving, adapting to new user requirements such as mobile keys. Looking to the future, our new Incedo platform is an entire access control ecosystem built for integration, with devices from our own range supplemented by compatible solutions like CCTV.

The technical backbone of integration is provided by connected ecosystems, data capture and analysis for 'intelligent' buildings. Can access control integration be done via hardware or software?

Russell Wagstaff: Both! Integration is not a one-size-fits-all process. In fact, by partnering with an experienced integrator and access control provider, an integration should be designed to achieve whatever goals or efficiencies the customer is targeting. It can incorporate hardware or software integration — or both.

For hardware integration, it is critical that hardware be designed for interoperability, built to agreed, compatible standards, with an integration-ready API. As well as being more flexible, solutions developed to common standards are better future-proofed. Standards ensure investments can be made today with the confidence that hardware and firmware can be built on in the future, whether in expanding to new premises, developing a 'smart building' or whatever.

Security software offers another powerful integration path. Our CLIQ key-based access system with a wide range of locking cylinders, for example, can be integrated via the Web Manager into other security or building management solutions. A CLIQ software integration with Genetec´s Security Center is already launched. This helps Security Center users to broaden their access control capability, administer locking more efficiently and better protect all kinds of premises from increasingly sophisticated and diverse threats.

Company partnerships are crucial for making integration happen. One of the most recent and probably most important co-operations you have set to work is one with Siemens: Assa Abloy's Aperio battery-powered access control has been integrated into Siemens' Siveillance Access from their Smart Infrastructure Suite ...

Russell Wagstaff: That is correct. Our integration collaboration with Siemens supports a growing number of devices from the Aperio range, including the escutcheon (E100), cylinder (C100) and, in the near future, the cabinet lock (KL100). Each integrates seamlessly with Siemens SiPass, giving security teams control over almost any interior or exterior door – including wooden and glass doors as well as fire doors – from a single, familiar interface.

Our battery powered Aperio locks make it simpler and more cost-effective to extend access control further into a building. This increases the overall security of the premises. Movement around the site can be monitored and measured to extract insights about building use, while reducing breaches and thefts.

Managing access deeper into a building – far beyond the perimeter or entrance door – provides an opportunity to harness this valuable business data. It also enables more flexible use of space: access may be varied depending on the time of day or week, for example, making 'touchless office' policies easier to implement. In the case of one-off events, open access can be extended widely then quickly returned to secure status.

An integrated system is already deployed at Hamburg's Hafen-City University (HCU), where Aperio wireless locks extend Siemens' intelligent access control. Around 500 Aperio cylinders are connected to and controlled by the university's Siemens system.

You point out that the integration of wireless locks into a security management platform is particularly cost-efficient and future proof? Could you expand on that a little – and in what other ways does integration play a role in the pursuit of cost efficiency?

Russell Wagstaff: So many efficiency gains flow from operating a single, integrated management system rather than multiple systems in parallel silos. For example, the need to administer

Genetec´s Security Center is also one that supports integration of Assa Abloy's products

and update separate systems may create double or triple the work. Duplicating data entry also increases the chance for errors. The job gets done quicker because the system is always familiar. Staff induction and training are more straightforward.

To quote one independent Omdia analyst, "Access control integration is essential to unlocking the potential of higher-level BMS platform functionality. As more BMS solutions move towards command-and-control-style features, which allow buildings to adjust building management subsystems to respond to individual occupants' actions, the need for access-control integration grows exponentially"*.

Integration also helps building users to work smarter. One credential, on a smartcard or phone, might open the car park barrier, then the building entrance and their department door. It may then unlock their laptop, let them book a meeting room and buy lunch in the café. It's so much quicker and more efficient with an integrated system.

Siemens SiPass supports a growing number of devices from the Aperio range

When talking about buildings today we have to concede that the Corona crisis has reinforced a trend towards a certain loss of importance of offices. A significant number of both employees and companies seem to believe that working from home should survive corona – and there is also the concept of hybrid working. Is this also something that can be managed better by integrating building technology components?

Russell Wagstaff: The continued growth in home, mobile and 'hybrid' working certainly requires building security to be more flexible. The right access control technologies and devices can make tracing movement and contacts much easier, for example. The data generated by an integrated access system can help businesses manage space usage more efficiently in this 'new normal' we are entering.

When an organization replaces mechanical locks with integrated wireless door devices, there is less need for keys to be shared or passed around. A few clicks in the system gives employees permission to enter on some days but not others, for example. Connect a user credential with the photocopying or library borrowing system and you add greater flexibility to allow people to work when they need to, not necessarily when everyone else does.

Remote management of an integrated system frees security managers from their desk. They too can work smarter, and from anywhere. The integrated system can detect entry then coordinate with automated heating and lighting or alarm systems to perform an appropriate function in response.

The integration of different solutions, products and technologies is quite demanding for manufacturers, integrators and customers alike. What does this mean in terms of training for Assa Abloy and its customers?

Russell Wagstaff: It is important to mention that one goal of integration is to help customers reduce the need to constantly train staff on new systems, new interfaces, new ways of generating and managing data. This is very different to the 'old way' of running building functions in silos. Not only did these systems refuse to 'talk to' each other, they also required staff to be trained in each one separately. Controlling as much as possible from a single, integrated interface is much more efficient.

Mr. Wagstaff, we're already approaching 2022. How will the story of integration continue at Assa Abloy and its partners?

Russell Wagstaff: Although we have been making and selling integration-ready access control for over a decade now, we still feel this is only the beginning. There is vast potential for integration to help buildings and building management to be more efficient.

Let me finish with a brief example. The UN Environment Program estimates that buildings consume around 60% of the world's electricity. We can do better! By providing the 'grammar' that allows building systems to communicate and interoperate – to be smarter – integration is a small but important part of the solution.

Assa Abloy's Wireless Access Control Report 2021 is free to download at: https://campaigns.assaabloyopeningsolutions.eu/wacreport2021

* https://omdia.tech.informa.com/OM003090/Electronic-access-control-integration-is-the-first-stop-on-the-road-to-smarter-buildings

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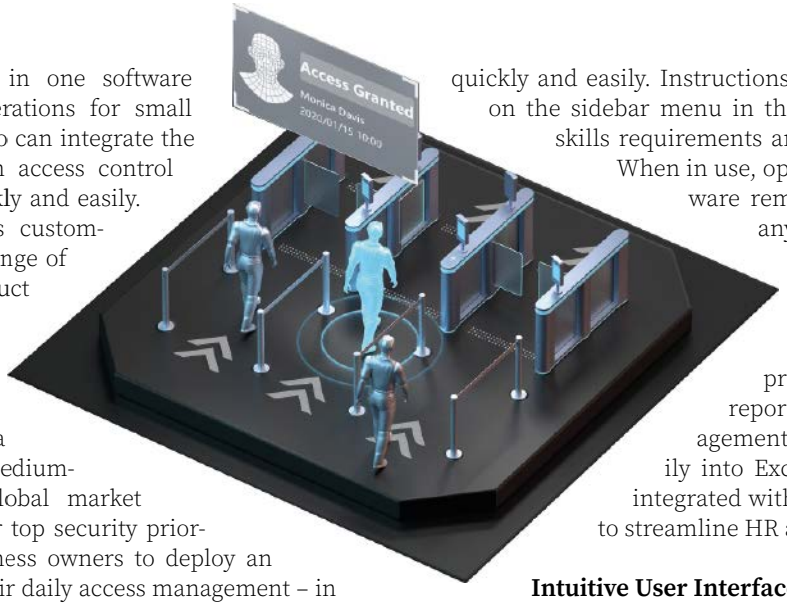
ACCESS CONTROL

Access Control and Time Attendance Made Easy

A Fast Track to Effective Access Control and Attendance Management

Combining time and attendance and access control together does seem a natural option, it is important to know that companies specializing in access control do not necessarily provide exceptionally good time and attendance system and vice versa. They are two very different concepts after all. Hikvision has announced the launch of its HikCentral Access Control software as a new offering of its signature HikCentral family. Inheriting the complete access control and attendance capabilities from the existing HikCentral Professional, the new software is designed and dedicated for professional access control and time attendance management in an easier and more efficient way.



Integrating both functions in one software simplifies security and operations for small and medium businesses, who can integrate the system with their Hikvision access control and intercom products quickly and easily. With the software business customers can experience a wide range of benefits. We have asked product manager John Cheng from Hikvision about how Hikvision approaches the access control market with this solution: 'There are a large number of small- to medium-sized businesses in the global market where access control is their top security priority, it is important for business owners to deploy an easy and fast solution for their daily access management – in a flexible way. This is how we designed our HikCentral Access Control software. The software significantly simplifies and optimises how small businesses manage access control with needed credentials, and streamlines their employee attendance and HR administration with flexible rules and straightforward reporting.'

Maximized Security

HikCentral Access Control supports a wide range of employee ID credentials, including fingerprints, cards, facial recognition, QR codes and PIN codes, to ensure flexibility and security for employee access authentication. It also includes advanced access security features such as multi-door interlocking, anti-passback, and multi-factor authentication, providing high levels of protection for sensitive areas. Alarms are also triggered in real time when rules are breached, accelerating responses, and minimizing potential losses, damage, and other negative impacts.

Minimized Deployment Complexity and Simplified Setup

The new software requires limited hardware processing power. Customers with minimum hardware requirements of i3-CPU and 4 GB RAM can get the software up and running in minutes. Customers can set rules for access permissions and work shifts quickly and easily. Instructions for doing this are available on the sidebar menu in the portal interface, reducing skills requirements and speeding up the process. When in use, operators can manage the software remotely with a mobile app at any time, from anywhere.

Optimized HR Reporting

The HikCentral software provides detailed attendance reports to support better HR management. These can be exported easily into Excel, CSV or PDF formats, or integrated with third-party payroll systems to streamline HR administration.

Intuitive User Interface

The software offers a dynamic view of multiple sites of a building and access control device status based on an interactive E-Map. This allows effective responses to event alarms and device anomalies in a timely manner.

