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Audio/Video Monitoring in Schools: The 24/7 Solution

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ABSTRACT

Even though crime in public schools has been documented as declining in recent years, the public perception is that crime is rising. To combat these perceptions, school districts and law enforcement agencies are spending enormous amounts of resources on innovative programs and state of the art technology. Everyone wants immediate answers, demanding maximum safety with minimum cost. The question then becomes: Is there a single best solution that alters both the perception and reality of crime in schools? Interestingly enough, video cameras can provide the answer, 24 hours a day, 365 days a year. This research will attempt to confirm the following premises.

The use of camera systems is increasing in public schools. Further, *crime prevention* is the principal reason given for school districts that installs, or wants to install, cameras. For districts that do not have cameras, but want them, cost will be cited as the main reason why they are not installed. In reality, cameras are quick and easy to install, can be integrated with existing technology on campus and are coming down remarkably in cost. Actual crime and/or the perception of crime decreases, while crimes that do occur are solved, as a result of their use.

The research will attempt to confirm that cameras are usually not tied in with a burglar alarm system, as they should be. Cameras, integrated with a quality building intrusion alarm system, that immediately transmits video to law enforcement authorities greatly enhances the overall effectiveness of the systems. A further premise is that cameras will generally be incorporated with the use of metal detectors, despite the fact that cameras are much less intrusive into people's daily lives than metal detectors.

To prove or disprove these assumptions books, literature review, magazine articles, and other current periodicals were reviewed. Surveys of a variety of school districts were conducted to see how they are attacking the problem. Several of these schools were directly visited to access cameras in actual use. Systems vendors, administrators and law enforcement officials were interviewed to ascertain their interpretation of how the video systems have impacted crime or the perception of crime where they have been installed.

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INTRODUCTION

According to a recently released report by the Department of Education, "the vast majority of schools in the United States are safe places for children" (ERIC, Spring 2000. p. i). That same report continues by saying, "Notwithstanding this encouraging news, the recent school shootings [h]ave clouded the public's perception of school safety" (ERIC, Spring 2000. p. i). This underscores the general opinion that even though crime in public schools has been declining in recent years, the public perception is that crime is increasing. This perception is driven primarily by the news media, especially the televised media, which has amassed a voracious appetite for horror and sensationalism. The media's mantra is "If it bleeds, it leads!" What better lead, from their cannibalistic perspective, is a crisis in a public school? Schools are nationwide, and if it can happen one place, it can happen at another. Thus, the perception of the public, that schools are dangerous, is maintained making further stories on similar incidents "newsworthy." The horror/sensationalism concept that was invented in Vietnam, the "living room war", is being perfected and perpetuated at places such as Paducah, Jonesboro, and Columbine.

To combat these perceptions, school districts are spending enormous amounts of time and money on innovative programs and state of the art technology. Likewise, law enforcement is committing their limited and precious resources toward changing the public's perception of school-related crime. Both groups are anxiously searching for *something, anything*, that will help. School districts want their students and staff to have a safe learning environment, both in reality and perception. Law enforcement shares that viewpoint because it demonstrates a pro-active approach for law enforcement by preventing some criminal activity. They like it even more for the evidentiary value, to show visual identification of the criminal when a crime has been committed.

For law enforcement, increasing the percentage of solved crimes helps to show the public that they are actively pursuing leads and suspects to successful conclusions. Further, that they are looking for any workable, pro-active strategy that will prevent crimes from happening. When public school systems and law enforcement are ultimately successful, the glaring lights of the media will turn elsewhere, and the public will finally realize that schools are reasonably safe places for their children. Thus, a solution that benefits school districts will likewise benefit law enforcement.

To obtain a solution to these mutually beneficial positions, this research paper will answer the following questions: Are camera systems increasing in use in public schools? Is cost a major factor listed as to why schools that want cameras do not have them? Does actual crime and/or the perception of crime decrease with their use? Are crimes solved as a result of their use? The paper will briefly ask what the primary technical considerations are in considering the installation of cameras. Finally, it will attempt to determine if these systems are cost effective?

