

**PROTECTING
SCHOOL ENVIRONMENTS:
CONNECTING
ADMINISTRATORS
AND SECURITY
SYSTEMS**



VALUE-ADD
HELPS DISTRIBUTOR
STAY AHEAD

THE CHANGING
VMS LANDSCAPE

“A recent phenomenon that has captured the attention of the global security industry is the expansion of certain Chinese manufacturers to foreign markets with their ultra-low prices.”

**SECURITY
INDUSTRY
HEATS UP,
AS CHINA TRIES
TO CATCH UP**

MNCs
GLOBAL SECURITY
POLICIES DRIVE
CONVERGENCE

**ACCESS CONTROL PLAYERS:
DIFFERENTIATION
MAKES A DIFFERENCE**



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• BY Israel Gogol, Freelancer

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VERTICAL MARKET



MNCs Global Security Policies Drive Convergence

A visitor entering the offices of a large multinational corporation (MNC) like Intel or Cisco, or even entering a Starbucks coffee shop will quickly find out that they are quite similar regardless of their location around the world. Be it Texas, Taiwan, or Tokyo, the environment is similar in design, corporate culture, policies, and also security systems.

• BY Israel Gogol, Freelancer

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SMAHOME

2015 European Smart Home Industry

According to market research, Europe is the second largest smart home market — there are a considerable number of safety- and energy-conscious households. The U.K., Germany, Netherlands, France, Switzerland, Italy, and Spain are considered major powerhouses for smart homes in Europe. A few Eastern European countries like Poland and Hungary also play important parts with their intelligent hardware and software solutions.

• BY a&s SMAhome

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SHOW REVIEW

secutech Excellence Awards 2015

The secutech Excellence Awards have entered their fifth year and were held in conjunction with secutech Taipei from April 28 to 30. Nearly 30 UHD IP cameras, panoramic cameras, and NVRs competed in the contest and were judged by secutech.

• Submitted by secutech

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Protecting **School Environments:** Connecting Administrators and Security Systems

BY Israel Gogol, Freelancer

Tragic events such as the Columbine or Sandy Hook shootings bring the issue of school security to the public attention and usually cause a surge of interest in security systems as well as bring more funding dedicated to security. However, the need for a robust security system in a school is not just to protect against active shooter incidents. There are other threats related to personal grudges, gang activity, illicit drugs and even custody battles between parents.

A major challenge facing school administrators thinking about security is finding the right information on how to do so. "There is a lot of information for active threat scenarios, especially pertaining to after the fact response, but there is little about how the school can protect itself using technology and standard physical security practices," explained Jim Crumbley, President and CEO of Risk Response Team, who also serves as Vice Chairman of the Partner Alliance for Safer Schools (PASS) in the U.S. PASS was formed out of the collaboration of the Security Industry Association (SIA) and the National Systems Contractors Association (NSCA). The goal was to create an entity that would help schools and their integrators implement the most appropriate and effective security technologies. "PASS wanted to create a set of guidelines like there are for security in health care. This is supposed to give end users the tools to begin the process of securing the kids," explained Crumbley.

"Parents are expecting students to be safe when they are sending them to school and the same is true also

The first step of setting a security plan and choosing the right systems is mapping and understanding the threats and needs.

for higher education," said Renee Patton, US Public Sector Director of Education Customer Impact and Market Acceleration at Cisco Systems. "If the environment is not safe students will not go to school. From a university's perspective, not having a secure environment has a negative implication in the loss of students whereas an effective security system can become a competitive differentiator for the school," added Patton.

"Not having a secure environment has a negative implication," explained Jenny





Månsson, Director of Industry Segments at Axis Communications. Schools typically have limited budgets and usually don't have dedicated resources for security systems management, therefore they need cost-effective solutions that are easy to install, use, and maintain.

Despite the similar constraints and goals, schools differ immensely in their environment. "The most important thing to remember, at least in North America, is that each school has its own requirements and needs. A downtown school is different than a high school in rural areas. Therefore a cookie cutter approach is difficult. We try to develop numerous feature sets and functions that schools can pick and choose from," explained Brett St. Pierre, Director of Education Solutions at HID Global, and Chairman of the PASS Alliance.