The new HikCentral Access Control is provided free of charge to Hikvision customers with up to 4 access doors, and up to 50 employees for clocking in and out. It can also be scaled quickly and flexibly for larger sites and workforces. Where necessary, it can also be upgraded to HikCentral Professional – a more sophisticated and versatile software platform – designed for centralized management of a variety of security and business applications, including video security, access control, alarm systems and more, for end-to-end protection of people and assets, and greater operational efficiency.

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ACCESS CONTROL

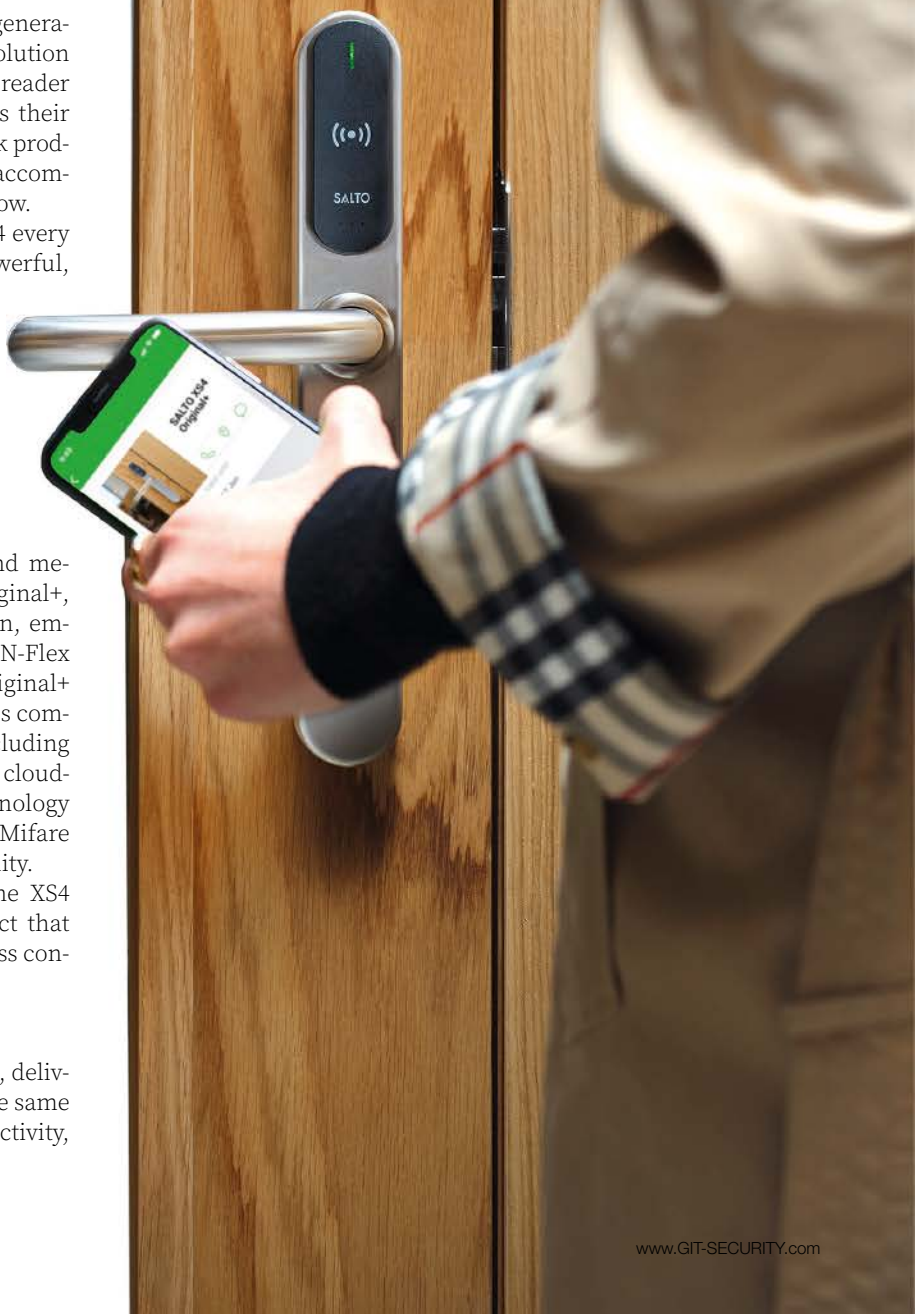
Sleek Design, Advanced Functions

Smart Access Features at Your Door

In the world of IoT and with the rise of mobile and cloud applications, electronic lock manufacturers are facing constantly changing technical requirements for their products. Featuring a sleek design, Salto's XS4 Original+ is a smart locking system delivering next-generation access control technology in a market proven solution.

Salto has introduced the XS4 Original+, the next generation of its flexible and reliable smart locking solution that features a beautiful design with a sleek flat reader in two new colors. The new Salto XS4 Original+ takes their trusted and proven flagship XS4 Original electronic lock product family and incorporates the latest technology to accommodate access control needs of both today and tomorrow.

"Our customers, partners, and users rely on the XS4 every day, which is why we've made XS4 Original+ more powerful, capable, and redefined to elevate any door's security and management," said Marc Handels, Salto Systems Chief Technology Officer. "When you have an excellent product like the Salto XS4 Original electronic lock that has withstood both the test of time and technology, it makes sense to improve upon what is already working very well."



Featuring Salto Space and KS

The design is based on the same proven housing and mechanical mechanisms of the XS4 Original. The XS4 Original+, however, is optimised for future-proof communication, embedding Salto's BLUEnet real-time functionality and SVN-Flex capability, that enables Salto stand-alone smart XS4 Original+ locks to update user credentials directly at the door. It is compatible with the array of Salto platform solutions including Salto Space data-on-card, Salto KS Keys as a Service cloud-based access solution, and Salto's JustIn Mobile technology for digital keys. The XS4 Original+ also includes RFID Mifare DESFire, Bluetooth LE, and NFC technology functionality.

"By incorporating the latest in technology into the XS4 Original+ locking range, Salto has delivered a product that extends up-to-date and comprehensive electronic access control to any door," said Handels.

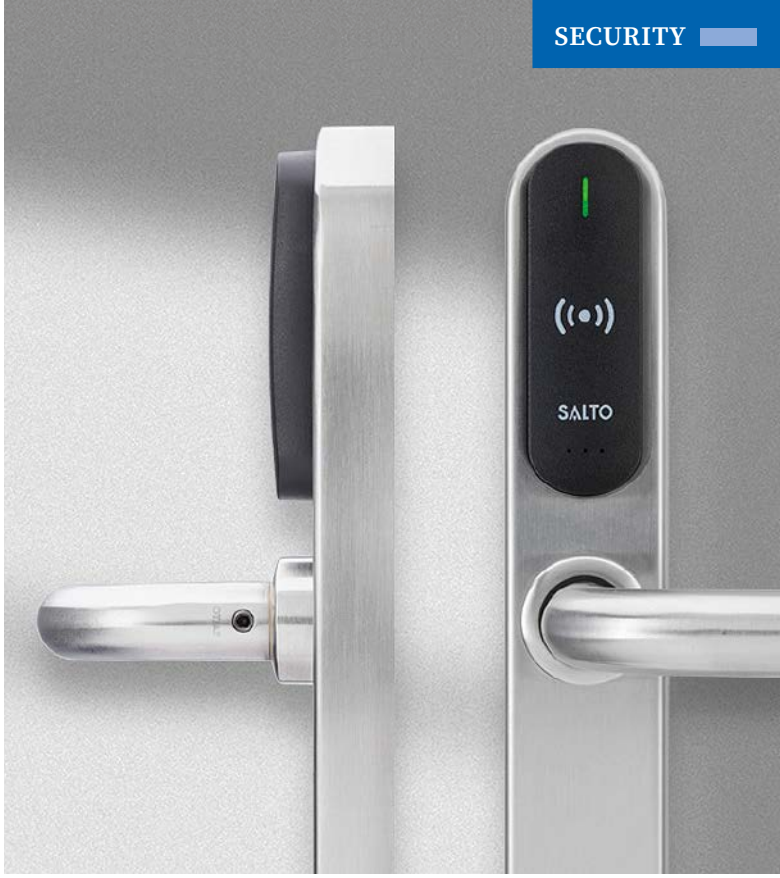
The Engine

The XS4 Original+ is much faster than the XS4 Original, delivering more performance, new security architecture, the same electronic functionalities based on BLUEnet connectivity, and better power efficiency.

The feature rich new security architecture, which is protected against internal and external attack, makes everything more fluid, transforming the way users' access, operators manage, and installers' set-up the electronic lock.

There is an XS4 Original+ model for every type of access and customer need. The existing XS4 Original models are fully available in the XS4 Original+ product range – from the key override option to mechanical or electronic privacy models. Just as with the original version, the Salto XS4 Original+ is suitable for a wide range of customer applications including interior doors in educational or commercial buildings, or tailored solutions for other specific building requirements. Easy to install and retrofit, it works with ANSI, Euro, DIN and Scandinavian door industry standards. Universally compatible, it can replace your existing door hardware and fits any door with unlimited model options. XS4 Original+ wide reader models are slightly wider and the reader is now flatter.

"Salto has long sought feedback from our end users and partners on what they desire in an upgrade and, taking their input into account, we have developed the XS4 Original+ which delivers everything needed for current and future smart lock solutions," said Aznar Sethna, Salto Systems Chief Sales & Marketing Officer. "With restyle designs, industry-leading performance, and advanced access control features with impressive communication capabilities – all with incredible durability – the XS4 Original+ ensures customers get secure and safe access when they need it.



Salto is incorporating the latest in technology into the XS4 Original+ locking range

Redefined and Durable Design

The XS4 Original+ works with existing XS4 Original door hardware. A broad range of different models and functions make smart access to any door possible to cover all needs of any type of building. Visually, it differs from the conventional XS4 Original only in a few details with improved reader aesthetics.

