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SECURITY SOLUTIONS **TODAY**



BUILDING A SAFE CITY FOR ALL

The multi-faceted approach to keeping cities safe

IN THIS ISSUE

- 3 In The News**
Updates From Asia And Beyond
- 10 Security Feature**
- + Indonesian government Institution improves people identification and authentication with facial recognition technology at its premises
 - + Lidar-based security systems improve accuracy of perimeter surveillance, safety and security applications
 - + Charting the Roadmap to a Safe City
 - + Is video analytics technology the future of security?
- 18 Calendar Of Events**

In The News

07 | Genetec Lands Multi-Year Changi Airport Group Security Upgrade Project



Security Feature

Charting the Roadmap to a Safe City | **14**



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AXIS COMMUNICATIONS LAUNCHES M3077-PLVE NETWORK CAMERA WITH ENHANCED SECURITY FEATURES

Video surveillance company Axis Communications launches the AXIS M3077-PLVE Network Camera in March 2021, a compact, affordable mini dome delivering sharp images and 360° panoramic overview with no blind spots.

It is suitable for a wide range of surveillance scenarios with video and audio capture and it also features the Axis Forensic WDR technology. This outdoor-ready camera captures high-quality images even when there are dark and light areas in the scene. It offers Axis Lightfinder for sharp, color images in poor lighting conditions and Axis OptimizedIR for surveillance in pitch darkness up to 20 metres.

With two built-in microphones, it allows for audio surveillance and detection. In addition, it features digital PTZ functionality and it's



possible to stream dewarped views such as panorama, quad, corner, and corridor views directly from the camera.

Its enhanced security features, supported by Axis products and

technology, also prevent unauthorised access and safeguards the system.

Founded in Sweden in 1984, Axis Communications offers network video and audio solutions, analytics and access control solutions. ■

BCDVIDEO LAUNCHES A&E PROGRAMME TO EMPOWER SECURITY SPECIFIERS AND CONSULTANTS

Security system supplier BCDVideo debuted their new A&E Security Specifiers Programme in March 2021, which is available to security specifiers internationally.

Specifiers to leverage BCD's experience and partnerships through an easy-to-use online portal in this programme. It offers a range of technical resources, ongoing education and expert support.

With the help of the A&E taskforce that BCD has assembled for this programme, consultants will have direct access to BCD technology specialists that can provide the most up-to-date product specifications and extended guidance.

Consultants can access tools for designing custom engineered solutions to create an optimal security system. The online portal gives 24/7 access to technical documentation and resources, including CSI MasterFormat 2020 specifications, system designs, product images and datasheets, calculators, and MSRP pricing, ensuring

that consultants can find answers to many product specifications without waiting for a response.

Staying ahead of the curve

Additionally, ongoing education in virtualisation, accelerated computing for AI, network infrastructure, and current video storage trends will become available to keep specifiers on the cutting edge of how emerging technologies impact growth and convergence.

Designated task force experts will offer project consulting, design assistance and verification that remove risk and liability from specifiers and help position integrators to win the bid. BCDVideo guarantees that the proposed design will fit and perform as intended, or they will fix the shortfall at their own cost.

"Consultants need resources they can trust so they can accurately design reliable and resilient security systems



and recommend solutions that meet their clients' needs and budget. BCD has the resources to provide that guidance –

and if we don't have a specific answer, we are partners with some of the largest tech and software manufacturers in the world – an alliance that is supportive of our programme," said Maureen Carlo, Director of Strategic Alliances in North America, BCD International.

An initial member of BCDVideo's A&E Programme, Frank Pisciotta, CSC, President and CEO of Business Protection Specialists, Inc. shared: "BCD has done an excellent job creating a useful resource for the A&E community. Even in its infancy, I have found the BCDVideo A&E Programme to be an excellent resource. You have set the bar high for interfacing with the security specifying consultant community."

The BCDVideo A&E Programme is open for online registration through the BCDVideo website. ■

NEW ACCESS CONTROL KITS FEATURES ADDED VERSATILITY IN POWERING LOCKING DEVICES

Altronix, the manufacturer of low voltage power supplies and data transmission solutions for the professional security industry, has launched an enhanced line of eFlow power supply/charger kits that provide 12 and 24VDC simultaneously for locking devices and peripherals.

These new solutions are equipped with fused, or PTC protected outputs that are individually selectable to provide necessary power for a wide range of access control panels, door locks, ancillary devices and more. Models also feature bi-color LEDs for instant visual voltage verification and embedded Language-Integrated Query (LINQ) network power management technology, allowing users to control, monitor and report power over individual outputs.

