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THE ABCs OF SCHOOL SECURITY

A "Networking" Guide for Security Dealers

By Fredrik Nilsson

The ABCs Of School Security:
A "Networking" Guide For Security Dealers

A 32-Channel Unit

FireWire Support Via Software

School security is under close scrutiny on campuses of all sizes across America today. It is no longer uncommon to see cameras surveying the halls and parking lots as well as in the classroom. Although school crime has decreased in recent years, the incidences that now occur are likely to be more violent or dangerous than before, putting pressure on schools to improve their security and surveillance methods.

reported carrying a weapon such as a gun, knife, or club on school property in the past 30 days.

- From 1996 to 2000, teachers were the victims of approximately 1,603,000 non-fatal crimes a year, or 74 crimes a year for every 1,000 teachers.

- In 2001, approximately 29% of all students in grades 9 through 12 reported that someone had offered, sold, or given them an illegal drug on school property in the year prior to the survey.



Every classroom in Canton High School is equipped with network video. The school also uses network video surveillance in public areas such as hallways and the cafeteria.

The U.S. Department of Education's 2002 "Indicators of School Crime and Safety" report states that:

- In 2001, 20 percent of students reported that street gangs were present at their schools, and 6% of students in grades 9 through 12

The study also finds that school violence is most likely to occur when students are congregated and under less supervision, such as before or after school, during class changes or at lunchtime—the exact times when it is more difficult to keep an eye on all students. Under

the "Security Measures" section of the report, 15% of public schools reported using video surveillance to monitor students and their school.

Video surveillance can be cost-prohibitive, especially when funding is limited. It can be accomplished for less by installing network video surveillance systems in school environments. Since network video systems utilize a school's existing computer network, installation can be simplified and costs can be reduced, making it a viable alternative for many school settings. Network video technology is currently being deployed in elementary and secondary schools around the country, typically in public areas such as hallways and cafeterias.

In August, network video surveillance received another boost when the Missouri School Board Association (MSBA) partnered with Digital Technology & Surveillance (DTS) to present the company's network-based surveillance system to school districts nationwide. The MSBA recognized the need for network video surveillance as a tool that can assist schools in providing a secure environment for students to learn. Tim Beerup, the chief executive officer for the MSBA, reports that the system discourages violence, vandalism and theft. It encourages students to self-regulate their behavior and verifies the presence of campus visitors.

"Today, surveillance systems play an important role in a school's daily operations and improve communications between school officials and the community," Beerup comments.

A: Appreciate the Differences

The flexibility of a network video system comes from it being based on Internet Protocol (IP). IP is the standard method for sending data from one computer to another over the Internet, which enables more enhanced and improved security and surveillance techniques.

With a network video system, school districts have the option to allow local police and first responders access to the images. In an emergency, this improves communications with the appropriate government agencies because real-time images of conditions in and around the school can be remotely viewed from police headquarters or an approaching squad car. Network video also gives schools the option of using wireless connections.

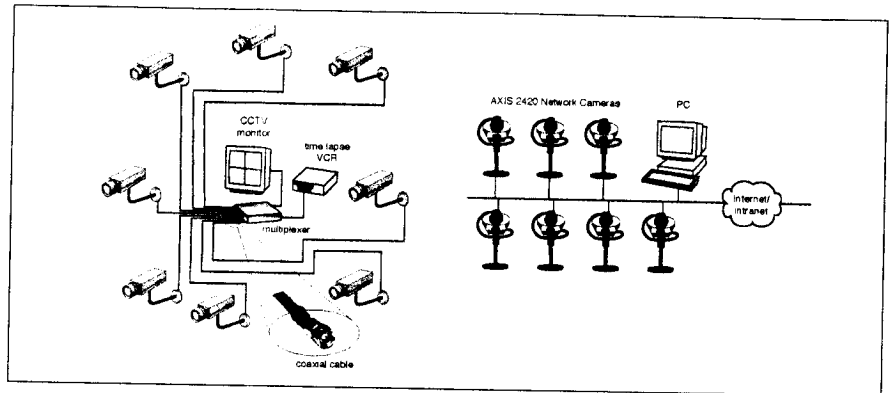
The core of a network video system is the network camera, a camera that contains image compression, an operating system and a Web server. This built-in functionality allows network cameras to operate independently of a PC and send images directly over the computer network and the Internet. If a school has an existing CCTV system that it does not want to dismantle, video servers can be implemented. The video server will digitize the images from the analog cameras, allowing for increased functionality without an entire system overhaul.