Thanks to a sleek design update, the XS4 Original+ looks better than ever. The reader is now flatter and available in black and white for a simplified, modernized front. The ANSI, Euro Wide, and Scandinavian Wide standard reader models are a little wider creating a more harmonious version. The XS4 Original+ can be tailored to your building and door needs with a wide variety of colours and finishes, including the new Dark Bronze finish, and black or white reader options. These can be visualized on a wide range of door styles by using the Salto MyLock Configuration tool: https://mylock.saltosystems.com/

The Environment

The XS4 Original+ is designed to minimize its impact on the environment. Today, Salto is carbon neutral for corporate factory operations, and is committed to having net zero climate impact across the entire business, which includes manufacturing supply chains and all product life cycles. The XS4 Original+ is the latest model from Salto to be delivered to customers net CO_2-neutral. This concept involves offsetting the CO_2 emissions generated during the manufacturing process and the logistics until it is delivered to the customer. The system is now available for order.

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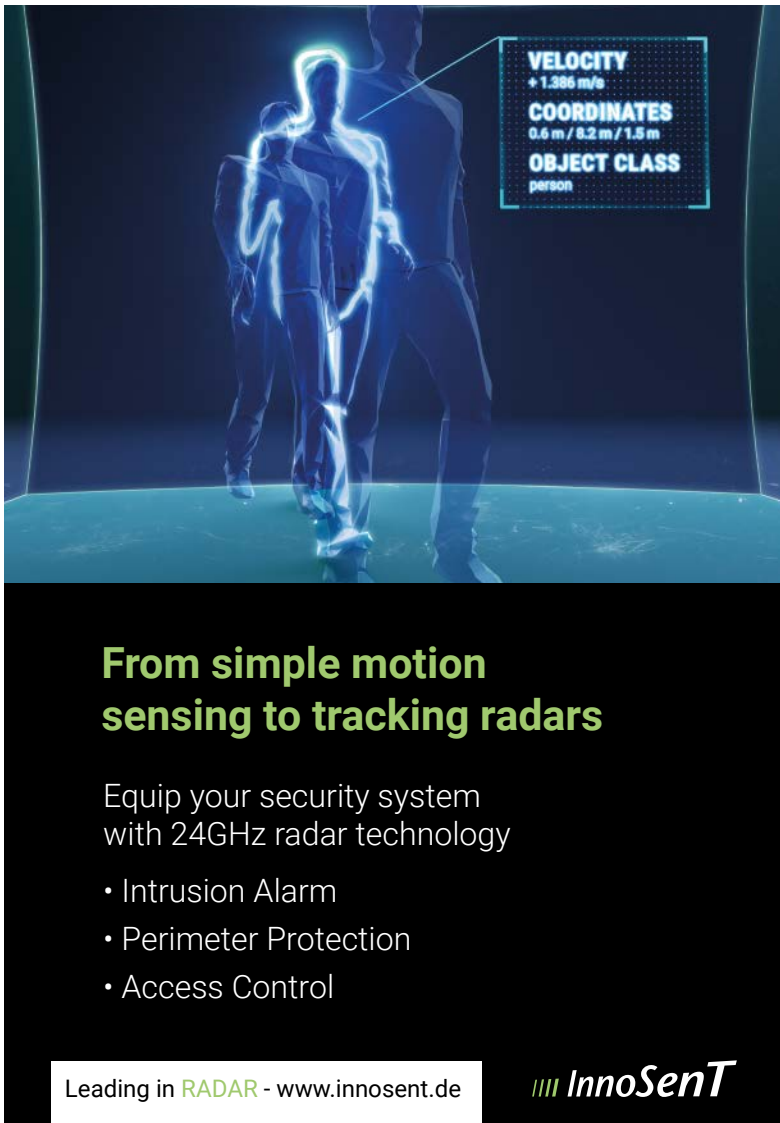
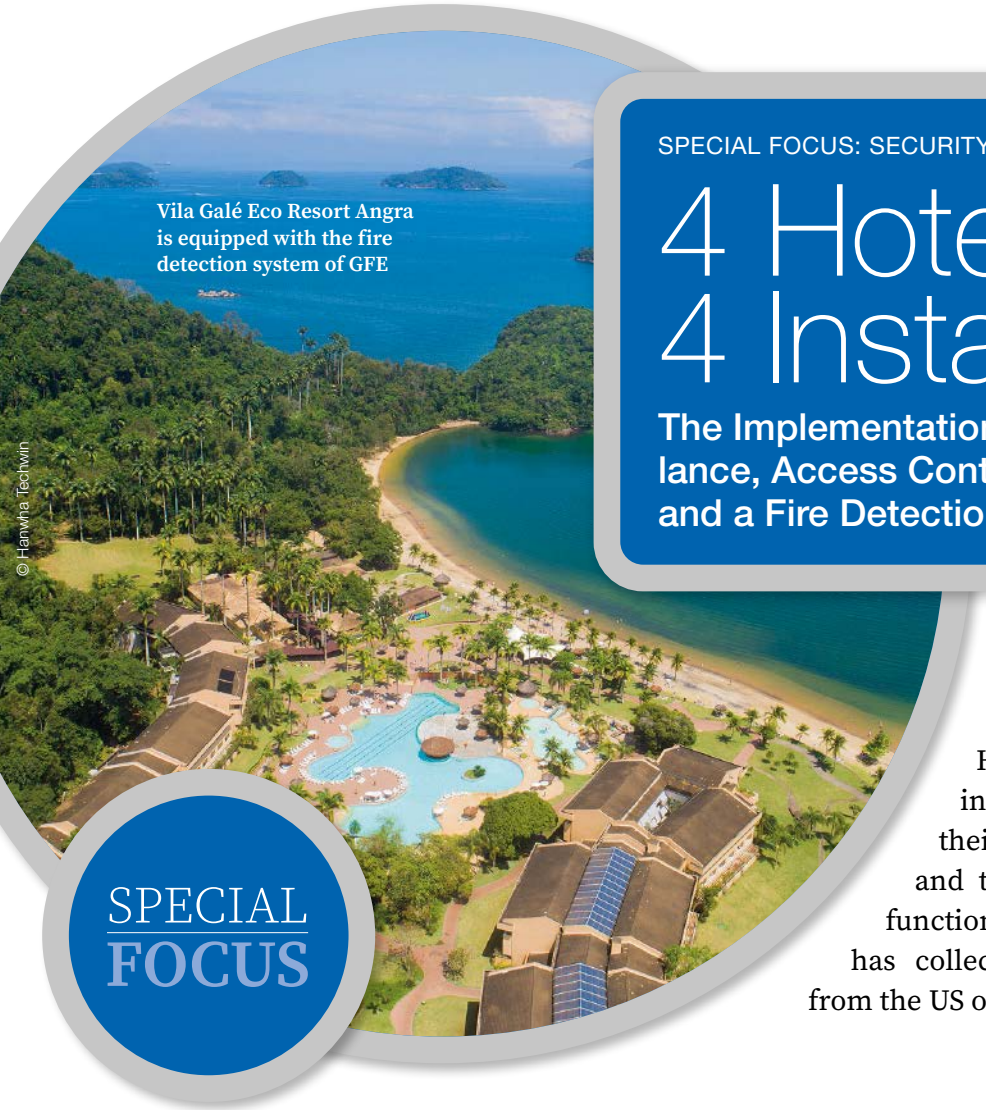




Vila Galé Eco Resort Angra is equipped with the fire detection system of GFE

SPECIAL FOCUS

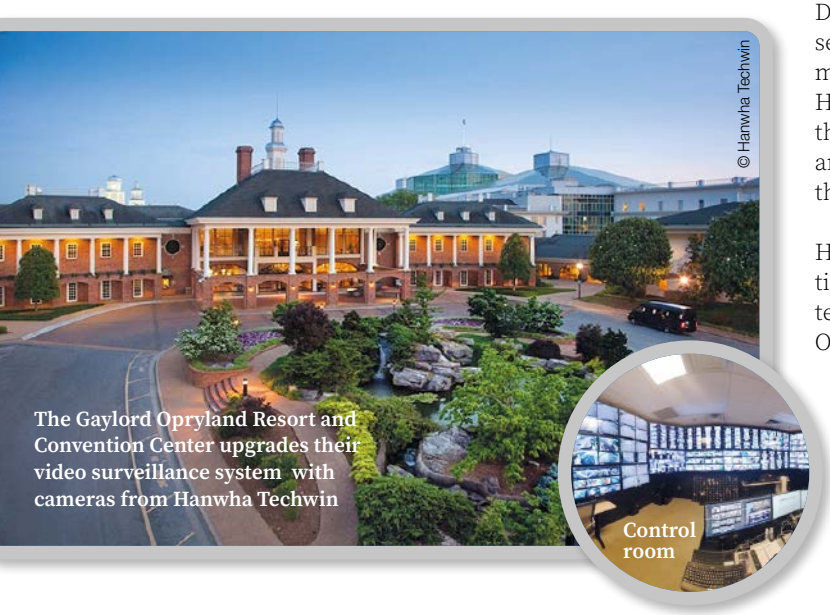
SPECIAL FOCUS: SECURITY FOR HOTELS

4 Hotels – 4 Installations

The Implementation Story of a Video Surveillance, Access Control, Intrusion Detection and a Fire Detection System

Hotels have on common compound: They receive guests. However, each hotel differs in architecture, clientele, size, their need for security solutions and the difficulty of employing a functioning system. GIT SECURITY has collected four installation stories from the US over Australia, the UK to Brasil.

From surveillance through identification at the door over fire safety, the most important factor is, that guests and staff are safe and in control of their situation in case of emergency. Of course, there are many different technologies and factors, but in this article, GIT SECURTIY has collected three installation stories for four hotels and four different compounds of security and safety.



The Gaylord Opryland Resort and Convention Center upgrades their video surveillance system with cameras from Hanwha Techwin

Control room

Marriott: Video Surveillance System for Resort and Convention Center

The Gaylord Opryland Resort and Convention Center is the largest Marriott property in the world. Located in Nashville, Tennessee, Gaylord Opryland offers visitors the chance to experience Music City under a single roof. The Resort has a hotel with over 3000 suites and rooms and a smaller adjacent hotel with more than 300. Now, they have upgraded their video surveillance system with cameras from Hanwha Techwin. Greg Pezzo, the Director for Safety and Security at the Resort says: "Our older security camera images are grainy or black and white, which means we could not get the level of detail we needed. But, with Hanwha cameras, we are able to capture high-quality images that show us, for example, how a guest fell. Whether there was an obstruction, water on the floor, or an indentation or whether the guest simply tripped."