WHERE TO BEGIN?

The first step in setting a security plan and choosing the right systems is mapping and understanding the threats and needs. "We suggest that first you conduct a threat assessment, look at the data, what kind of incidents happen in the area, city, state, etc. Then you can focus on specific issues based upon the local conditions," explained Crumbley.

PASS recommends a "tiered" approach to security. These are recommendations describing solutions for various physical and technological "layers" in a school. Within each layer, the recommendations are divided into TIERS,



❶ **Robert Christie**, Head of Sales and Marketing, CriticalArc
❷ **Jim Crumbley**, President and CEO, Risk Response Team
❸ **Melissa Davis**, Application Specialist, PPM
❹ **Craig Dever**, VP Sales, Inovonics

progressing from TIER 1, which provides a good baseline level for security, to TIER 4, which includes the most aggressive approaches to securing a facility.

"The tiers give you options even for a limited budget — the first step is securing the doors properly, depending on needs and budget the school can scale up even to an enterprise grade VMS if needed," explained Crumbley.

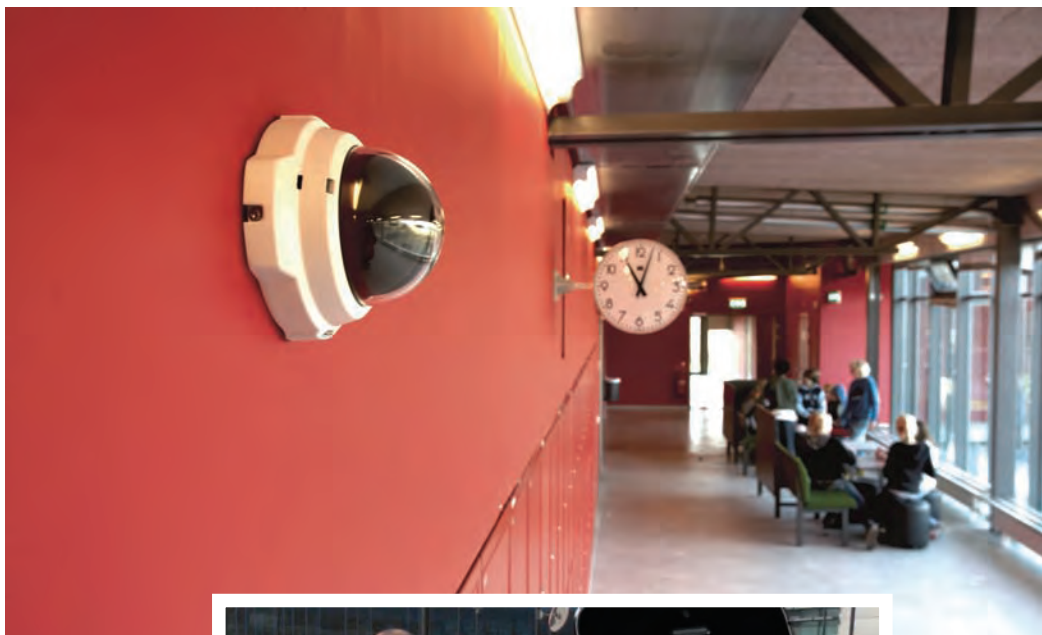
MAKING USE OF LEGACY SYSTEMS

As budget is a serious constraint for schools, making sure that legacy systems are utilized to their full extent is wise advice. "Therefore a cost conscious approach also looks to be able to leverage as much of the schools' existing investment and infrastructure as possible," said Månsson.

Schools can preserve their existing investments in older analog systems and still migrate to more modern IP-based systems through the use of encoders, which will allow the integration of IP cameras into existing systems. "Schools must recognize that in the long run an investment in an IP system is much more cost effective," explained Månsson.

"We always recommend finding a flexible management system that has the capability to maximize legacy systems while also giving schools a foundation for future expansion," said David Fleming, Director of Marketing and Design for Code Blue Corporation. "There are now many software and hardware options available that offer this type of flexibility."