"Our new eFlow dual voltage kits provide greater system flexibility when deploying devices with different power requirements, creating additional resting metabolic rate (RMR) opportunities for systems integrators," said Ronnie Pennington, Director of Sales, Americas for Altronix Corporation. "With nine new eFlow kits available, system designers and installers can select the configuration that best meets their needs, with or without remote network power management, improving overall cost-efficiency and profitability."

The new eFlow power supply/charger kits provide selectable 5VDC, 12VDC and 24VDC outputs. Additional features include stackable sub-assemblies that save valuable space and supervised fire alarm disconnect for main power output or selectable by output. The enclosure



space can accommodate up to two 12AH/7VDC batteries and to extend the life of back-up batteries, it has a low power cut-off. Additionally, it offers faster charging circuit for more up-time, along with over voltage protection.

Altronix serves international markets through a global network of resellers. ■

WE'RE AN AMERICAN BRAND

For over three decades Altronix has earned its global reputation for the highest quality and reliability, offering exceptional power and data transmission solutions engineered and manufactured exclusively in the USA – all backed by the best customer support and our unique lifetime warranty. And we're stronger than ever. As we continue to grow and the industry evolves, rest assured you can always trust your security to Altronix.



More than just power.™

BOSCH INTRODUCES FIRST CAMERAS BASED ON INTEOX OPEN CAMERA PLATFORM

Bosch introduces the first cameras based on its Inteox open camera platform starting with the MIC inteox 7100i.

The new MIC inteox cameras share the same characteristics as the rest of the MIC camera family, such as robust housing and high-quality imaging, and support predictive solutions with machine learning, neural network based video analytics, and third-party software apps for customised applications.

These Inteox cameras can be classified as “Driven by OSSA.” This distinction signifies that the cameras follow the Open Security & Safety Alliance (OSSA) Technology Stack for video security devices, ensuring seamless connectivity with the Security & Safety Things (S&ST) Application Store. The cameras also allow for the easy creation of customised software apps that can be deployed on the Inteox cameras afterward. Users can mix and match apps from the S&ST Application Store or develop software apps to create a novel solution. In addition, Bosch introduces two Inteox development kits containing either a bullet camera or mini-dome camera to complement MIC inteox cameras in pilot installations and support further app development.

Supporting predictive solutions

MIC inteox 7100i cameras support predictive solutions with built-in Artificial Intelligence (AI). It includes Intelligent Video Analytics, Camera Trainer based on machine learning, and video analytics based on deep neural networks (DNN). These built-in AI capabilities enable Inteox cameras to understand what they see and add sense and structure to captured video data with metadata. This process is an important first step in converting video data into actionable insights and building predictive solutions, helping users anticipate unforeseen events and prevent them from happening. For example, in city surveillance applications, the MIC inteox 7100i cameras can detect abnormalities in behaviors, provide density data, and alert traffic operators with insights they can act on to prevent unwanted situations. By adding third-party software apps to Inteox cameras, integrators can easily customise security systems, enabling them to go beyond their basic functionality. In turn, app developers can leverage the camera’s metadata, neural network based video analytics, and machine learning to introduce innovative software to the market.

Tailored for traffic applications

The MIC inteox 7100i object classification (OC) models are made specifically for Intelligent Transportation Systems (ITS) applications. Powered by the edge computation capabilities of the Inteox platform, the introductory OC



models present a novelty in the field of AI. They offer a Traffic Detector, an additional Video Analytics feature based on DNN that helps distinguish and classify automobiles in congested scenes with precise detail. Possible disturbances caused by vehicle headlights or shadows are ignored, uncovering new ways to improve mobility, safety, and efficient use of roadways. The actionable insights delivered by the cameras’ Traffic Detector help detect the presence and volume of vehicles to intelligently control traffic lights to keep traffic flowing when monitoring intersections. These insights can also enhance Automatic Incident Detection (AID) solutions to improve the safety of people and vehicles in tunnels and on highways.

MIC inteox cameras range from a 4K enhanced model featuring optical image stabilisation to a 1080p model in a base or enhanced version featuring Bosch’s starlight technology that can capture color images down to a level of 0.0069 lux as standard. The 4K model’s optically-stabilised images maintain pin-sharp pictures even when the camera is subject to severe vibration, such as on bridges.

Early adopters can take advantage of Bosch Inteox development kits to complement the MIC inteox 7100i cameras in pilot installations. ■

GENETEC LANDS MULTI-YEAR CHANGI AIRPORT GROUP SECURITY UPGRADE PROJECT

Singapore's Changi Airport Group, has selected Genetec, Inc., a technology provider of unified security, public safety, operations, and business intelligence solutions to enhance and upgrade its security system.