Extensive research will be conducted utilizing using books, literature review, magazine articles, and other current periodicals that have already examined this issue. Libraries at various universities will be visited in an effort to locate recent studies on the topic. Surveys of a variety of school districts will be conducted to see how they are attacking the problem. These surveys will be conducted randomly, with no effort to distinguish between large or small, affluent or impoverished, or any other similar characteristics of the districts selected. Additionally, visits will be made to the site of several of these schools to directly assess the final product in actual use. Attempts will be made to speak with both administrators and law enforcement officials to ascertain their interpretation of how the video systems have impacted crime, or perhaps more importantly, the perception of crime where they have been installed. Finally, technology experts will be consulted to obtain technical data regarding system construction, costs and similar technological considerations.

This project hypothesizes that the use of cameras, though increasing in use in public schools, is still not widespread. Further, it hypothesizes that lack of money (i.e. – cost) will be cited as the primary reason for not installing such systems, in schools that do not have them. For schools that have installed them, it is hypothesized that crime prevention will be listed as the most common reason for their installation. It is further hypothesized that actual crime, as well as the mere perception of crime, will decrease with the use of cameras. It is also hypothesized that most systems will not have audio incorporated into them, nor will they be tied in with an intrusion alarm system. Additionally, it is the hypothesis that the majority of the camera systems will be incorporated into a larger security mix that includes the use of metal detectors and/or other security measures. Finally, it is hypothesized that cameras are the only technological measure that can be put to use twenty-four (24) hours a day, seven

(7) days a week, three hundred sixty-five (365) days per year, making them the single most, cost effective measure for schools to utilize.

Several key points will be emphasized. First, camera systems are the key components to effective school security. Indeed, Lawrence J. Fennelly (1999), says, "Every organization regardless of size should have an emergency and disaster control plan, which should include closed circuit television, CCTV, as a critical component" (p. 284).

Additionally, this paper will show that today these systems are relatively low cost, particularly when viewed within the context of doing nothing. Kenneth Trump (1999), in a recent article says, "When dollars are an issue, we must also examine the cost of doing nothing. Increased lawsuits and insurance claims losses [a]re the two most obvious costs" (p. 20). The fact that these systems can be "hard-wired" or wireless, are relatively easy to retrofit to existing buildings and can utilize existing computer technology increases the cost savings.

Further, when combined with appropriate notification signage, camera systems provide a huge deterrence to criminal activity. On the other hand, when crime does occur, the system will provide court-approved evidence of the event. A "CCTV system records information about what happened for use by police or prosecutors after an event ends" (Fickes, 1999. p. 24).

Various other benefits of an audio/video system include: they do not intrude into person's lives, they are not appreciably restricted as to location, and they are in service twenty-four (24) hours a day, seven (7) days a week. No other single piece of technology can make these assertions.

The issue of alarm systems will be examined when used in conjunction with a camera system. Previous research states that CCTV equipment is most effective when integrated with electronic access control, fire and safety alarms, intrusion detection alarms, communications, and security personnel. (Fennelly, 1999) Thus, the most desirable system is one that works in combination with a quality alarm system that is properly monitored, followed by appropriate response.

Up until now, there has been very little empirical data that looks at the issue of camera systems in schools. Accordingly, almost any data that is collected and analyzed will be of great benefit to law enforcement. In the last year or so however, there has been an explosion of articles on the subject, thus dramatically illustrating the importance this technology is bringing to schools and the recognition by

school security experts of their significance. These recent articles, as well as the data presented herein, will give law enforcement agencies additional ammunition to present to administrators on the importance of installing them in public schools. Assuming the hypothesis is correct that crime went down or was solved as a direct result of the presence of camera systems; law enforcement can show a direct correlation to costs within their districts. To the extent that current statistics are maintained by law enforcement agencies with regard to school related crime, the costs associated with property crimes can be directly compared against the cost to install a camera system. Further, administrators can be contacted to obtain figures regarding the cost of insurance and bond ratings. In turn, those costs can be correlated with insurance and financial analyst's projections as to the attendant reduction in these costs as a result of preventing or solving property related crimes. Law enforcement agencies will also be able to point to an invaluable tool in solving crimes when they are caught by the camera and archived by the system. Perhaps the single most important benefit, both to law enforcement and to school districts, will be the ability to compare the reasonably finite cost of a camera system against the infinite value of human life. That comparison alone should suffice to convince any proactive school district, parent group, or any otherwise doubting faction that is far less costly to implement a state-of-the-art camera system to protect the nations most precious commodity, our youth, than it is to do nothing and reap the consequences.