Ryman Hospitality, the organization that owns Gaylord Brand Hotels, decided to embark on a risk assessment of their properties in 2017. The third-party assessors discovered that CCTV systems were lacking in all of the hotels, including at the Gaylord Opryland Resort. According to Pezzo, "the system consisted of old operating systems and cameras that didn't all work. The security team could not get consistent playback from all of their cameras, and they were not able to store data for more than a few weeks at a time."

Working with integrator Herring Technology, Ryman Hospitality designed a solution that features a new video management system (VMS) from Milestone Systems and

400 state-of-the-art cameras from Hanwha Techwin. The Resort purchased a variety of Hanwha cameras, including 145 full HD cameras with video analytics, 182 Q series indoor and outdoor dome cameras with IR, and more than 20 multi-directional cameras.

Deciding where to place their cameras was a relatively simple process. Pezzo explains, "We added cameras where we had high volume, where we had experienced problems in the past, and where we didn't previously have cameras at all." They also looked at their own data relating to theft and other incidents to help determine camera location.

For the Gaylord Opryland Resort and Convention Center, the upgrade had an immediate impact. According to Pezzo, "On the first day after installing the new cameras, someone attempted a false claim, but we were easily able to prove that it was not our fault." For 2021, the Resort has planned to invest in more new cameras every few months as the budget becomes available.

Digital Key feature, such as Salto's Justin Mobile or Salto Keys as a Service, can be implemented as a standalone app

The Hilton Experience: Digital Keys

Access control solutions that offer the Digital Key feature, such as Salto's Justin Mobile or Salto Keys as a Service, can be implemented as a standalone app. However, national, and international hotel groups choose to embed the functionality into a branded guest mobile app, which is integrated with the hotel's Property Management System (PMS). Research shows that when guests can find their key within the hotel app, download rates increase, and the in-app purchase rate goes up to an estimated average of $140 per room per year. A Digital Key is stored in the hotel guest app on the guests' mobile device. When presented to a lock, it uses BLE (Bluetooth Low Energy) to open the lock. With Digital Keys the hotel administrator can grant designated access to guests, employees, or even delivery services whenever it's appropriate for them to enter. The convenience of being able to open doors with Digital Keys is undeniable.

"Many of our loyal 'Honors' members are business travellers who are incredibly tech-savvy. We are thrilled our hotel is able to offer them this cutting-edge Digital Key technology and give them an easier, more convenient stay." said Rupert Hallam, General Manager, Hilton Adelaide.

Hilton Adelaide in Australia partnered up with Salto Systems and implemented the solution to their system. This gave the hotel the ability to integrate Digital Keys into their 'Hilton Honors' guest app. Within 24 hours of arrival, Hilton Honors members who book direct through Hilton's channels can digitally check-in, choose their exact room from a digital floor plan and request a Digital Key through the Honors app. Hilton Adelaide will notify guests through the app as soon as their room is ready. Honors members with previous stay history can then head straight to their room when they arrive, pressing the virtual "unlock" button on the app when they're within five feet of their door. Improve safety for guests, visitors, staff and property meeting hospitality's unique security challenges is Salto's approach. Their solutions combine robust 24/7 security with seamless, convenient and safe digital access from the guest room to the back-of-house, saving countless staff hours per week. "With the app, Hilton Honors members can take advantage of a seamless and contactless experience. Digital Check-in and Digital Key allow guests to go straight to their selected room, bypassing the reception", says Hallam.

The Londoner: Intrusion Detection for 5 Star Hotel

Optex has specified and installed its compact and intelligent Redscan RLS-2020 LiDAR laser sensors at the new luxury five-star Londoner hotel in Leicester Square. Part of the Edwardian Hotels London group, The Londoner, which opened in September 2021, is billed as the world's first super boutique hotel. It has 350 rooms across 16 storeys including six basement levels, featuring six concept eateries, a private members club, a cinema, a wealth of meeting and event space and an entire floor dedicated to health and wellness equipped with a gym, pool and spa. The hotel has six restaurant and bar areas in total with expensive whiskeys, wines and other drinks on display 24/7 with no shut-

ters or coverings. Given the cumulative value of the drinks behind each bar, the hotel needed to find a security solution to keep its valuable stocks protected. The solution needed to be accurate and reliable, and capable of integrating with the hotel's existing security system, as well as being aesthetically discrete.

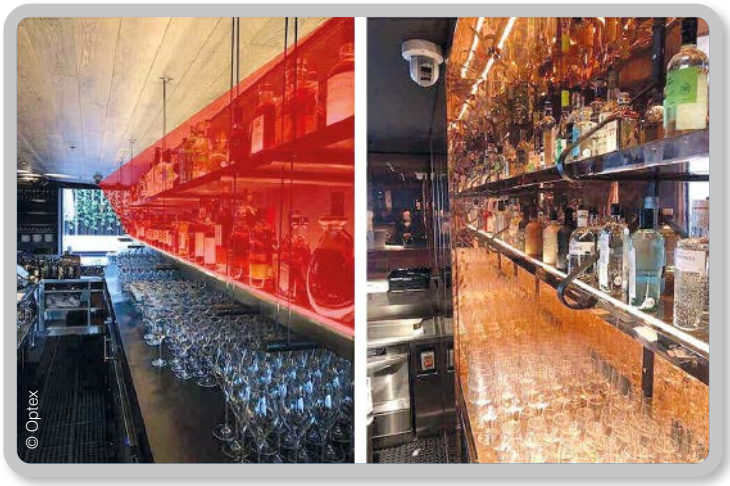
Installation

Optex specified and installed its Redscan RLS-2020 laser sensor in the ceiling at each of the seven bars. The RLS-2020 sensors provide a customisable 'virtual' wall or plane that cannot be seen by the naked eye with a 95-degree detection area of 20x20m or 30m radius detection range. The laser technology works by analysing the speed, size and distance of the objects detected, meaning they track the objects within the detection area and understand the ratio size/distance of the object. This provides the ability to accurately detect a specific size of object either at distance or close up. In the event of any movement being detected, a security alarm is raised, and alerts are immediately sent to the 24-hour on-site security control room.

Darren Carter, Group Director of Safety, Security and Sustainability at Edwardian Hotels London, says Optex has provided the ideal solution: "We've worked with Optex for a number of years, and installed their technologies at a number of our other hotels in the group. For this new and hugely exciting project, there was nothing else on the market that met our brief. The Optex laser sensors are a simple, yet highly effective solution, providing the very highest level of detection that easily integrate with our wider security operation at the hotel."

Ben Linklater, Optex Commercial Director UK, Africa, CIS countries, says Optex's LiDAR technology delivers the greatest accuracy of detection: "We are constantly working to improve our technology to provide the highest quality sensing solutions," he says.

"Working in close partnership with Darren and his team, we were able to provide a highly accurate detection solution that met their requirements. We are proud to have worked on such a prestigious project, with the Londoner set to become one of the world's most talked about hospitality experiences."



Optex specified and installed its Redscan RLS-2020 laser sensor in the ceiling at each of the seven bars

Hotel Fire Detection for Two Luxury Hotels: Vila Galé

Fire detection solutions from Global Fire Equipment (GFE) have been installed at two luxury holiday resorts in Brazil that are owned and operated by the Vila Galé hotel chain. Portuguese-based Vila Galé is the second largest hotel group in Portugal and ranks among the top hotel groups in the world. GFE equipment has recently been installed as part of an upgrade to the fire detection system at Vila Galé Eco Resort Angra and during the construction of the brand-new Vila Galé Resort Touros. GFE's distributor for both these projects was JVT Equipamentos who also acted as Vila Galé's technical advisors on the projects. Vila Galé was already familiar with GFE's fire detection solutions as prior to these latest installations, JVT Equipamentos had advised Vila Galé on the purchase of GFE equipment for two of its hotels in Brazil. Vila Galé Eco Resort Angra is a 5-star all-inclusive eco resort located in Brazil's Atlantic forest. The hotel has 319 air-conditioned rooms, all of which have balconies with views of the sea, mountains or the pool. The resort spans 1,500 square meters and includes leisure areas, water sports, spa facilities, three bars and five restaurants.

When Vila Galé was looking to replace the existing E3S fire detection system at Eco Resort Angra, it approached JVT Equipamentos to design and supply a new system, with fire protection system supplier, Ekiper Fire, appointed to install and commission the system. The chosen 20-loop system comprises fire alarm control panels from GFE's Octo+, Gekko and Node Plus ranges, along with approximately 900 ZEOS AS-S smoke detectors and six ZEOS AS-H heat detectors. As part of the contract, Ekiper Fire will provide ongoing maintenance support for the hotel's fire detection system.

Marco Vieira, Commercial Director at JVT Equipamentos, comments: "The installation process at Eco Resort Angra ran smoothly and the hotel was able to remain open to guests throughout the installation works. One of the challenges Ekiper Fire's installation engineers faced was with the length of the existing cables used throughout the hotel. To avoid having to change the existing infrastructure, we advised the project engineers to cut the cable loops in half, reducing their individual length and to create a data network for use with GFE's Chameleon Networking System (the first in Brazil), in order to meet Vila Galé's requirements."

Newly-build Five Star Resort

Fire detection equipment from GFE has also been installed at the hotel chain's brand-new 514-room Vila Galé Resort Touros in Rio Grande do Norte, a 5-star all-inclusive resort which incorporates accommodation with a restaurant, water park, kids' club, outdoor swimming pool and bar. JVT Equipamentos was appointed to design and supply the fire detection system, with specialist fire systems installer, TecneTecnologia, undertaking the installation. The installation process went smoothly and took 45 days in total, with all work completed prior to the hotel opening to guests. The 18-loop GFE system supplied by JVT Equipamentos comprises Node Sub Panels, Juno Net and Junior Mini-Rep panels, along with more than 1,000 Zeos AS-S smoke detectors and 43 AS-H heat detectors. Jose Antonio Bastos, Vila Galé's Operational Director for Brazil, comments: "Our Eco Resort Angra and Resort Touros are the third and fourth of our Brazilbased hotels to benefit from GFE's fire detection systems, and construction work is already underway on two more hotels in Brazil where we have also chosen to install GFE equipment. The systems are both highly reliable and very competitively priced."