The three-year project, which is expected to be completed by the end of 2023, will see Genetec Security Center, a unified security platform that blends IP security systems within a single intuitive interface, underpinning the airport's security operations, with a specific focus on the video surveillance system across its terminals.

According to the company, the contract was awarded to Genetec following a rigorous competitive tender process.

"Increasingly, our airport customers are understanding the deep business insights Security Center is capable of delivering, its ability to inform and create value for multiple areas of an airport business operation and improve the overall passenger and employee experience," said



Giovanni Taccori, Commercial Lead Transportation, APAC at Genetec, Inc.

Singapore Changi Airport was awarded the Best Airport by Size (over 40 million) by the Airport Council International (ACI) Airport Service Quality Awards (ASQ) - Worldwide in 2021, marking its sixth win in that category. ■

MALAYSIA'S IMMUNITEE HEALTH PASSPORT GAINS APPROVAL IN SINGAPORE TO ENSURE SAFE AND SECURE TRAVEL

Singapore is slated to accept travellers from Malaysia in the near future as Malaysia's Immunitee Health Passport has been formally accepted in Singapore, according to media reports.

Created by Malaysian digital health company Immunitee, the passport provides the ability for people to have an electronic record of their detailed testing and vaccination history. In turn, this allows safe and quarantine-free travel and facilitates the opening up of borders and the economy without compromising health security elements.

Immunitee is an open source blockchain Vaccine Registry Management System (VRMS) providing a low cost system to countries needing to roll out mass vaccination programmes while

maintaining the protection of patient data.

User data such as passport and identification numbers, vaccine record, past medical history and test results are stored in the blockchain, encrypted and only accessible by the user. Immunitee says the platform only has access to record the username, contact and email address and no data concerning the user's physical location is stored.

Airlines, border control authorities and other related institutions can then access this information via a secure QR code, ensuring a seamless and secure clearance at health checkpoints.

Dr Nick Boden, Chief Executive



Officer, Immunitee, was cited in the media saying: "Vaccines have been developed at 'breakneck' speeds and are being supplied to governments and the private sector. It is important to ensure that the cold chain and vaccine management systems are in place to ensure proper traceability and authenticity. Patient safety and the ability to track adverse events are an essential part of the roll out."

NORTEK CONTROL UNVEILS THE 2GIG EDGE SECURITY AND AUTOMATION PANEL FEATURING SOME INDUSTRY FIRSTS

Technology solutions provider Nortek Control launches the 2GIG EDGE Security and Automation Panel in March, which is said to deliver the industry's first secure face recognition touchless disarm.

Packed with state-of-the-art Artificial Intelligence (AI) and edge analytics it is engineered using edge analytics and with technology built right into the panel ensures homeowner's biometric data stays secure by saving it only on the panel. Once homeowner data is deleted, it is deleted forever. Another industry first, according to the company, includes 100% compatibility with live feed of ONVIF cameras to the 2GIG EDGE panel. This allows homeowners to use existing ONVIF devices for their surveillance needs; all built on a foundation of security and data privacy. Upgraded with a new intuitive user interface in an exceptionally powerful and secure platform, the 2GIG EDGE panel not only supports encrypted sensors and devices but now provides the most secure way to disarm a system with hands-free convenience without phones to carry or codes to remember.

Housed in a sleek design that is 50% thinner and offers a higher resolution edge-to-edge glass screen that eliminates plastic bezels, the 2GIG EDGE Security and Automation Panel includes dual microphones with noise and echo cancellation and front firing speakers that enable two-way voice communication for best-in-class audio quality. Additional features include a built-in radio and wi-fi communications, camera and glass break sensor.

"Our 2GIG EDGE panel is born from security and not built from a tablet design. It provides the elevated capabilities consumers expect while delivering the most secure experience consumers have been wanting. Engineered with advanced edge analytics and face recognition touchless disarm, a first in the industry, our panel surpasses the IQ of any other smart home security panel on the market today. We know this is a game-changer positioned to take considerable market share evidenced by the enormous distributor and dealer demand from our pre-launch programs, of which over seventy percent of dealers are new-to-brand," said Bruce Mungiguerra, Senior Vice President of Global Sales and Marketing at Nortek Control.

Nortek Control said it developed the 2GIG EDGE Security and Automation Panel to be the center of today's smart home making it compatible with a broad array of home technologies and products. The panel allows users to seamlessly connect to cameras, doorbell cameras and



directly view video in real time from up to eight different camera feeds. Further increasing security and data privacy, encrypted sensors and devices help eliminate system hacks and prevent account take-overs. Plus, integrators are able to customise the panel to a homeowner's personal needs with controls, rules, scenes, notifications and Smart Area zone partitioning.