The use of legacy systems comes with a warning. "The issue is that even with compatibility, a legacy system is still limited in its capabilities. Even if all of the customer's devices are working on a single system, the device-to-device experience is very different. In an emergency situation, the last thing you want is responders wasting time trying to figure out the needs of each device," Fleming said.



Despite their obvious importance, security systems encounter resistance from parents and school boards citing concerns over data security and the creation of a "big-brother" security system.



5 David Fleming,
Director, Marketing
and Design, Code Blue
Corporation

6 Jenny Månsson,
Director, Industry
Segments, Axis
Communications



A cloud-based command and control system that uses smartphones as sensors can gather intelligence to help responders resolve incidents at all levels — from personal emergencies to large-scale events like fires or lock-downs.

USES BEYOND SECURITY

A way for schools to make the most out of their security systems is making them "dual-use" systems, offering the school and even parents uses beyond security. "Security systems are not required from an emergency perspective every day, so schools need to consider ways to get their staff comfortable with the platforms for non-emergency activities," explained Fleming. "For example, in the case of a mass notification platform, while it may be designed to handle critical communications, at its core, it is a delivery platform perfectly capable of sending everyday messages, like morning announcements, classroom bells, or letters to parents," he elaborated.

IP cameras can be used to give parents the option to see how their children interact in class and also give school administrators the option to monitor and audit a class remotely, without having their presence in the class influence the regular way the lesson is held.

RESISTANCE TO SECURITY SYSTEMS

Despite their obvious importance, security systems, especially card-based ones, encounter resistance from parents and school boards citing concerns over data security and the creation of a “big-brother” security system. Parents fear that the information stored in school systems might be breached and fall into the wrong hands. Faced with this resistance, St. Pierre still advocates the use of technology.

“I think it’s important for schools to better understand technology so they do not have any misconceptions of what it is and its functionality. Some states and legislation are trying to prevent the use of technology in schools, primarily the use of cards, since they are afraid of data collection and profiling of the pupils. But they disregard the positives of the technology,” concluded St. Pierre.

MOBILE CLIENTS

Schools are dynamic environments, students and faculty move between classrooms, parents pick-up and drop-off their kids, and children engage in outdoor sports activities. School administrators and security personnel also move around the school and therefore need a mobile solution. “The biggest feature that people want is mobility — access from a phone or a tablet. For example, during off-school hours there is a need to be mobile, whether on the football field or in the parking lot,” said St. Pierre.

“When officers or principals have access to the security system from their mobile device, they can not only receive notifications or alerts but they can also respond to events with real-time information or handle investigations from anywhere in the school,” said Jimmy Palatsoukas, Senior Manager of Product Marketing at Genetec.

There are of course more options than just viewing video. “Pre-programming responses to alarms and setting up specific threat levels also heightens



7 **Renee Patton**, US Public Sector Director, Education Customer Impact and Market Acceleration, Cisco Systems



8 **Brett St. Pierre**, Director, Education Solutions, HID Global

response efficiency in case of emergencies,” added Palatsoukas. “Once activated automatically by an alarm or manually by a system user, a threat level will dynamically alter the state of the security system such as locking down perimeter doors, restricting access, controlling PTZ cameras, or triggering the recording of video with the maximum resolution available.”

MOBILE PANIC BUTTONS

As part of their security policy schools rely on students and staff to report any suspicious incidents or people. “There has been a shift of thinking in this area of reporting and raising alarms over the past few years. Where before there was a culture of staying silent if something was taboo — or, if you did speak up, you risked the consequences of being outcast. This is no longer the case. Most individuals are aware of ‘See Something, Say Something’ programs and are using smartphones to capture incidents, attacks, and general wrongdoings,” said Melissa Davis, Application Specialist at PPM, an incident management software company. “These programs only work if students know that the systems are in place, how they work, and where to find information. Therefore it is critical that these types of systems be made known, familiarized/broadcasted regularly, and tested to maintain maximum effectiveness,” she added.