Contacts

www.globalfire-equipment.com
www.hanwha-security.eu
www.milestonesys.com
www.optex-europe.com
www.salto.com

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Burnickl Engineers

Florian Haacke,
ASW, Porsche

Markus Piendl,
Expert

Michael Hirsch,
Vice President, Bosch

Among others with panel discussions on the **top topics in 2022** in fire protection, work safety, access control and video analytics.

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FIRE PROTECTION

Watertight Fire Safety

Keeping Commercial Buildings Fire Free

Most fires are preventable, but it is up to those responsible for these workplaces and public buildings to ensure they are safe and adequately protected, should a fire break out. Ian King, COO, Zeroignition, discusses essential fire safety considerations for commercial buildings and factories.

In recent years, the construction industry has been working hard behind the scenes to tighten up processes and implement new regulations to ensure positive change and innovation. As a result, it is estimated that fire fatalities have fallen by 65% in Europe over the last 30 years.[1] The addition of meaningful sanctions will act as a powerful deterrent to those few companies who haven't prioritised safety, and instead remain focused on delivering bigger, quicker and cheaper builds. This approach can result in mistakes being made and sometimes corners being cut and has the potential to cost lives.

Quality is Key

Introducing quality checks and tests during the construction process for a factory or commercial building, will help to ensure the overall safety of the building. When the materials reach the construction site, having a qualified workforce who have the latest knowledge of the products specified, and the building as a complete "system" will enable them to execute the final build with greater ease. This approach can be adopted for fire protection design.

A Critical System

As expected in all new build projects, a system-led fire protection design method needs to be followed. This covers both active and passive fire protection and involves checking that the specified components work with each other to protect against any fire outbreaks.

System components will generally include:

- Active fire protection – measures triggering a response, such as sprinkler systems and smoke alarms
- Passive fire protection – measures to slow down or contain fire, such as fire doors and fire-retardant materials

A system-led approach can combine compartmentation – for example, with fire doors, sprinkler systems and FR-rated OSB boards – an assessment can take place where each component is assessed for its individual performance, and how it works in combination with other components too. It is only when the knowledge across the industry is robust that a system-led approach to fire protection will really work.

Improving Fire Protection Awareness

Fire safety regulations are notoriously complex and require an in-depth understanding. Research we conducted across the UK, Germany, and France in the wake of the Grenfell disaster in the UK in June 2017, revealed that knowledge levels surrounding fire and fire protection amongst some of our most trained professionals in architecture, was worryingly low.

Across the three countries, just 3% of architects were able to correctly define the four basic fire protection terms: active fire protection, passive fire protection, fire resistance and reaction to fire.

A mere 2% of the architects interviewed said they'd received comprehensive fire protection training. Whilst most agreed that they had had some sort of training, less than one in ten (8%) said they've never had fire protection training. Our findings came as an industry-wide shock and highlighted the clear need for re-education in order to improve expertise and understanding when it comes to fire basics.

As remote working was mandatory for many across Europe during 2020, many

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people had time to spare, as they were not required to spend time out of the office travelling.

In the UK alone, it was reported that nearly half of the workforce (49%) were intent on investing time to actively further their learning around fire safety during the pandemic. This was mirrored around Europe, as peoples work lives shifted and online learning via webinars and webcasts became the norm.

Modernising Traditional Approaches

Construction projects are complex and involve countless decisions. Each choice has a knock-on effect and if a systematic approach to fire protection isn't adopted, there can be unforeseen results.

Most industry professionals do understand this approach is best practice, however, more can be done by manufacturers and architectural bodies to ensure that best practice is fully established and followed. Modern methods of construction does seem an obvious solution for future progress, however, a systematic approach remains absolutely critical. If this is not implemented properly, problems with the build will remain a very real risk.

To put this risk into perspective, in some cases, safety oversights have caused the loss of entire buildings. This demonstrates why a proactive drive towards increasing the competency and training of all industry professionals involved in the building process, must be seen as a non-negotiable if standards are to improve. It's important that we view building holistically, assessing the structure as a whole, rather than in individual stages to ensure that MMC is used as intended and to reduce the risk of fire and improve safety for the end user.

Beyond this, the construction industry needs to take note from industries that operate on a checklist approach to reduce harm to passengers such as automotive and aviation. Attempting to rely on memory allows for mistakes. The simple action of checking off points can stop fire planning elements being missed. The digital 'revolution' that the construction industry is currently experiencing in this post-Covid world create 'digital footprints' that prove the right building criteria has been adhered to. This will become essential if we're to successfully implement watertight fire safety checks before it's handed over to the occupant or end user.

Robust fire protection in every build must be considered with the seriousness it demands. After all, a building's role is to keep people safe and secure. As an industry, we shoulder this responsibility together, and it is our job to ensure the buildings we create never fail to do just that.

Author
Ian King,
Chief Operating
Officer at Zeroignition

(1) Source: www.modernbuildingalliance.eu/EU-fire-safety-guide

CONTACT

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Halifax, Canada
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Biometric Access Control Integration

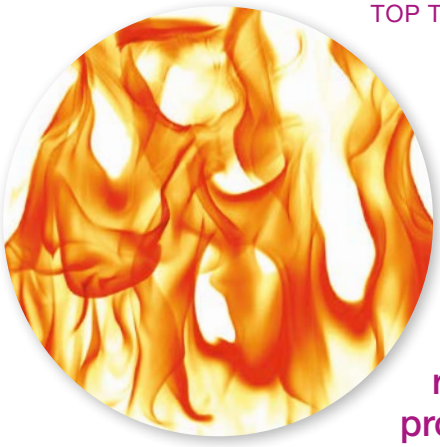
Suprema, a provider of access control and biometrics, has announced the successful integration of its biometric access control products with Genetec Security Center, a unified security platform that connects security systems, sensors, and data in a single intuitive interface. Genetec Synergis (the access control system of Security Center) can now be paired with Suprema access control devices to to verify access credentials with fingerprints and facial recognition along with existing RFID cards and PIN numbers. Biometric data such as fingerprint and facial recognition records can be quickly registered through either the Security Center software or Suprema's BioStar 2 software, with all data being synchronized in real time and transmitted to a server. The integration is suitable for enterprise level use, allowing up to 1,000 devices to be connected at once. **www.suprema.co.kr**

Sorhea Launches New Fence Detection System

Sorhea launches a new detector cable, the G-Fence 2400 system. The cable can be installed on all types of fences. Alarm messages are transmitted via three outputs specific to the system. Transmission works via two-point switching outputs, IP network via Modbus or API protocols, as well as Maxibus. The G-Fence 2400 is easy to install and consists of standard cables with molded accelerometers and a control unit. The system can be managed directly from a web server integrated in the control unit; no other tool or program is required. Sorhea's sensor cable is particularly easy to install and maintain. In case of cable breakage, the disconnected part can be restored by simply connecting the electrical wires. There is no need to select an alarm transmission mode anymore: Everything is integrated in the G-Fence 2400 system. **www.sorhea.com**

TDSi Gardis Software now Features Full Integration with Hikvision's Face Recognition Terminals and ANPR Cameras

TDSi announced its Gardis Access Management Software now supports full integration with Hikvision's Face Recognition Terminals and ANPR cameras. John Davies, Managing Director of TDSi commented: "Integration with Hikvision's latest generation of intelligent cameras is part of TDSi's ongoing mission to ensure our powerful integrated access control solutions work directly with the best third-party products on the market. Our Gardis software is perfectly placed to help end-users cope and deal with rapidly changing and evolving needs. Our ethos is that customers must be able to choose the right components for their security network to meet their specific needs and budget, with the whole solution overseen by our powerful, centralised, but flexible Gardis software." Providing options for Wiegand and Clock & Data protocol inputs, TDSi's Gardis software delivers quick and simple but powerful integration with Hikvision's Face Recognition Terminal and the wider security network. This includes integration with Assa Abloy Aperio and SimonsVoss SmartIntego wireless locks, along with a wide choice of intruder alarms and CCTV systems. Gardis includes Lift Control, Area Occupancy, and ANPR – which are all designed to assist with not only security but also ongoing safeguarding of health requirements.**www.tdsi.co.uk**

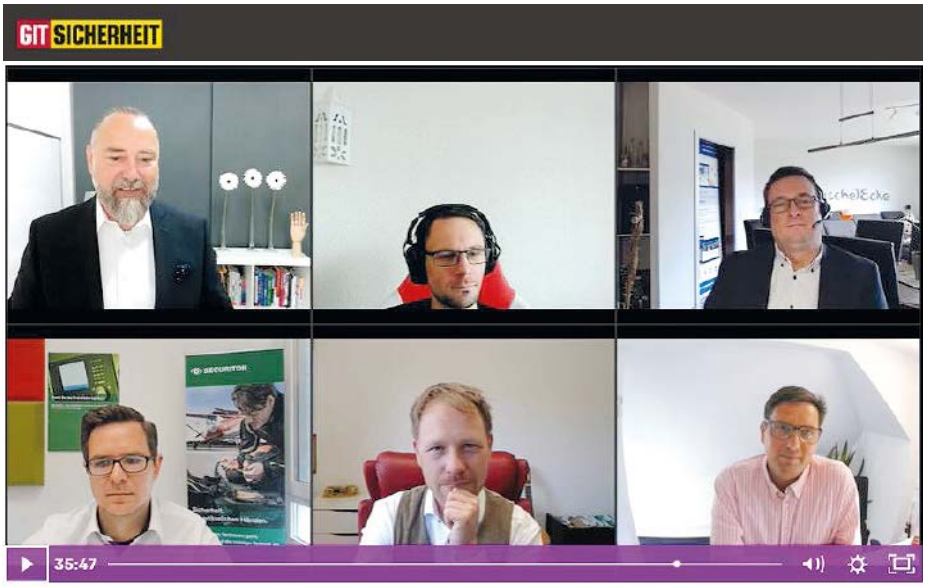


TOP TOPICS

Out of the Fire Alarm Bubble

WIN>DAYS-Talk: The top topics in fire protection. Where things are stuck, why there is talk of 'madness' and how remedial action could be taken – conclusions from the fire protection experts panel at the virtual Wiley Industry Days 2021.