Tried and tested

The panel has also gone through rigorous beta testing with integrators and users, and it is the largest beta program ever undertaken at Nortek Control, according to the company.

"The design of the 2GIG EDGE Security and Automation Panel brings together the best of Nortek Control intelligent AI, advanced home automation, audio, wireless and security technologies. The features these technologies enable culminate in layers and layers of value to homeowners while giving dealers and integrators a competitive advantage in selling the evolution of home automation and security. It is truly a next-generation platform that can scale and expand to meet future needs," said Quinto Petrucci, Vice President of Product Management for the Nortek Control 2GIG brand. "We know that face recognition is a convenient plus, and to ensure consumers are extremely confident with this feature, the design of the 2GIG EDGE panel takes privacy protection to the next level. By processing analytics on the edge, sensitive biometric data is never sent over the internet. And, the integration of anti-spoofing technology ensures only the real live person can disarm the system."

Headquartered in Carlsbad, California, USA, Nortek Control and its partners have deployed more than 15 million connected systems and over 35 million security and home control sensors and peripherals. ■

GLOBAL SECURITY SUMMIT TO BE HELD IN DUBAI IN MAY 2021 AS A HYBRID EVENT

This year's Global Security Summit, organised by Intersec in collaboration with Expo Consult, will be held in Dubai, United Arab Emirates (UAE) on 24 and 25 May.

It brings together an influential line up of global decision-makers, government officials and business leaders for bilateral cross-border discussions to address the biggest challenges in security.

Organisers say this is an essential and timely two day event for c-suite professionals across security, defence, cyber security and civil defense, as the threat landscape has changed dramatically over the past year and continues to evolve at pace bringing new challenges daily. Thus, the ability to adapt in these unprecedented times has never been more important than it is today.

Delegates attending the summit will gain valuable insight and information, engage in important Q&A exchanges, connect with peers and meet innovators of latest tech and solutions.

Visitors to the summit will be able to experience a special showcase of the very latest security and defence products and technology from over 25 leading suppliers exhibiting for the first time in the UAE.

Exhibitors include system integrators, control room & data centre providers, software, network video recorders and video analytics vendors, IoT smart home solutions companies and other security services players.

Blended in-person and virtual interaction

Combining the best of both worlds, the Global Security Summit will be held as a hybrid event targeted at in-



person attendees and virtual attendees by integrating an AI powered technology platform. Organisers hope the hybrid format will allow attendees to have an amplified reach, enhanced business matchmaking and networking opportunities, unique content formats and innovative experiences.

The first day of the summit will focus on shaping the future of security and safety, building resilience and enabling innovation and future security as well as new capabilities in the security, safety and fire industries. There will also be discussions on future cities and fire safety.

The following day will see strategic discussion and exchange designed to strengthen cooperation, collaboration and trade between the UAE and Israel.

Intersec is the world's leading trade fair for commercial security, information security, fire & rescue, safety & health, homeland security & policing, and smart home & building automation. ■

Security Solutions Today (SST) is a leading publication on the latest security information, trends and technology, and products that include Access Control, CCTV/ IP Surveillance, Intrusion Detection and Integrated Security Systems.

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SST is packed with the latest developments in security technologies and trends, events, previews and reviews of major global trade shows, product launches and security installations worldwide.

Indonesian government Institution improves people identification and authentication with facial recognition technology at its premises

When a government institution in Indonesia needed an easy way to recognise faces of the people entering and exiting its premise and analyse their attributes in real time, the authority was looking for a robust and highly-secured facial recognition system for its perimeter security efforts.