Extending Security to School Buses

For many children, the school day starts not in class but on the school bus taking them to school. The need to protect children on their way to and from school is just as important as on campus. Video monitoring and on-board DVRs are commonplace, real-time monitoring and downloading of the information from the bus is still not common and information is used in post-event investigations. Recent advancement in transmission technology have made monitoring of school buses more efficient and expand the ability to provide a safe environment for children on the bus.

Davra Networks is a Cisco development partner from Ireland that developed the infrastructure to collect information from vehicles on the go using the Cisco platform. The system was deployed on school buses in a rural area of Texas where due to the remoteness of some locations, children often had to transfer between school buses.

Children boarding the bus tap their student card so the school administrators have control and knowledge of which child is on which bus. In cases



where children need to switch between buses, the system makes sure that the second bus will not start moving without them. In addition, Cisco IP cameras on the bus monitor emergency exits, and in case a child tries to tamper with one of the doors, the system automatically can tag the right moment in video and send an alert to security personnel and school administrators that can take action immediately when the bus arrives.

Fixed security systems have a major disadvantage in the coverage of open areas and securing people moving through them. Schools and university campuses have many open areas where traditional solutions like the deployment of fixed duress buttons and video surveillance is not always practical. One option to overcome this obstacle is leveraging the popularity of smart phones and use apps as “mobile panic buttons.”

For example, CriticalArc has a cloud-based command and control system that uses smartphones as “sensors” from which to gather intelligence to help responders resolve incidents at all levels — from personal emergencies to large-scale events like fires or lock-downs. Students and staff use the app to get help quickly without the need to make a phone call, or check-in to share their status with the security team when working alone or in high-risk environments. The security team or responders also carry the “responder version” of the app, which provides them complete situational awareness. Responders can acknowledge the alerts immediately and communicate directly with the person in need while they are responding.

“We have the solutions that are priced at effective levels for schools from 1,000 students up to 100,000 students or more. Our average school size is above 30,000 however we are engaged with numerous smaller schools,” said Robert Christie, Head of Sales and Marketing for CriticalArc.

Unlike a university environment where the students are adults and more adequate to be engaged as part of the security solution, a K-12 environment requires a different solution, one that leaves the control at the hand of the teacher.

Inovonics is a Colorado-based manufacturer of mobile panic buttons, wireless transmitters carried by the teacher and connected to the school’s systems. “A mobile panic button is a sole use device,” explained Craig Dever, VP Sales of Inovonics. “Unlike a cell phone



Connectivity With Other Databases

The visitor management system in a school is used primarily to know who is on campus and when and alert of suspicious visitors. The systems also include the possibility to add additional information, such as who is allowed to pick up a child. For example, if parents are going through a divorce and have a problem over the custody the school administrators can make sure the visitor management system is up-to-date. In addition the system can connect to other databases such as a sex offender registry and other federal databases and check the visitor’s identity.

The benefit of an electronic system is that from a post-event perspective, it is easier to research an event when there is an electronic log instead of paper forms. So if there is an incident like a theft it is easier to find out if there were any outsiders in the school at that time, explained Brett St. Pierre, Director of Education Solutions at HID Global.

app, there is no need to worry if you have sufficient battery, or finding the emergency app on the phone. It is designed to make it easy for the teachers to call for help,” he added. The transmitters can also have up to four buttons, to signal a number of conditions (e.g., safety, medical emergency etc.).

The buttons are carried by teachers in the school and are connected over a wireless network to the school’s different security systems. The system is an open system and can easily scale up and integrate with other systems according to the specific school’s needs. These could be public announcement systems, video management systems (VMS), access control systems, or even the school email system to send an email in case of an event.

“When a teacher presses the button, the VMS can get a camera or a PTZ to focus on that location, we also have OEM partners that make message panels. This way the school can relay information using existing digital signage. It depends on the protocol for the specific school, who they want to alert. The key is the flexibility we give to the schools in choosing different systems,” said Dever.

SAFETY FOR CHILDREN IS PRIORITY

Schools have a commitment to ensure our children’s safety and well-being. Even though the chances for a catastrophe such as an active shooter are very low, we must still find ways to protect children. A tiered approach, combining both technology and each school’s specific conditions is the best way to do so. **AMS**