



St. Georges Technical High School, Central New Castle County, Middletown, DE

The Client:

On December 2005, construction began on the most advanced Technical School in Delaware. Located in Central New Castle County, St. Georges Technical High School is a 225,000 square ft. school designed to accommodate 1,000 students in Middletown, DE. Configured to support small learning communities, the school includes academic classrooms, career-training labs, teacher offices, and student services.

The Situation:

When the school district determined that security was vital to day-to-day operations, they consulted with Mahaffy & Associates, Inc. to design the system, who selected security integrator Advantech. They created a system design that provides true integration, and one that is very simple to use for the students and faculty.

“The integrated security system at St. Georges is an ideal template for any school. It is a unique project since it is truly a one system/one card solution with true data integration of the sub-systems, IP video, smart card technology, and its own dedicated 1GB network.

Eric Schaeffer, president of Advantech



The Solution:

Traditionally, the fundamental systems that comprise security in a building of this size are three independent systems: Access Control, Intrusion Detection and CCTV. "This project is unique because it offers true data integration since Intrusion, Access Control and CCTV are in one networkable/expandable system," explains Eric Schaeffer, president of Advantech.

The system features IP cameras which provide easy expansion. To ensure efficiency, the system operates on its own 1Gigabit Ethernet network eliminating bandwidth impact to the school's computer network. "Due to the large footprint of the school, IP cameras offered a solution that would allow the information to be directly coupled to the system head end. The availability of the network to support IP cameras offers a low cost solution



when adding additional cameras in the future," explains Edward Fayda, P.E. for Mahaffy & Associates.

PTZ cameras monitor the perimeter grounds and interior cameras monitor activity in common and critical areas. Conventional digital video recorders were substituted with hot swappable, digital hard drive storage arrays using RAID5 recording technology. This permits future expansion of the system with minimal upgrade costs.

The Benefits:

The system monitors and digitally records the cameras for simple event recovery and digital reproduction. In the event of an alarm, the system can

be programmed to recognize the point of alarm, and change from time-lapse recording to real-time recording. That makes the system less dependent on operator observations and enables

real-time decision making. There is no need to watch a video monitor, manually call up cameras or search through dozens of tapes to find the associated information, increasing personnel productivity and responsiveness.



A key concern for the district was that the system be easy to use. Therefore, the system employs contactless smart card technology. Unlike conventional proximity cards, smart cards can be programmed to contain a variety of information such as a photograph, biometrics, and the access levels granted. Since this one card solution is used for multiple applications, it offers convenience and security for the end users. The security system is automatically disarmed based on a

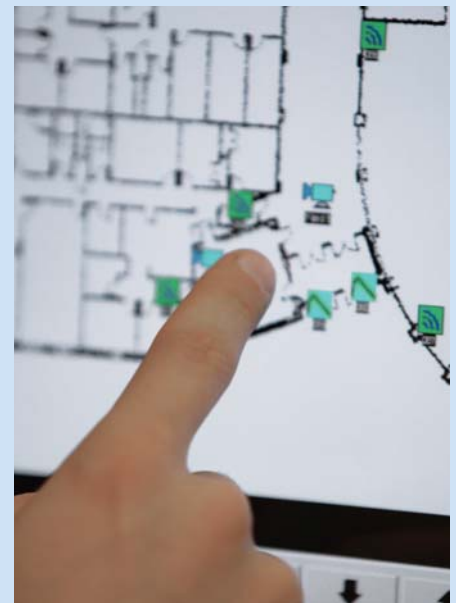
valid in card read to that area of the school, simplifying operation and eliminating user caused false alarms.

An end user does not have to enter any PIN numbers since the card arms and disarms the intrusion capability, providing accountability. Lost cards can easily be deprogrammed from the system without the need for changing locksets and reissuing brass keys. In a crisis, school officials have the ability to "Lock Down" the school at any time.

The design also ensures ease of use with an interactive touch screen controller located in the main and custodial offices. They display the entire footprint of the building and any points in alarm. "By using the touch screen, the District has the ability to interact with all sub-systems without the need for keypads, flat panel displays and other desktop related equipment," explains Fayda.

From the touchscreen, users can select a camera and view video in real time. The touchscreens allow staff to see at a glance all alarm points from one location. Staff can quickly locate and close doors left open as well as other alarm points, ensuring that the system is used every day, keeping the facility and the students safe and secure.

"In order for a system such as this to be successful, three entities need to work in complete harmony. They are the design engineer, the system integrator and equipment manufacturer. Together with Advantech and Honeywell, we were able to specify a system that would clearly meet the needs of the school district, while being cost-effective and technologically superior to any other system on the market," concludes Fayda.



The Products:

Honeywell Pro-Watch

Honeywell PW-5000
Intelligent Controller

Honeywell PW Series High
Density Enclosure Rack Mount

Honeywell PW Series
Daisy Chain Cable

Honeywell Smart Card Readers

Honeywell Power Supply
w/Battery Back-up

Honeywell Ethernet
Daughter Band

Honeywell OmniClass
16K SmartCard

HP Pro-Watch Workstation
with 19" LCD Monitor

HP ProCurve 10/100/1000 MB
Core Switch w/Optical Fiber
Modules 1GB

Advantech Industrial In-wall PC

Advantech In-wall Touch
Screen 105"

Advantech Custom Integration
Software for VISTA-250 &
Security Mgmt. System

Nisca High Speed Dual Sided
ID Card Printer

Honeywell Vista 250
Control Communicator

Honeywell Vista
Ethernet Converter

Honeywell Dual-Tec Standard
Range Motion and Dual-Tec
Long Range Motion Detectors

Honeywell Overhead
Door Contacts

Honeywell Siren

Honeywell V-PLEX
power booster

Honeywell RPM Modules

Honeywell Custom
Display Keypad

Honeywell DVM Server, DVM
Hard Disk Storage Array, 3.25TB
@ RAID5, Rack Mount

Honeywell Digital IP
WeatherDomes

Honeywell Corner Mount
Adapter and Pole Mount
Adapters

Honeywell Primaview Impact
Resistant Dome Cameras, True
Day/Night, Varifocal AI lens

Honeywell 1port video streamer
with PTZ support, 1 input/1 output



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