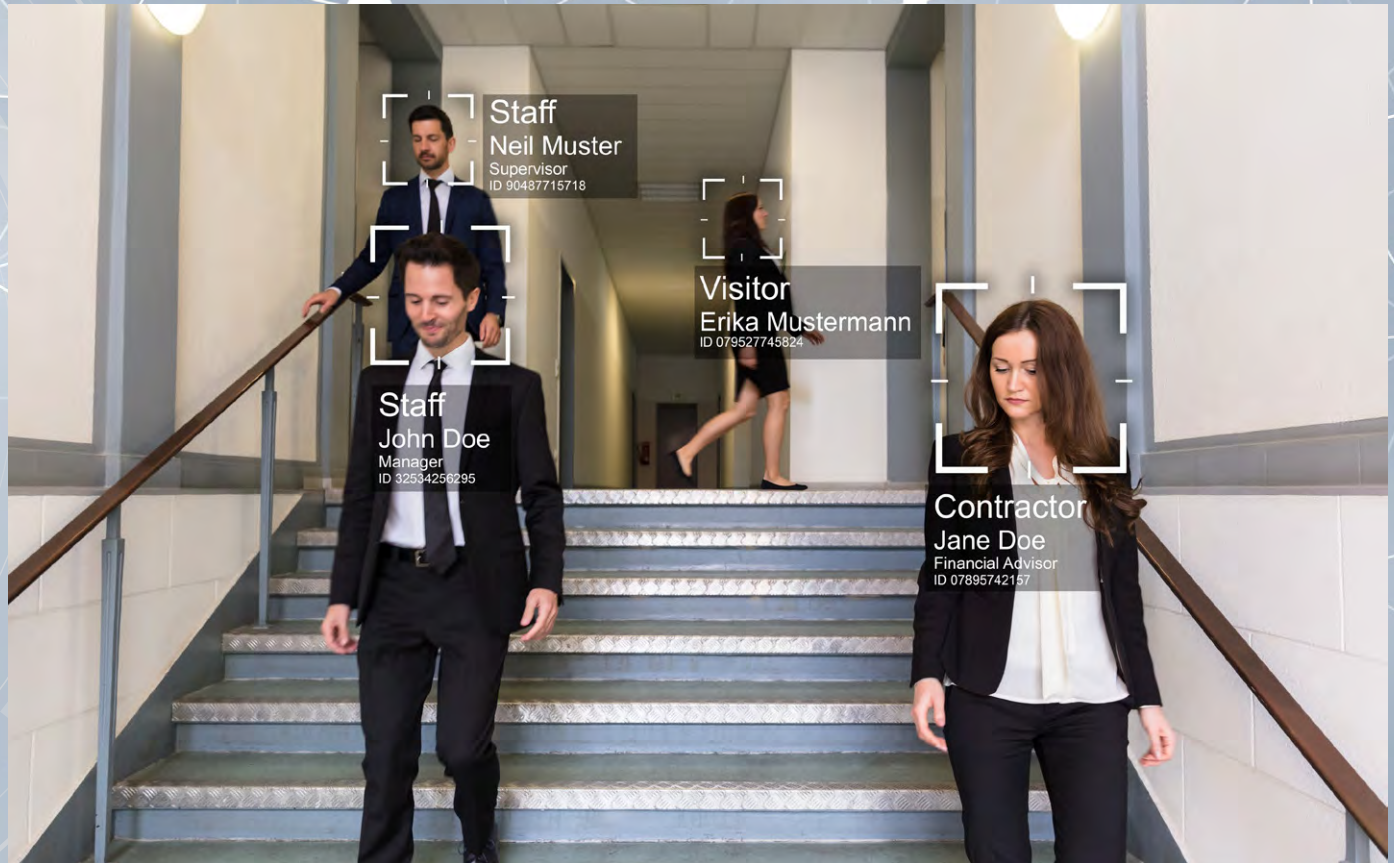
Due to heavy footfall at the premises, it was difficult for staff to manually record the information of people visiting and verify their identity on a daily basis. Sometimes, they even faced a challenge in verifying them due to changes in appearance or features.

To tackle this bottleneck, Videonetics MeraFace, a facial recognition software, was implemented for its

high accuracy in recognising and detecting faces in varied lighting conditions, providing additional attributes of gender, age and emotions and comprehensive statistical reporting. Operating around the clock on one of the busiest premises where visitors include very important persons (VIPs), citizens, members of the media, and government officials, Videonetics MeraFace was deployed at strategic locations with high human traffic flows including entry and exit and lift lobby areas of the institution.

How it works

The video streams from Internet Protocol (IP) cameras are processed via MeraFace to detect faces in real-time and operators can find probable matches with the registered faces. A face which is not registered but has been captured and stored in the system, can also be detected at any time. This gives operators the ability to keep records of registered faces and attributes of the person's face for future search and investigation. Powered by artificial intelligence



A face which is not registered but has been captured and stored in the system, can also be detected at any time. This gives operators the ability to keep records of registered faces and attributes of the person's face for future search and investigation.

The impact

The software company adds that Videonetics MeraFace has been proven to be a reliable and scalable system for the Indonesian government authority by delivering fast and highly accurate results.

Today, the security staff can recognise and detect faces in real-time. Furthermore, a smaller number of security guards are needed around the entrance or exit of the premises, due to the automated facial recognition system of identifying and validating information. The risk of human errors in face matching has also been eliminated.

(AI) and a deep learning framework, MeraFace analyses and delivers more information such as gender, age, and the emotion of the visitors. This proved to be helpful for officials to make accurate visitor analysis. As such, operators can identify and classify VIPs or blacklisted people on the spot with easy clicks and send the instant notification to the relevant staff

for swift action.