The issues surrounding digital transformation, the skills shortage and smart buildings are omnipresent. Moderator Andreas Seltmann discussed the biggest challenges and opportunities for the fire protection industry from the perspective of manufacturers, planners, operators and installers at WIN>DAYS 2021, the virtual Wiley Industry Days trade fair.



Participants in the discussion, top row from left: moderator Andreas Seltmann, Dennis Schmidt (Volkswagen), Frank Einlehner (Carrier); bottom row, from left: Markus Kiwus (Securiton), Dr. Peter Burnickl (Burnickl Group), Christian Kühn (Schlentzek & Kühn).

The WIN>DAYS talk on the top topics of fire protection – chaired by business moderator Andreas Seltmann and accompanied by co-host Lisa Holland from GIT SICHERHEIT – was itself a sign of generally advancing digitalization: it took place as an online panel, a format now familiar to all. The lively debate made it clear to the viewers and listeners in an interesting way, and in more detail than just bullet points, which tasks are currently causing sleepless nights in the industry.

After being welcomed by Lisa Holland of GIT SICHERHEIT as organizer of the WIN>DAYS, Andreas Seltmann briefly introduced the participants – and turned first to Dennis Schmidt from Volkswagen AG. In his dual function as both planner and operator, he started the round with a summary of what he currently sees as the greatest challenges in plant fire protection.

Complex Requirements at the VW Plant in Hanover

Dennis Schmidt works for VW as a coordinator and technical planner for fire alarm systems in the commercial vehicles division in Hanover and is an experienced electrical engineer with a wealth of experience in fire alarm technology, voice alarms and burglar alarm systems. The alternating pattern of up to 18 shifts demands good coordination when systems are being installed and

Scan QR (or click) and start video
Link to the video of the fire protection talk on GIT-SICHERHEIT.de:
www.git-sicherheit.de/webinare/podiumsdiskussion-die-top-themen-der-brandschutzbranche (in German)

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operated, but also for their maintenance and servicing. Work in the various industrial buildings on the site cannot be planned according to a recurring pattern – rather, an individual plan has to be thought up in each case and then also coordinated with the authorities.

Another very exciting and challenging aspect is the fact that each of the many individual buildings has its own responsible person – known as the internal factory operator. These people have to be involved in the planning, which means explaining the purpose of each step to them. Although there is comprehensive monitoring of the factory premises, old buildings are often demolished and new ones erected for new projects: a living structure.

Moderator Andreas Seltmann also asked Schmidt about the opportunities that arise for him out of this complexity. Dennis Schmidt clearly saw opportunity in the fact that, in the course of a project within this complex framework, one could recognize processes that could also be simplified – also across disciplines. For example, he is currently aiming to install fire control matrices in each building so that the necessary safety mechanisms and processes can be initiated as quickly as possible in the event of a fire. Such opportunities for simplification were also found in production for example, because many new ideas emerged when working together on such topics.

Recipes against a shortage of skilled workers – and a focus on digitalization

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According to Dennis Schmidt, especially with fire alarm technology, many things that have been set up are not even catered for in the corresponding standard. Right from the start one has to think about how to organize fire protection in such a way that the result is both satisfactory for the operator and at the same time the fire brigade and the authorities will go along with it, so that overall active monitoring is guaranteed. This is all quite tricky, but the result is an optimization of the processes.

Neutrality – and Taking Responsibility

Also asked by Andreas Seltmann about the "most stressful" issues for him at the moment, Dr. Peter Burnickl, whose internationally active company employs about 200 people, took up the topic with his point of view. As an engineer and planner, he said, one is often required to be neutral in his company, much to his frustration. You often have to tender impartially and then award the contract to the cheapest bidder. He deliberately emphasizes that it is then really about the 'cheapest' and not at all about the supplier who turns out to be the most commercially attractive. He is very annoyed by this as he often sees the problems associated with it from day one. In addition, there is the extreme neutrality of manufacturers and the sheer myriad of fire protection certifications and approvals. The 'documentation madness' – which will perhaps improve when BIM (Building Information Modelling, a working method for networked planning, construction and management of buildings with the help of software) is implemented – is a questionable 'job creation drama'.

A good example of this is the ESO Supernova project, a new planetarium in Garching near Munich. Fire protection II approval was ultimately not obtained because of a ventilation control flap. The problem behind this is that no one is willing to take responsibility. He appeals to engineers and experts to take more responsibility for their actions. At some point, one has to say that a project as realized is safe from a technical point of view. One could judge that the respective building complex would not burn down because of a single flap. But the reality is that you cannot get a signature on the certificates.

Andreas Seltmann expressly agreed with this assessment. Part of expertise and healthy risk assessment is taking responsibility. He passed the floor to Christian Kühn, Managing Director of the system house Schlentzek and Kühn, who is also active in standardization committees on a voluntary basis.

BIM and the Shortage of Skilled Workers

Christian Kühn is concerned, among other things, with the complexity of building regulations, especially the MVV TB (Muster-Verwaltungsvorschrift Technische Baubestimmungen, a publication of the Deutsches Institut für Bautechnik – the German Institute for Building Technology). This brings together the technical regulations for the planning, structural design and construction of buildings as well as those for building products in one regulation. This highlights the fact that the dissemination of BIM is not progressing fast enough. You can exchange ideas with the planners, but soon realize that they also need support. Market experience plays an important role here. During the crisis, it was noticed that many buildings were changing in their usage. In his company, too, there is a struggle to select suppliers – the cheapest is not always the right one.

With the lack of skilled workers, Christian Kühn addressed another pressing problem. This has existed for a long time and independently of the Corona crisis. It is partly homemade, but it is also the case that during the crisis, training courses at the manufacturers have been limited because many aspects require trainees' physical presence. This problem will 'fall at the feet' of all those involved. The students, on the other hand, often lack the prerequisites. Plugging these holes requires the strengthening of partnerships with education facilities.

According to Christian Kühn, digitalization within industry is a challenge that has made itself felt in delivery problems and logistics, but ultimately along the entire value chain. There is a lot to do here, especially now that resources and conditions have to be upgraded quickly.

Andreas Seltmann reiterated the importance of the digital value chain as a topic for the industry and passed the ball on to Marcus Kiwus, who heads up sales in the fire protection and special fire technology division at Securiton. An electrical

Experts in the discussion:

- **Dr. Peter Burnickl**, Managing Director, Burnickl Group, www.burnickl.com
- **Frank Einlehner,** Sales Manager Fire, Carrier, https://de.firesecurityproducts.com
- **Marcus Kiwus,** Sales Special Fire Technology, Securiton, www.securiton.de
- **Christian Kühn,** Managing Director, Schlentzek & Kühn, www.sicherheitdirekt.de
- **Dennis Schmidt,** Planning Fire Alarm Systems, Responsible Person according to DIN 14675, Factory and Infrastructure Planning (NP-HS/F1), Volkswagen Aktiengesellschaft, www.volkswagen.de
- **Andreas Seltmann,** business moderator and coach, www.andreasseltmann.com

engineer by training, he gained plenty of practical experience before moving into sales, also as a service technician.

Focus on Digitalization

For Marcus Kiwus too, digitalization is one of the main topics. Covid-19 has shown how quickly one can adapt in this regard. The benefits of digitalization were already evident in small-scale measures for fault clearance and maintenance at customers' premises. At Securiton, the focus is strongly on the corresponding digitalization of the systems. They simply want to make better technical use of the many advantages.

In terms of standards, however, there is still work to be done on simplifying this topic. The cloud connection of fire alarm control panels is technically feasible today without further effort – the problem lies rather in the budgeting by the end customer. They want the technology – but it must also be financially accountable. The advantages are not only for the end customer but also for their own employees, in particular because of the shortage of skilled workers. Technical optimization is therefore necessary.

In the meantime, digital maintenance records can be kept and it is possible to read out all the system data via an iPad. Once the system is in the cloud, all its functions can be made available to an end customer on the other side of the world. From there he can look at the most remote fire detector and, if necessary, measures can be initiated at short notice. Installers and maintenance personnel can check what the problem is before they decide to go to the customer's site. This is both cost-efficient and ecological because travel time is saved.

The topic of digitalization and networking then continues in the direction of standard protocols. The available data can then also be made available to other systems.

Moderator Andreas Seltmann agreed with this, combined with the appeal to use the opportunities offered by technology to increase efficiency. With that he gave the floor to Frank Einlehner, Sales Manager, Fire, at Carrier Fire and Security. He has many years of experience, especially with fire alarm and voice alarm systems, and is active across borders.

Rethinking Urged

Frank Einlehner called for a rethink for the entire industry. We can see how digitalization is progressing more and more, especially as a manufacturer. Planners must be provided with interfaces that apply to all systems. For him, it is important above all to adapt to the needs of the future generation through digitalization, who are much more familiar with it. For this reason alone it is necessary to push it further.

Andreas Seltmann added to this by asking how smart and digital he would like buildings to be in the future.

Dennis Schmidt sees that the topic has already been strongly implemented in his environment, also through the transition to Industry 4.0. Above all, he wishes that the topic of BIM would really pick up speed. This would simplify a lot of things in the construction process. Everyone would always have all the information available and could adapt their planning accordingly. Meetings and a lot of back and forth would become unnecessary.

His company is already well on the way. From the fire alarm control center to the ventilation system, everything is operated via a control matrix, and they work over a fiber-optic connection. It must be possible to store the data in the cloud – a proper infrastructure must be created. The goal is to use the collected data across all systems – but nothing is happening here at the moment. According to Dennis Schmidt, we are in a fire alarm bubble and are still at the very beginning of digitalization.