REVIEW OF LITERATURE

Prior to about 1990, there is virtually no definitive data available concerning the use of cameras in schools. Predominately, schools were designed as "user friendly" facilities, openly accessible to the general public at virtually any time. This "friendliness" extended itself to school employees who found it extremely difficult to challenge strangers, even when they felt uncomfortable. (Trump, 1998). Historically as well, there are a considerable number of issues that caused the use of cameras to be summarily dismissed by academia in general. Unfortunately, a considerable number of those issues still exist today, and accordingly, provide the greatest impediment to the widely accepted use of cameras in the school setting.

The first and foremost impediment to use of cameras is politics. Perhaps, as Trump (1998), points out, the more appropriate term is "politricks" – political tricks. While there are other obstacles that are frequently cited as reasons for not using cameras (to be discussed later) items such as funding are, in reality, scapegoats. The true and underlying reason for failing to utilize video technology in schools can virtually always trace its origins back to politics. For clarification, the term politics, as used in this context, does not limit itself to elected officials. Rather, it embodies the entire administrative echelon of school districts, to include the voting public, school Boards of Trustees, superintendents, deputy superintendents, principals, police chiefs, teachers, et al, all the way down to the level of students. All of these persons affect the decision concerning the use of cameras in schools. Therefore, the terms "politics" and "politician" in this paper are referred to within the above context.

If there is one single, over-riding factor in politics that drives the mentality against the installation and use of cameras, it is 'image/perception'. Embodied within this are the additional concepts of control and power. It is interesting to note that 'perception' by the public is the primary catalyst in the belief that schools are unsafe, just as 'perception' by administrators is the primary catalyst that prevents them from recommending cameras in their schools. This is the equivalent of "shooting oneself in the foot." Indeed, many administrators fail to report criminal activity (denial), or if reported, attempt to manipulate or mitigate

the impact. Those who do this perpetrate a fraud on the public and ultimately, render a great disservice to their students, staff and the entire community.

Their primary motivation for not reporting crime is generally self-preservation. Frequently, careers are adversely affected when the schools in their care and custody show high crime statistics or disciplinary problems. Principals fear over-reaction by parents claiming that the school is unsafe. They fear condemnation from their superiors for bringing negative attention to their district. They fear the media frenzy which focuses on the sensational rather than the facts. Cameras accurately document data, with little opportunity to alter the image.

Ironically, statistics show that administrators who attack any criminal or disciplinary activity, real or perceived, head-on, are ultimately viewed as the better administrator, because over time, crime actually drops and discipline issues decline. The public, staff and students recognize the accomplishment because they truly know if and when crime and/or discipline problems are occurring. When administrators elect to ignore or deny existence of these activities, they undermine their own authority and image within their sphere of influence. Thus, the 'image/perception' by others of the school and the administrator diminishes over time, all over factors being equal. This is exactly the opposite of what the politician (building principal in this case) is trying to accomplish.

Trump (1998), sums it up the best. "Politricks – political tricks – is unquestionably the biggest obstacle to having professional school security in many districts. A focus on image, power, control, and money (ironically the same features that motivate many gangs) often takes precedence over reporting crime and implementing professional security measures to truly protect children, staff and property" p. 21). Preservation of self-interest/career thus frequently overshadows the publicized position of politicians, while the safety, security and education of staff and students suffer immeasurably.