If there are any suspicious activities, operators can quickly investigate the person's face in the videos or the archive of facial images. This feature has been successful as an investigation tool for conducting post incident analysis, according to Videonetics.

“Videonetics has not only delivered a perfect facial recognition solution, but also delivered on its reputation of providing outstanding training and support, to us and customers. Our customer has invested in the future-proof technology that has the ability to grow with their needs,” said Alfred Bisuk, Technical Manager, Lamjaya Inovasi Komputindo. ■

Lidar-based security systems improve accuracy of perimeter surveillance, safety and security applications

Perimeter security solutions provider Barrier1 Systems recently partnered with Cepton, a provider of intelligent Light Detection and Ranging (lidar)-based solutions to add new layers of intelligence to its physical barrier systems. Using Cepton's Heliuss Smart Lidar System, this partnership enables the next-generation of early-warning intrusion detection and onsite safety applications.

Barrier1 Systems is working with global customers in the public and private sectors to install innovative new solutions that leverage the unique capabilities of Cepton's Heliuss system, which combines a network of Vista-P lidar sensors with edge computing and advanced perception software to deliver real-time, anonymised, 3D object detection, classification, tracking and velocity.

How it works

In one customer application, Barrier1 Systems has combined its barrier control systems with Heliuss to monitor the speed and direction of vehicles approaching entrance or exit points. If a vehicle exceeds a certain speed limit within a specified range, the system will flag it as a potential intrusion attempt and trigger an alert to the central system for further actions. By classifying vehicle travel direction, it can also guard against incoming threats through outbound roadways.

Deployments as described utilise the Cepton Vista lidar's long range, high resolution imaging capabilities, and the Heliuss solution's real-time, 3D information on object dimensions, locations and velocities. For example, Barrier 1 Systems uses Heliuss to detect and classify vehicles at 150 meters and keep track of their velocities to help diagnose whether there is a potential breach. The object information from Heliuss is much more accurate than from radars, thereby minimising false positives and false negatives.

Barrier1 Systems has also deployed Cepton's Heliuss system to help ensure facility security and onsite safety. For instance, a network of



Vista-P90 lidar sensors has been installed at customer inventory sites to monitor access points. Helius generates useful information such as whether a detected object is a vehicle or a person, how fast it is moving and whether it is in a pre-defined exclusion zone. As lidars perform 24/7 under many weather and lighting conditions which are challenging for cameras, this helps facility managers continuously ensure property security and worker safety. Facilities and operators can utilise the smart lidar data to flag potential accidents and breaches of access control.

The impact

Speaking of the partnership, Baxter Matthews, Vice President of Security Projects at Barrier1 Systems, said: "Cepton's lidar technology and perception solution have allowed us to unleash a new set of innovations and

capabilities when it comes to security and safety, which is critical given the range of threats and challenges faced today in both public and private spaces. The simplicity of installation of Cepton's solution makes it easy for us to deploy and scale up quickly."

He added that the anonymous nature of the lidar images, combined with their high accuracy, enables significant advancements in security and safety. "A major customer liked the advantages of our solution so much that they want to do a nationwide implementation at all of their sites, which is incredible. What's exciting is that we are just scratching the surface of what is possible because there are many untapped applications – in the perimeter security industry and beyond – where customers see tremendous potential for solutions arising from our partnership with Cepton." ■



Charting the Roadmap to a Safe City

By Muneerah Bee



We find out some of the common traits that safe cities around the world share and what more can be done to improve urban safety.

Singapore often tops safe cities indexes put out by various organisations around the world, especially in infrastructure, digital and personal security.

But what makes a city safe and what are some of the measures and technologies in place to ensure the population's safety? The Safe Cities Index (SCI) 2019, by The Economist Intelligence Unit and NEC Corporation, ranks 60 cities across 57 indicators. Interesting six of the top ten cities on the list are in Asia-Pacific, with Singapore coming in second, sandwiched between two Japanese cities -- Tokyo at the top of the list and Osaka in third place.

Over 56% of people on earth live in cities, according to the report, and a safe city contributes to the growth of the country's economy and improves the quality of life of its residents as they are likely to have high confidence in the public safety of the community they live in. It is also a way for emerging economies to catch up and match with more developed countries.

However, the concept of "safety" is not one dimensional and it is not enough to focus on just one security element. It is not just about reducing crime rates, eliminating terrorism threats or defending infrastructure. The different areas of security are often interlinked and they seem to have a domino effect to the city's safety as a whole. The SCI 2019 states: "Technological investments for infrastructure, for example, can bring health benefits, while





Top 10 Safest Cities in the World

1. Tokyo
2. Singapore
3. Osaka
4. Amsterdam
5. Sydney
6. Toronto
7. Washington, DC
8. Copenhagen
9. Seoul
10. Melbourne

Source: The 2019 Safe Cities Index Ranking

enhanced cyber-security will protect the ability of the city to provide every kind of security, not just protection of digital systems.” Hence, it is important to view security solutions and software and intelligent technology as part of a bigger picture as it plays a part in increasing the efficiency and resilience of a city, especially in megacities.