Peter Burnickl noted that BIM has already gained momentum – but compatibility with Open BIM is still problematic in many cases. In this respect, Germany is still far behind. Here, too, a lot is technically possible, but nothing is decided.

AI Still at the Beginning

Frank Einlehner added that, from a manufacturer's point of view, it makes a difference whether one is involved in a project at the end or at the beginning. If you are involved with the planner right from the start, you can contribute a lot. However, some partners or specialist installers do not have all the data, so that the right solution that works for everyone is not so easy to find. The developments in artificial intelligence are also interesting – but they are still in the early stages.

Marcus Kiwus from Securiton agreed with this. AI will catch up with us all in all areas. The process of introducing a certain intelligence into the detectors has already started. One simple example of this is how the sensitivity of the smoke sensor is changed when the temperature rises. Things have to be networked in such a way that they can simply communicate in all directions. For him it is not only important that data is sent out from a particular system – he also wants to be able to receive data.

Another simple example of this is a multi-sensor detector he has in his office. It has automatic and highly precise temperature detection built in. Why, asks Marcus Kiwus, can't the fire detector system send the temperature to the roller blinds? You don't need three thermostats that all do the same thing. That is where we have to get to. All in all, efficiency is increasing everywhere in industry – and we have to keep up with it. This will be a challenge that has to be met, but which will also be successfully mastered.

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MACHINE AND PLANT SAFETY

A Real Piece of the Ice Age, Bottled

... Perfectly Detected by "PRK" Type Retro-reflective Photoelectric Sensors

"Untouched since the ice age" is not a marketing slogan, but a fact – a real piece of the ice age that still exists today: When the ice melted, immense amounts of water drained away into the rock of the Swabian Alp mountains. The earth shifting in an unusual way then caused this reservoir to be sealed off approximately 400 meters below the outside world. Since then, heavy layers of impermeable stone have prevented rainwater from seeping through to the reservoir and have protected it from all the environmental influences of our time.

View of the palletizer technology in the new glass system

The mineral water deposit was discovered in the 1970s when deep drilling was undertaken near the site of Romina Mineralbrunnen in Reutlingen-Rommelsbach, Southern Germany. "This water has an exceptional quality and is a real gift from nature," says Stefan Eberle, Head of Maintenance at Romina Mineralbrunnen, who knows just how valuable "his" water is: "This unique water quality is what spurs us on and is why we are committed to accepting only the highest standards across the complete filling process."

In addition, Romina Mineralbrunnen undergoes regular internal and external quality controls that far

PRK 18B in the unit pack handling technology

exceed what is prescribed by law. This has enabled the company to receive International Featured Standard (IFS) Food certification and pass the test in the highest category, "Higher Level". The criteria for the "Higher Level" category are considered the most stringent standard in the food industry.

Modernization and Expansion of the Glass and Palletizer System

EiszeitQuell is available in the varieties natural, lightly sparkling and sparkling, in large and small bottles made of glass and PET. "For some time now, the glass bottle, which has our icicle relief imprinted all around it, has been experiencing a real return to popularity," explains Eberle. Therefore, Romina Mineralbrunnen invests continuously in the filling of its glass bottles and ensures that its production processes meet the most up-to-date technical and ecological standards. In 2020, Romina started to modernize its glass system. Over several building phases, the company put into operation its transport technology, packing and unpacking machines, crate washers, new-glass depalletizers and a brand-new palletizer system with a double palletizer and depalletizer. This new complete system has been hard at work packaging mineral water ever since.

Romina Mineralbrunnen chose Beyer Maschinenbau as its partner for this project. The experienced machine builder from Roßwein in Saxony, Eastern Germany, specializes in the planning, development and building of efficient conveyor and packaging systems for the food and beverage industry: Thanks to a high level of vertical integration, this family business, which is now being run by the fourth generation, is able to provide an all-round service. From the individual packaging machines to the complete system with transport technology for containers, unit packs and pallets. These systems are often supplemented by machines for sorting and checking containers and unit packs. Beyer Maschinenbau also meets all of the systems' servicing needs with around 50 experienced technicians.

"When we entered into business with Romina Mineralbrunnen at the start of 2020, a glass system and a PET system were still standing side by side here," says Till Beyer, CEO and owner of Beyer Maschinenbau. In May of last year, the PET system was relocated to another area in a building across the road. Then we were able to make a start on the expansion: First we modernized the new palletizer and depalletizer system with the complete pallet conveyor system. Next came the packing and unpacking machines and the complete crate transport system. These were followed by the crate washers and the complete bottle transport system right up to the bottle cleaning machine. Finally, a new depalletizer for new glass was installed. In the meantime, Romina modernized the building technology and the flooring, bringing them in line with a new industry standard. "The big challenge was coordinating and implementing all of the modifications with only very short breaks in production and in less than a year," explains Beyer.

Nothing works without a Sensor System

At peak times at Romina Mineralbrunnen, up to 45,000 glass bottles per hour are conveyed through the system, depalletized, unpacked, cleaned, filled, repackaged and finally loaded onto a new pallet, secured in place and transported into storage. A high level of system availability is absolutely essential. Otherwise this level of peak operation simply could not be achieved.

"Nowadays, conveyor and packaging systems just don't work without reliable sensor systems," says Beyer. Therefore, for many years now he has relied on optical sensor systems and a particular, experienced partner: Sensor expert Leuze from Owen/Teck, Southern Germany – just a few kilometers away from Romina Mineralbrunnen. "As the Sensor People, we have many years of experience and in-depth application know-how relating to the packaging and beverage industry. Working together with our customers, we develop efficient sensor solutions that are precisely tailored to the requirements of this industry and that ensure our customers' continued success in a constantly changing industry," says Andreas Eberle, Local Industry Manager Packaging at Leuze. The sensor expert has a precise solution on hand for almost all applications in the beverage industry: For example, for transporting pallets, unit packs and containers. Leuze also always has the appropriate sensors for applications in individual machines.

MLC 530 SPG safety light curtains from Leuze ensure the safety of people and machines in the area where pallets are loaded and unloaded

Reliable Transportation of Unit Packs and Containers

One example of a Leuze sensor that is particularly suitable for use in the beverage industry is the PRK retro-reflective photoelectric sensor. This is an optically switching sensor that uses the reflection principle. "Even transparent or highly reflective materials such as glass bottles or plastic crates with glossy, multicolored decoration, like Romina's EiszeitQuell crates, can be accurately and reliably detected by these sensors," says Eberle.

Retro-reflective photoelectric sensors are available in various series, sizes and performance classes. The sensor principle offers a range of functionalities: When transporting unit packs, it detects the individual crates. For example, identifying whether they are being transported correctly or becoming backed up somewhere along the conveyor line. Alternatively, it detects protrusions if crates are too long or too tall. If the PRK is used in the machines themselves, the sensor is mostly used for product detection. On the set-down table, it monitors free spaces and prevents collisions when pallets are being unstacked.

Safe Material Flow with Access Guarding

Retro-reflective photoelectric sensors monitor the beginning and end of a pallet. Both when the empties are set down on the conveyor line and when the Euro-pallets are finally loaded with newly filled crates. Provided that the Euro-palettes were detected as flawless by an optical and mechanical checking device during transportation. The sensors also monitor the pallets to check that they stop in a particular position, and that they were actually transported at all. In this area, safety sensors are also required to ensure the safety of people and machines. For example, when loading and unloading pallets. Multiple light beam safety devices in the device column with integrated muting function are often used for this application. However, safety light curtains with the Smart Process Gating (SPG) technology patented by Leuze are also suitable. Using the version of safety light curtain that features SPG means that additional signal-emitting muting sensors are not required. This saves a lot of space and is a significant advantage when setting up in confined areas.

Satisfied with the result of their joint project. From the left: Till Beyer (Beyer Maschinenbau), Stefan Lederle (Romina), Andreas Eberle (Leuze).

Fully Automated Material Flow: Reliable and Safe

End customer Romina Mineralbrunnen, machine builder Beyer Maschinenbau and sensor expert Leuze look back on their joint project with satisfaction. And they are all in agreement: reliable systems and fast customer service are essential in meeting the demand for mineral water, which is particularly high in the summer months.

Even greater efficiency and a glass bottle throughput of up to 45,000 bottles per hour is achieved thanks to the modern transport technology and the brand-new glass system from Beyer Maschinenbau. And the sensor systems from Leuze, just up the road in Owen/Teck. Because a fully automated material flow is only possible with reliable sensor systems. And these must be precise, but also safe.

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Bi-Directional Analytics-Driven Integration

Thanks to a new bi-directional analytics-driven integration between BriefCam and Synectics' Synergy command and control platform, professionals in charge of delivering smart and safe city programs can now accelerate a review of camera footage, more rapidly identify risks to public safety and infrastructure, and easily derive valuable operational intelligence from video content. In addition to allowing control room teams to apply sophisticated video analytics filters to surveillance footage – color, face matching, direction of travel for vehicles, clothing attributes etc. – the integration enables rapid footage review by presenting objects and events of interest on screen simultaneously. Analytics-based alerts can also be used to trigger dynamic workflows to support effective management of the specific scenario in question, from dealing with potential COVID-related overcrowding risks to coordinating a multi-stakeholder response to a criminal event. **www.synecticsglobal.com**

TREND REPORT

From the Static Nineties to the Dynamic 21st Century

On the Path to Harmonizing Safety with Productivity

"The whole is greater than the sum of its parts" – this famous Aristotelian these has been the guiding principle for the development of safety technology over the past 30 years. On the path towards the greatest possible safety in the complex interaction of people with machines, robots and automated guided vehicle systems, safety manufacturers are choosing a holistic, integrated approach. To ensure that safety concepts and high productivity go hand in hand, the safety experts use their experience and knowledge to delve ever deeper into the production worlds of their customers. In the future, customized sensor technologies and intelligent control systems will be even more crucial in determining the level of productivity for dynamic safety solutions.

Looking back at the nineties, production lines were static and designed for standardized products that were manufactured in large batch sizes with a low number of variants. This meant streamlined linear production concepts were required, in which production was separated from logistics and storage areas, and material transport was more or less characterized by manual labor. Only to a very limited extent and with manual procedures was it possible to make processes transparent without field data being available for process optimization.