In network video systems, images are stored to hard disks. They can

technologies to other school boards in the area, which could lead to more business opportunities.

It is also important for dealers to consider the scalability of their network video systems. School districts range in size from just a handful of schools to hundreds of schools in a single region, and most dealers will want to capitalize on opportunities in various size ranges. Dealers must ensure that the system they install is scalable enough to include several hundred or even thousands of network cameras and video servers for the largest districts.

"We work with schools of all sizes and have found that they all deal



This diagram depicts the differences between analog CCTV systems and network video systems.

be used many times without a decrease in image quality. It is also easy to locate image sequences on hard disks. Searches can be done quickly. Recording video on hard disks also means that no one has to manually change tapes, further reducing the risk of human error.

In large network video systems with hundreds of cameras, software normally is installed on one PC to manage the operations of all the cameras, which is particularly important to large school districts that often want to monitor activities at many schools from a single location.

B: Broaden Your Focus

When working in the school market, security dealers will typically find that they are not dealing with individual schools, rather with an entire school district. Funding for large projects like security systems often comes from the district level, and many districts install a network video system in one or two schools first, with plans to expand as resources allow. In addition, many districts will recommend successful programs and

with common problems such as vandalism or theft," says Dan Moore, president of DTS. "Regardless of a school's size, a security officer or administrator can't be everywhere at once. A good security system extends their eyes and ears and makes the school a safer environment for everyone."

In addition, a scalable system allows every school in a district, no matter its size, to use the same technology. This creates efficiencies for the district when it comes to installing and managing each school's security system and makes it easier to expand the system as funds allow.

Dealers who are accustomed to dealing primarily with security professionals will also want to broaden their focus to include IT managers. Because network video systems run over the computer network, IT managers in the school districts are likely to be key decision makers or at least a big influence. Dealers need to understand the major concerns that IT managers will have with an IP-based system, such as the manage-

ment and allocation of bandwidth or the security of the system itself.

Although school systems typically have ample bandwidth to support a network video system, dealers can adjust the image quality or frame rate and find the balance that best fits a school's security needs and bandwidth limitations. To secure the data being sent over the network and the Internet, network video systems can be password-protected so outsiders cannot access images or make changes to the system. Passwords also can be set to give different people varying levels of control. For example, some passwords may allow users to only view images, while others may give them the ability to make administrative changes to the cameras.

C: Classrooms are the Future

Although most network video systems are installed in public areas such as hallways, cafeterias and parking lots, the technology has applications for the classroom as well. The school district for Biloxi, MS, was the first in the country to install cameras in every classroom, and Mississippi's Canton

school district followed closely behind. These camera systems in the classroom go beyond security and surveillance applications, as schools can use them to evaluate teacher performance and monitor for disruptive student behavior.

CameraWATCH, a Jackson, MS security company that specializes in network video systems for schools, installed the classroom system for Canton High School.

Jim Walker, CameraWATCH's vice president, says that the emphasis on the classroom largely comes from the government's No Child Left Behind act, which aims to close the achievement gap in America's schools and hold schools accountable for students' academic achievement.

"Under the No Child Left Behind Act, schools must ensure that all students achieve academic proficiency," Walker

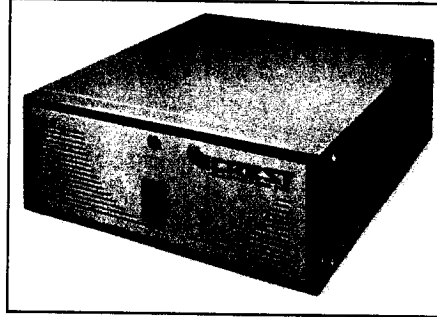
A 32-Channel Unit

Crest Electronics, Inc.'s CDVS-5432 Digital Video Solution with 32 inputs features global display speeds of 480 fps and recording speeds of up to 240 fps and resolution settings up to 720 x 480.