Technology solves social gaps

Beyond urban management, we should not overlook some demographic-related challenges. Some cities, such as Japan and Singapore, are currently facing an increasingly aging population and declining workforce. This translates to lower productivity and digital solutions are needed to resolve certain security challenges within the cities. We see this with buildings that are investing in smart surveillance cameras which are accompanied with video analytics and Light Detection and Ranging (lidar) technology to reduce the dependence on

human labour. Leveraging data and integrated solutions have proven to give a clearer insight of the security strategies needed for a city to operate seamlessly.

Keeping a city safe and secure requires a thorough assessment of its needs and risks that are relevant to the local context, and the strengths and weaknesses of the city. At the same time, it also depends on being able to anticipate the future needs of the city and reduce risks with enhanced security. This includes planning for cybersecurity, disaster management, emergency recovery and even health outbreaks to keep city dwellers safe.

By 2050, 68% of the world’s population will be living in cities, the SCI reveals, which is even faster

than previously predicted especially in developing countries. This is due to the speed of urbanisation as well as the movement of people within the nation. In tandem with this projection, the global market for safe city solutions is seeing an on-going growth trajectory, according to a report from research and consulting Frost & Sullivan.

Planning and preparing for safer cities that are more populated starts now. Security players and providers will need to get the foundations right with scalable and flexible systems and evolve in order to meet the vision of the future. ■

Is video analytics technology the future of security?

By Muneerah Bee

It is widely agreed that surveillance cameras are one of the most practical executions for perimeter protection but how effective is it in today's circumstances?

Founder and CEO of cognitive media processing company Graymatics, Abhijit Shanbhag, shares how video analytics technology is building a safe and secure workplace.



Abhijit Shanbhag

We are currently living in a world of data and the use of analytics is prevalent everywhere. This seems to be the only way forward for many industries, including security.

Something like a CCTV camera that passively collects video information is now transformed into a "smart" camera with human-like abilities with the use of analytics. Abhijit Shanbhag, founder and CEO of Graymatics observed that such cameras' capabilities are greatly helping to improve safety and security at workplaces and more.

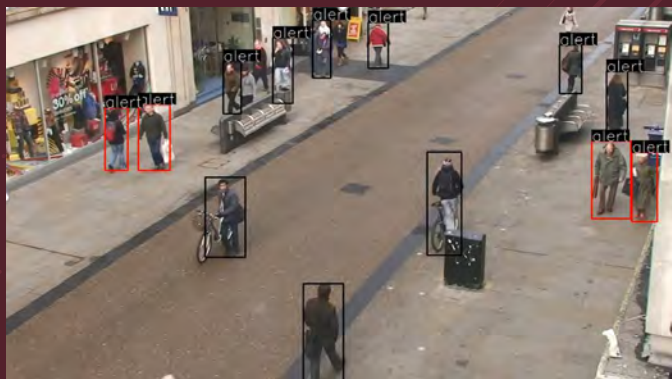
While the use of CCTVs for perimeter protection has increased in the last couple of decades, it still requires a lot of manpower and high human reaction time while producing low detection rates. Smart CCTV, on the other hand, is when "cognition" is added to a system that functions as "eyes" to identify different kinds of intruders and threats at different sections of the premises.

Shanbhag said: "With smart CCTV, we are able to reduce overreliance on humans to scan and detect suspicious behavior or objects more effectively and have a much quicker response time with less manpower required. With this suspicious activity being detected so much more quickly and accurately, nothing is overlooked, which greatly increases protection. We are able to detect loitering and intrusion with many added layers and nuances and send an alert immediately."

Strategic use of labour

Although some may have the perception that machines are to replace humans, he believes that analytics, especially video analytics should work in tandem with humans with minimal manual intervention.

For example, in the past, a security personnel would have to go through hours of live feed. When a person has to manually track multiple CCTVs, some things are likely to be missed or may go unnoticed.