At the turn of the millennium, the increasing demand for individualized products resulted in smaller batch sizes and a higher number of product variants. Maintaining a high level of productivity under these conditions was a major challenge. Interaction between humans and automated machines was limited, and safety was generally seen more as an obstacle and pure cost factor.

The combination of pre-certified components and applicable safety standards (SIL / PL) led to safety concepts that enabled machine manufacturers to comply with risk reduction specifications. However, with automation developing rapidly, the demands on these safety concepts increased steadily.

Productivity with the Competing Demands of Automation and Safety

In the following years, the degree of transparency increased based on process data that was not yet secure and enabled optimization of materials and workflows to strengthen competitiveness. The logistics and warehouse areas were highly automated and closely connected to production. Automated mobile platforms that followed defined paths at limited

In the nineties, robots were kept behind bars for safety purposes

speed took over material transport. Interaction between man and machine increased.

This emerging digital transformation allowed for an increase in productivity that was previously impossible. But as the level of automation increased, an even more holistic safety concept was required in the highly innovative, high-tech areas of automation to address the limitations imposed by safety measures.

Today, an automated guided vehicle or autonomous mobile robot (AGV / AMR for short) uses safety sensor technology to detect when it is approaching an obstacle and initiates a safe stop in front of the box, rack or person. The robot behaves in just same way as soon as an object is detected in the hazardous area. This means the "safety first" requirement is perfectly fulfilled. But plant operators rightly expect that safety will not limit or even prevent increases in productivity, but on the contrary, will even improve them.

Safety in the Highly Productive Environment of Tomorrow

The near future will be characterized by extensive digitalization in all areas of daily life and work, where Industry 4.0 and IoT have become reality: Fully automated storage areas will be seamlessly integrated into manufacturing facilities, and autonomous mobile platforms will handle material transport on secure high-speed routes. Regardless of batch sizes, flexible manufacturing concepts will then be able achieve the highest level of productivity.

With a dynamic approach to safety, the actual risk will continuously be assessed in real time, turning safety from an obstacle to an enabler for cooperation and coexistence tasks. In the future, AGVs will recognize hazardous situations such as impending collisions in advance, run the necessary calculations and autonomously adapt their course or speed. Since hazards can no longer occur with this dynamic adaptation process and the vehicle will not have to come to a standstill, this will also mean increased productivity. In the future, safety will mean even more: Protecting people in an increasingly dynamic environment filled with mobile robots and machines.

Today, customer discussions about safety still concern the shop floor, safe components and their controllers are installed at selected locations, and hazardous areas are protected. In the future, customer requirements on safety will have a different starting point: Engineers, IT departments, health safety environment (HSE) managers, logistics supply specialists, operations managers and data integrators will work closely with safety experts in the safety industry to realize holistic, safer and more productive automation processes. Safety specialists at Sick will play the role of a system partner in the future, offering their customers all over the world maximum productivity by not only averting hazards, but also preventing them wherever possible, and the highest priority will remain the protection of people.

Today, AGVs navigate safely with the help of intelligent sensor technology such as the EVC625 EventCam, the deTec4 safety light curtain and a Flexi Soft controller

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TRADE FAIR

From "Black Box" to Success

"People Count" Especially at the A+A 2021

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That 2021 would not be a normal year for the trade fair business, and certainly not one with record results, was to be expected from the outset. Nevertheless, the response to A+A 2021 was overwhelmingly positive. More than 1200 exhibitors from 56 nations and 25,000 trade visitors from all parts of the world took part in this year's leading trade fair for safety and health at work, according to the trade fair operator.

In fact, there were no crowded corridors this year, which of course was not only due to the larger distances between the booths. Nevertheless, the tenor of most of the exhibitors we visited was positive. Although no one had high expectations beforehand - in some personal conversations the word "black box" was even mentioned – everyone was happy that after a long time there were encounters in the real world again, where of course the interpersonal aspects outside of pure business life also had their place. And according to many exhibitors, the quality of the contacts was also good.

That "people count", as the motto of the A+A already suggests, did not only apply to the thematic contents in this special edition. The fact that this opinion was not purely subjective is also supported by another official statement from Messe Düsseldorf GmbH: according to this statement, 94 % of this year's exhibitors have already confirmed their renewed participation in A+A 2023.

A+A Congress

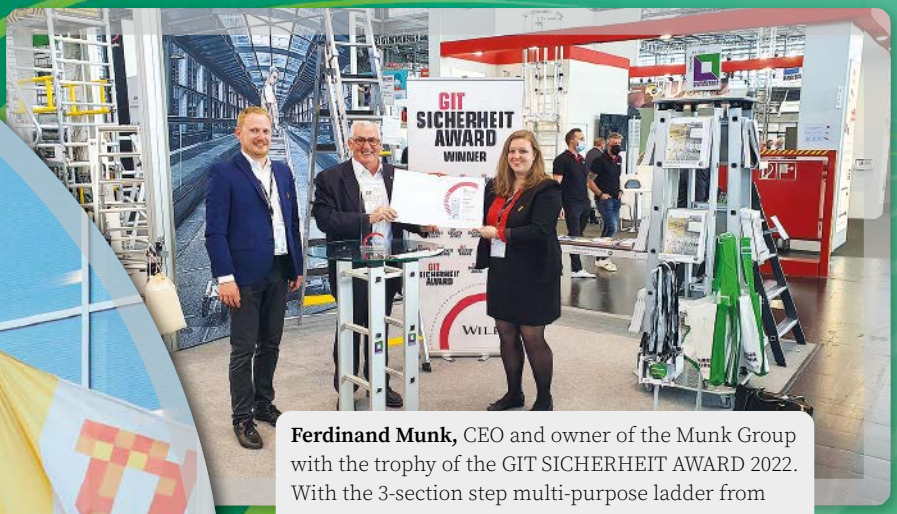
The A+A Congress, which was held in a hybrid format for the first time, also enjoyed lively participation. Around 1500 visitors listened on site and online to the contributions of 300 top-class speakers from research, politics and, of course, the industry itself. Dr. Christian Felten, Executive Director of the Federal Association for Safety and Health at Work (Basi), was also satisfied: "In the context of the current pandemic conditions, we concentrated on essential topics. Important were classic areas such as exposure to carcinogenic hazardous substances or musculoskeletal disorders caused by work. However, the audience's interest was equally focused on topics such as safe and healthy working in international supply chains, new work, mobile working and problems caused by digitalisation in the workplace."

Two Megatrends

With the topics "digitalisation" and "sustainability", which are often referred to as "megatrends", A+A 2021 also set decisive focal points that will have a sifnificant influence on future developments not only in the area of occupational health and safety. Trade visitors were able to see for themselves the innovative capacity of the exhibitors present and their solutions for the future in the Start-Up Zone, among other places. This year, the focus was particularly on the topic of exoskeletons and how they reduce muscular and skeletal strain and increase performance.

The next A+A will take place from 24 to 27 October 2023.

Benjamin Deck and Lisa Sole with the latest shoe model from Blåkläder



Ferdinand Munk, CEO and owner of the Munk Group with the trophy of the GIT SICHERHEIT AWARD 2022. With the 3-section step multi-purpose ladder from Munk Günzburger Steigtechnik, an access technology manufacturer is on the podium for the first time

Caroline Schröder in front of the FFP2 mask machine from Dräger

The Fristads booth was all about sustainability: Green Calculator, clever product lifecycle and many measures for the ecological footprint in production and shipping

The GIT SECURITY team at the A+A (from left to right): Lisa Holland, Timo Gimbel, Jörg Wüllner

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Name:
Jeremy Bennett

Position, Company:
Head of Global Corporate Security, Swift, the global provider of secure financial messaging services

Date of Birth:
January 1969

Hometown:
Hull, East Yorkshire and Wassenaar, NL

Favorite homemade dish:
Roast Beef and Yorkshire puddings and Shrimp fra Diavolo

Right now: I am contented.

When I'm stressed I eat Cadburys chocolate buttons.

My biggest struggle on a workday is keeping up with the amazing talent in my team, a great struggle.

I can never resist a good glass of wine with family and friends.

My biggest motivation is my son.

At 7 o'clock in the morning, I check emails and diary while drinking coffee.

The natural talent I would like to be gifted with is golf.

Guaranteed to make me laugh is strangely our cat, Sir Nigel Grayson.

Three characters I would like to have dinner with (dead or alive, fictional or non-fictional) are my grandparents, my parents and my son.

I have the completely useless talent of speaking the alphabet backwards, at speed.

Three things that I am most grateful for in life are my families support, health and happiness.

The best decision in my career so far is joining the Royal Marines Commando.

The best compliment anyone has ever given to me is I once worked in a refugee camp and an elderly lady said to me "you have sweet blood." She explained "if animals and children trust you, then so do I." It was humbling.

If my life was a movie, I would be portrayed by a very young Kurt Russell.

I am entering the wrestling arena and while the crowd is calling out my wrestling name "the phoenix!", **I can hear the song** "Thunder Struck by ACDC" **playing!**

At the most horrible job I ever had I worked as a paperboy **and the best job I ever had** is now**.**

The language I would most like to speak is Arabic **and I pretend to know how to speak** Dutch.

The biggest challenge for me/my industry at the moment is mentoring the next generation of talent, sharing our successes and failures and allowing them to tread the path for the future with our support.

When I have done something forbidden, I apologize **except when** I know it's right and for the right reasons.

The last thing/gadget I bought was an IPad.

In the shower I sing badly.

As a child I was teased, because I have a brother and sister, we teased each other all the time.

The most hideous/favorite piece of clothing I own: I have a black all saints sweat shirt I really like.

As a child I collected Lego and Matchbox cars.

From the first money I earned I bought a motorbike.

If I was trapped in a shopping mall for one night, I would look for fashion advice.

I would like to have the superhero superpower of superman.

My first car was a Ford XR2.

Off the Record

Get to Know Inspirational Characters of the Security Industry in GIT SECURITY's Series

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