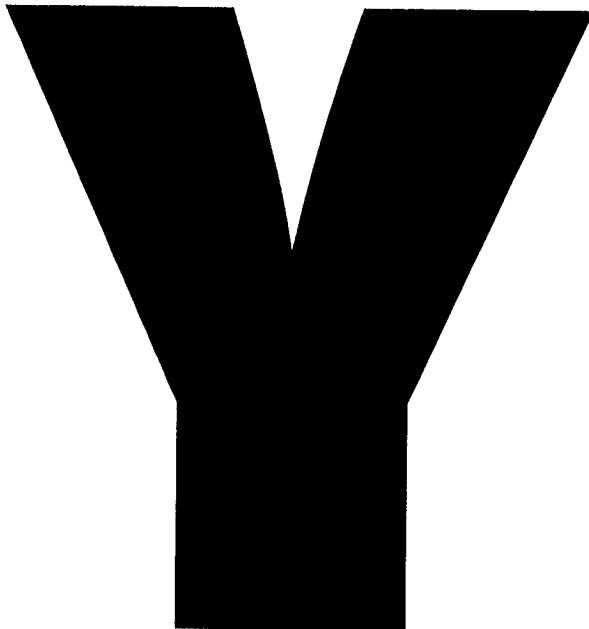
The CDVS-5432 also has 16 input and 16 output controls to integrate an entire security system. This full-featured machine also offers easy programming and remote access and administration functions through most typical firewalls. It features internal hard drive configurations available up to 600GB and the ability to control multiple PTZ manufacturers' domes.

For more information, call 888-50-CREST.

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explains. "Some schools, such as those in Biloxi and Canton, are finding that the best way to hold teachers accountable for educational performance is to install cameras in every classroom. That way, the administration can make sure that students are not being disruptive and that classroom time is being managed properly."

In addition, network video systems in the classroom can alleviate bullying, one of the biggest problems in schools today. Bullying creates a climate of fear and intimidation, which leads to

poorer academic performance. By controlling this problem, schools can create a safer, more productive learning environment that complies with the No Child Left Behind act.

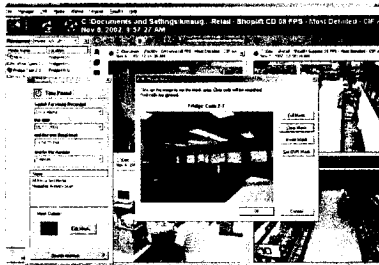
Today schools throughout Arizona, California, Florida, Georgia, Indiana, Mississippi, Missouri, New Jersey, New York, North Carolina and Wisconsin have installed network video systems, and are pleased with the benefits that network video systems provide. For security dealers,

this trend presents major opportunities for growth and business expansion. By understanding schools' needs and limitations, dealers can customize network video solutions that meet their needs and can easily tap into this rapidly growing market.

Fredrik Nilsson is general manager for Axis Communications. He oversees the company's operations in North America and manages all aspects of the business, including sales, marketing, business expansion and finance.

FireWire Support Via Software

GE Interlogix Video Systems Group's DVSe Software Version 2.00 introduces support for IEEE-1394 FireWire, which provides up



to 33 times faster throughput of image transfers when used in archive mode with GE Interlogix combination digital video multiplexer/recorders (DVMRe).

Designed exclusively for CCTV security users, this inexpensive desktop or rack-mountable disk array offers flexible solutions for extended storage and easy retrieval of digitized, compressed video data at extremely fast transfer rates of 400 megabits per second.

The FireWire connection can be used with the DVSe in either a selective or background archive mode. In the selective archive mode, DVMRe users can select and transfer the specific data files they wish to archive. In the background archive mode, data is written to the DVSe and DVMRe or DSR at the same time. Recordings are retrieved through the DVMRe's normal search functions, including play, fast forward, reverse, fast reverse, pause and frame advance.

For more information, visit www.ge-interlogix.com.

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