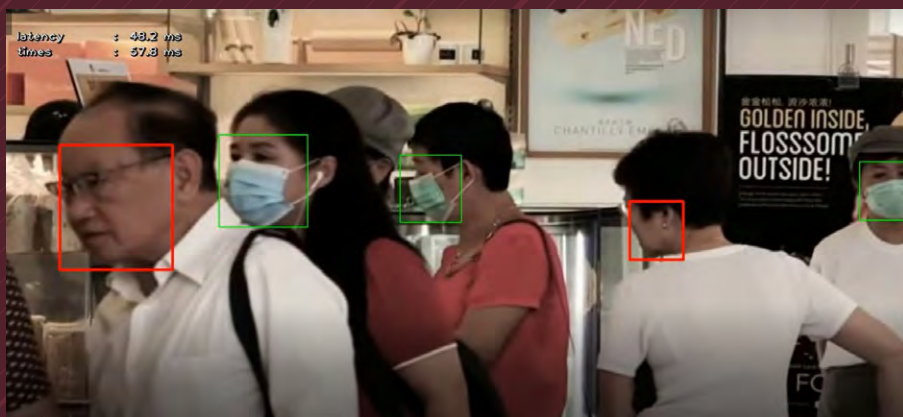


“Video analytics technology provides a solution to all of these problems. Using analytics, we add detection layers that assist security personnel in diverting attention where it is needed. We can also recognise patterns and make predictions in order for those responsible to take the correct steps sooner in order to avoid security problems from occurring and for people to be prepared,” Shanbhag explained.

Leveraging video analytics at areas that are more vulnerable will also allow for better manpower deployment.

Reducing false alarms

Video analytics solutions can also address some concerns about intrusion and trespassing. Sensor-based intrusion detection solutions are fairly reliable to detect intruders



To play our part in fighting COVID-19 recently, we introduced analytics like mask detection and social distancing checks with great customisation abilities, to enable businesses to open safely.

Abhijit Shanbhag, founder and CEO of Graymatics,

but there are some nuances that are missed out in such systems, according to Shanbhag. Sometimes, an authorised personnel or animals such as cats and birds can trigger alerts and due to the high rate of false alarms, security authorities might grow complacent and act slower than they should on a legitimate threat. Advanced video analytics adds more layers to the basic sensor-based approach and a large number of such false threats are avoided as artificial intelligence (AI) can easily differentiate between animals and humans.

“Additionally, face detection can be used to check if the right people are entering a premise, and clothing analytics can be added to detect uniforms of people who are in a particular region of interest. This greatly reduces false alarms. When an alarm is triggered, security personnel can simply check the photo or video clip of the person that triggered an alert. This greatly reduces response time,” Shanbhag expounded.

Another advantage of CCTV-based video analytics is that it does not need additional hardware for the CCTV cameras that have already been installed. The analytics can be run on different areas based on the requirement for that particular timeframe with the click of a button. It is no surprise that implementing smart CCTV and AI-powered solutions can make workplaces safer but they also ease the burden on security operators and can help to deploy security staff more effectively. ■

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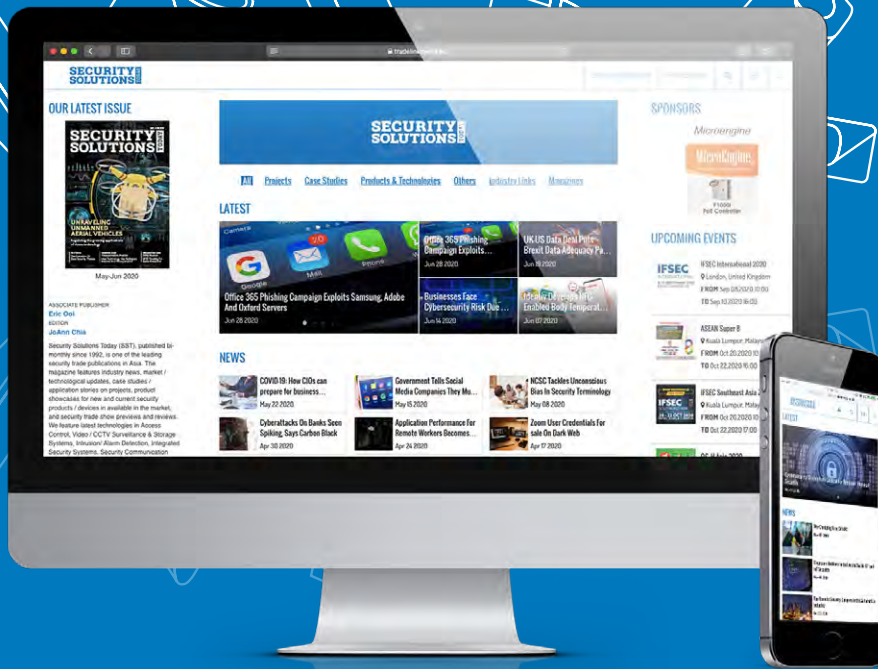
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