



### East Side School District Alarm Communications Project

#### East Side School District, San Jose, CA

- 12 Campuses
- 100+ Buildings
- 180+ Sq. Miles

#### Project Challenges

- Existing wiring conduit lacked integrity
- Temp classrooms required monitoring

#### Solution Provided: AES-IntelliNet

- Campus wide wireless mesh network
- 200 wireless subscriber units
- No monthly communications fees

#### Benefits

- \$200,000 savings in wiring costs
- \$96,000/yr. in phone cost savings

## School District Embraces Wireless Alarm Monitoring

East Side Union School District in San Jose, California is one of California's largest high school districts, encompassing grades 9-12 with enrollment over 24,200 during the day and 26,000 adult students at night. The 12 campuses with over 100 buildings encompass over 180 square miles. A recently awarded \$200 million bond for campus-wide renovations to modernize public safety systems including security and fire alarm monitoring was intricate and expansive. The first phase of the public safety system modernization extended throughout the 12 campuses with over 40 buildings slated for immediate renovation.

The Project Coordinator, Dave Sykes, San Jose's Assistant Director of Security, realized he needed to reach out to an experienced Security Systems Integrator and with the assistance of Kurt Brinkman, CEO of Intrepid Electronic Systems Inc., a design and installation plan was initiated. Intrepid, established in 1997, is a Security Integrator with 70% of its business focused on new construction and renovating educational facilities. Intrepid has addressed many of the challenges inherent in modernizing existing facilities and their experience was key in being awarded the project.

### Existing Infrastructure Offered Complex Challenges

The East Side School district's pre-existing communications structure illustrates three challenges very common to school renovation projects. The primary challenges were overcrowded conduit, temporary and transient classrooms, and

the requirement that the public safety system should suffer no down time during the renovation.

The conduit system of older facilities is usually at or above capacity meaning there is little or no room available to pull through new wires. Furthermore, Kurt Brinkman said, "We had no trust in their underground conduit. Their existing system was experiencing groundouts, water problems, and shorts. There was no integrity in the system." This made the option of pulling new wires through the existing conduit impractical and the estimated cost of \$200,000 for trenching and cabling new conduit was beyond their budget.

The second challenge was the need to secure temporary classrooms. The school district utilizes trailers as temporary classrooms. These temporary classrooms have to be monitored and are subject to being moved from campus to campus during the renovation project. This meant the public safety system needed to be completed with no lapse in the day-to-day operation of the public safety system at any time. The new system also had to be capable of operating in stand-alone nature, independent of a full campus wide implementation, so that transient trailers could be moved without requiring a new installation.

Finally, there was no down time available for installation and time-intensive testing. The school district had a very intense academic calendar, which utilized the facilities not only during the day but also at night and throughout the summer, and as a public school system monitoring had to be in place on a continuous basis.



## Traditional Alarm Communications Solutions Fall Short

Several traditional alarm communications alternatives were explored for this project including traditional wired alarm communications systems, radio tower, and cellular options. The traditional alarm communications systems that utilize phone lines were not practical as they required pulling new wire through the inadequate conduit. Also, since temporary facilities were used, many sites that needed alarm systems simply did not have phone lines available. The cellular systems were considered too expensive due to their ongoing monthly fees. Traditional private radio was too expensive due to the investment required for radio repeaters, tower rental space and the lack of reliability due to unpredictable weather or delays for servicing.

## The Solution

Intrepid identified the AES-IntelliNet wireless alarm communications system as the preferred solution for this project. AES-IntelliNet is a wireless network made up of 2-way radio communicators called subscriber units. Each subscriber unit is linked to the network and acts as a receiver, transmitter and repeater. Alarm signals are sent through the wireless network to the Crime Alert Monitoring Center

located in San Jose. The system's redundant reporting capacity lets distant subscriber units use other subscriber units to relay data to the central monitoring station. Signals follow the shortest, most reliable route available. These redundant routes enhance reliability and reduce the need for costly repeaters. The subscriber units dynamically adapt themselves to changes in the network, continually optimizing the system for best performance. For East Side School District the wireless and self-adapting technology provided the needed flexibility to address the multiple and complex challenges inherent in this project. Furthermore, the AES-IntelliNet system is NFPA-72 and UL compliant insuring that it meets all codes related to public safety systems for schools.

## The Results

The AES-IntelliNet wireless system allowed Intrepid to address all three major challenges plus receive an unexpected bonus.

First, it helped the customer bypass the existing conduit problem and eliminate retrenching and new conduit and wiring. This avoided an estimated \$200,000 in new trenching/wiring costs.

Secondly, the wireless solution could easily serve the temporary classroom trailers during the renovation phase. With the AES-IntelliNet mesh technology feature, Intrepid was able to add or re-deploy radios quickly, as new trailers were added or moved, since the system automatically integrates new units. According to Kurt "Because it is wireless, it can be re-used and moved to accommodate the moving of the temporary classrooms".

Finally, the AES-IntelliNet system could be installed and running in one day. "We could put up an entire building

using the AES-IntelliNet system and get a signal all in one day. AES-IntelliNet integrates with most alarm panels, in this case, Gamewell panels, making integration into the system seamless. With the quick set-up time, testing the system after the initial signal was received was almost instantaneous", Brinkman stated.

The unexpected bonus was the ongoing savings over otherwise recurring telephone charges. Utilizing the AES wireless system Intrepid provided a very low cost of ownership alternative to standard alarm communication systems. The project required the installation of 200 wireless alarm subscriber units connected to the alarm panels. AES-IntelliNet does not rely on telephone or cellular service, so there were no monthly telephone or cellular fees required thereby saving the school district an estimated \$96,000 annually.

## Summary

AES-IntelliNet provides security and fire alarm monitoring solutions that utilize wireless technology well suited to municipal or educational facilities. Tom Kenty, General Manager for AES-IntelliNet said "The availability of a wireless alarm monitoring system provides System Integrators and their customers with a unique solution to a common customer problem. Providing the end customer with a more flexible, reliable, and low cost alarm communications system that is otherwise unavailable with other alternatives. With the reliability, ease of installation and wireless feature, systems can be quickly and easily deployed as a project expands or moves through a multi phase implementation."



Toll Free (800) 237-6387

For more information contact AES-IntelliNet at (800) 237-6387 or visit [www.aes-intellinet.com](http://www.aes-intellinet.com). or Intrepid Electronic Systems at [www.IntrepidElectronic.com](http://www.IntrepidElectronic.com).

Copyright 2004 AES-IntelliNet  
AES-Intellinet is a registered trademark of AES Corp.  
Patent Protected