A second factor most often cited by politicians for not placing cameras in schools is money – funding. This is a smokescreen. There is virtually never a time when a politician, especially at the superintendent level or above, cannot obtain adequate funding for a project when he or she wants it bad enough. The installation of cameras is therefore a matter of priorities or simply placing the money where the mouth is. Funds are available through a number of avenues. Normal budget inclusion or bond issues are the two that come most frequently to mind. There are however a number of other sources frequently

overlooked or not seriously considered. Grants are an option. (Trump, 1999) Involvement by PTA's/PTO's are sometimes funding sources. Community partnering is a relatively new, but highly viable alternative. When the community, both personal and professional, become directly involved in these projects, innumerable benefits for everyone involved frequently spin off as a result. When done right, these can become the ultimate win-win solutions for funding. Innovation is the key. The new catch phrase of the 2000's is "thinking outside the box." Law enforcement and school administrators need to practice that. For example, the Superintendent of Schools in Georgia has proposed a statewide tax on violent movies and video games to help pay for additional school security. (Kennedy, 1999 [a]) (There are other sources for funds, the discussion of which are outside the purview of this paper.) A 1999 magazine article sums it up best. "When dollars are an issue, we must also examine the cost of doing nothing. Increased lawsuits and insurance claim losses due to inadequate security are the two most obvious costs." The same article continues by saying "Schools are often the safest places in the entire community – but safer than what? If 20 kids are killed in the community, and 5 kids are killed in your school, is that an acceptable level of violence" (Trump, 1999. p. 20)?

A number of other factors provide collateral reasons why cameras are not widely used in school today. A lack of training or failure to educate the educators is one. It is not uncommon to hear an administrator make a statement to the effect that, "I am an educator, not a cop." This is a myopic viewpoint, which perpetuates ignorance regarding effective school management in today's world. This produces a tendency to address issues only administratively. While this is certainly within their realm of authority, the failure to address the criminal issues shortchanges everyone. Additionally, administrators often do not have adequate training regarding what is a criminal act versus what is only a violation of school policy. This is not always the fault of law enforcement, as classes are frequently offered, but administrators do not choose to attend. Administrators tend to view violence in schools as something that will happen in someone else's school, not theirs. When the event occurs in their school, it is too late to seek the training. Also, the training that is sought is often driven by irrational emotions, not prudent facts and reasoned thinking. This mentality by administrators places an undue burden on the law enforcement community, and when carried to the extreme, manifests itself in schools where police officers are not

welcome at all, or where only lip service is given to their presence. Police officers become "paper tigers" and this sends a mixed message to students that undermines the safety and security for everyone.

With regard to the protection of property, the use of cameras is often renounced by the belief that the school district is "self-insured". This gives the connotation that because they are self-insured, they do not need to overly concern themselves with property loss and vandalism. This viewpoint overlooks or forgets one important fact. They are self-insured with public taxpayer dollars. (Trump, 1998) The dollars come from the same collective people, just a different pocket so to speak. If those funds were properly utilized to install a complete, state-of-the-art camera system, losses from theft and vandalism would generally be reduced well below the level of the cost of the system. Not only would losses be reduced, but also attendant reductions could be produced in the form of lower insurance premiums as a result of both added security and reduced loss.

A final contributing factor to consider is the issue of "paralysis by analysis". Academia's tendency is to fund studies, look at options, and consider alternatives, ad infinitum. They decide, often unconsciously, not to decide and this in itself is a decision. The issues of cameras, versus metal detectors, versus other technological means are studied to death, with the end result being that none are implemented or are implemented haphazardly or based on emotional decisions, not facts and reason. The resulting inaction can be catastrophic. Trump says that "Administrative inaction, not action, will eventually lead to their downfall on security issues...Failure [t]o deal with security matters proactively has negative consequences on several levels. Most important: It is not good for kids. It is wrong" (Trump, 1998. p. 29)!

By contrast, pro-active, forward-thinking school and law enforcement officials in recent years have been giving serious, focused attention toward the use of cameras. Many have teamed together to pool resources and accomplish common goals more logically and quickly. Cameras have proven to be great allies in school safety and security. In Clark County School District in Nevada, which is the nation's fifth largest with two hundred forty-seven (247) sites, the district has just installed a \$50 million dollar CCTV system comprised of 7,200 cameras, five hundred (500) digital multiplexer/recorders, two hundred forty (240) matrix switchers and five hundred (500) keypad controllers. According to Dale Scheideman, director of planning and engineering for the district, "When students are in school, they're our safety and

security priority. In the off-hours, protecting the buildings becomes the priority. We needed a system that could do both without so much constant attention on our part." (Mannet, 2001, p. 26) They obviously found the twenty-four (24) hour a day, seven (7) day a week use of a district-wide camera system as their solution.

Studies have shown that the presence of cameras has served as a deterrent to criminal activity. (Hale, 1999; Fickes, 1999) Cameras record events that are useful for both criminal prosecution as well as school administrative actions. Courts accept pictures as evidence. (Green, 1999) Vocal parents are soon quieted when presented with a video of their son or daughter engaged in violations of law or school policy. (Green, 1999) Cameras provide the pro-active persona that administrators must portray in order to be effective. (Mulqueen, 1999)

The presence of cameras has greatly reduced liability for school districts. Districts that have been virtually uninsurable have become very acceptable insurance risks after the installation of cameras. (Day, 1999) Issues of liability can likewise be extended to situations where they are tied to alarm systems. This can have the effect of negating the need to dispatch police officers to an alarm, when it can be shown by images transmitted from cameras that no intrusion actually occurred.

Cameras can be used to reallocate manpower. Where it might normally take multiple persons to patrol hallways or common areas, a single person might be used to monitor areas covered by cameras. This would free up others to cover otherwise unpatrolled areas, better utilizing the often limited manpower of both school districts and law enforcement agencies. (Kennedy, 1999) [b]

Additionally, cameras can be used to learn. This should be especially attractive to school officials, since learning is their primary endeavor. Many law enforcement agencies video their training and then review the tapes for things that were done correctly and things that need improvement. Events occurring at school, whether major catastrophes or relatively minor incidents, can be reviewed for more appropriate, rapid and/or effective response.

Once the decision is made to go with camera technology, the importance of setting standards cannot be overemphasized. Appropriate persons need to be consulted for input well before the first item is purchased. Technologically, there are cameras that range from a low of less than a \$100 each to more than \$5,000 each, with many in-between. The type of existing wiring is important for retrofitting older

buildings. There is a vast difference also in merely recording within a building versus sending the signal outside to another site, say to a local police department. All of these factors and more must be addressed in advance to prevent a hodgepodge of different systems at various sites that together are not compatible. Dr. Robert Watson and James Watson (2001), sum it up best. "School safety standards are especially important when it comes to purchasing technology. For example, an equipment standard that requires color video for all closed circuit television equipment can prevent the purchase of sub-standard black-and-white equipment and the attendant waste of resources" (p. 22). School financial resources are not infinite. Accordingly, it is imperative that proper planning goes into the process of installing cameras to avoid wasting money, a most precious commodity for schools.

From a pure law enforcement perspective, cameras in schools (or anywhere else within the agencies jurisdiction) are invaluable resources. One merely needs to look at any of the school related tragedies and then factor in the added benefit of cameras. The ability to take control of cameras within a building from a remote location and see in "real time" what is going on inside is a godsend. Plans can be formulated much more rapidly, and thus a response can be made more swiftly, possibly ending the situation much sooner and with a greatly reduced number of injuries and/or loss of life, quite possibly that of the responding officers. Roy Hunnington (2000), executive editor of Police magazine states in a feature story on video in schools that "video technology offers some solid solutions to problems in this arena {crimes on campus}. From an obvious increase in security due to site monitoring, to enhanced communications between schools and police during emergencies, this technology may offer a powerful tool for responding officers. The ability to have "x-ray" vision and see into a crime scene, while the crime is occurring, is an almost magical addition to a cop's tool kit. Put this potent technology to work in your jurisdiction" (p 30).

had looked at the issues involved to one extent or another and concluded that the safety benefits of having cameras far exceeded any perceived detriment.

The principals and assistant principals that were contacted were also in virtually universal agreement as to the benefits of cameras. School administrators are a fairly close-knit group, and they network with each other a great deal. In these discussions among peers, principals and assistant principals that do not have cameras are beginning to see the tremendous benefits of installing them after talking with those who have them. Additionally, some principals have come from other schools or other districts that have cameras and they personally know the benefits. As a group, these are some of the most ardent advocates of cameras in schools. (Chris Hines, Principal Oak Ridge High School, personal interview, September, 2001)

Perhaps the group that provided the most useful insight into the technological issues was the representatives of the companies that sell, install and service video systems. They provided data related to retrofitting cameras into buildings and spoke of the various physical obstacles that might be faced in retrofitting older buildings. They discussed the advantages of integrating certain items, primarily the basic wiring, into new buildings, and adding computers, cameras and such at a later date. Doing this substantially reduces the cost of the overall system, on a per building basis as well as for the overall system.

Some of the most enlightening data they provided was the tremendous amounts of information concerning integrating the cameras within the existing infrastructure, or LAN (local area network), of individual campuses with the districts WAN (wide area network). Issues involved with simply installing a camera system within a single campuses LAN often changes dramatically when there is a desire to 'push' the video outside the building to another location, such as police dispatch, across their WAN. Many times there is a dissimilarity within the campus network, which may be full fiber-optic (fastest), compared to the overall district's network which may be some fiber-optic, some microwave (slower), and some hard-wired T-1 lines (even slower).

FINDINGS

As previously noted, the primary instrument for answering the research questions posed herein came from the surveys. The first question posed was "Do you use video surveillance (cameras) in any of your schools?" Of the surveys returned a surprising thirty (30) districts indicated that they did use cameras in at least some of their schools. (See Figure 1).

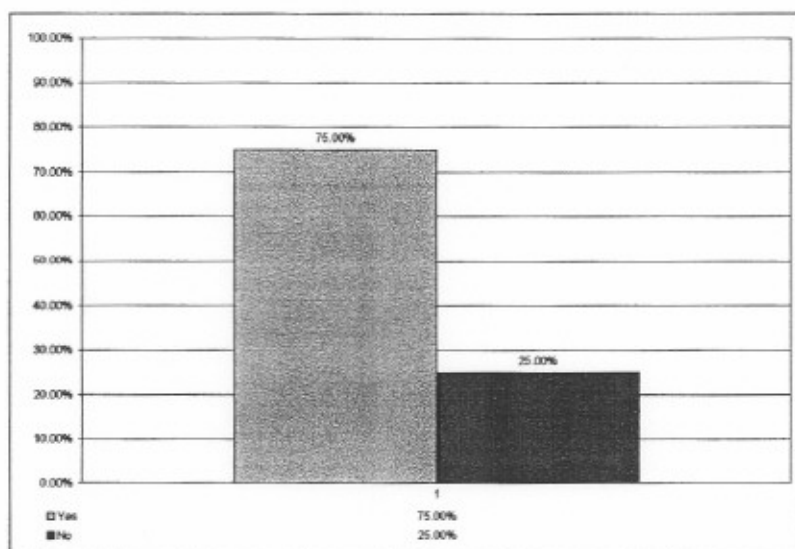


Figure 1: Districts with Cameras in Schools

This indicates that, of the district's that responded, three-fourths (3/4) have some type of camera system in place. This supports the assumption that cameras in schools are increasing but runs counter to the assumption that they are still not widespread. This would indicate that cameras are considerably more prevalent than was originally postulated in this paper.

The follow-up question to the first one cited above asked, "If 'No' have you considered installing them?" The percentage in figure 1 showing twenty-five percent (25%) of the respondents saying "No" represents a total of ten (10) districts. Of those ten (10), only one said that they had not even considered installing them. Thus, ninety percent (90%) of the districts that said they did not currently have cameras had looked at the feasibility of installing them, at least to some extent. That finding further supports the original assumption that the use of cameras in schools is increasing. If roughly seventy-five percent (75%) already use them and of the remaining twenty-five percent (25%), nine (9) out of ten (10) want them, their increasing use is evident.

The second assumption was that, for the district's that did not yet have cameras but wanted them, cost would be the predominant reason why they did not currently have them. A number of choices were given. Figure 2 shows only those that the respondent chose. One respondent did not list a single primary reason, but instead gave equal weight to items B, C, D, E & F.

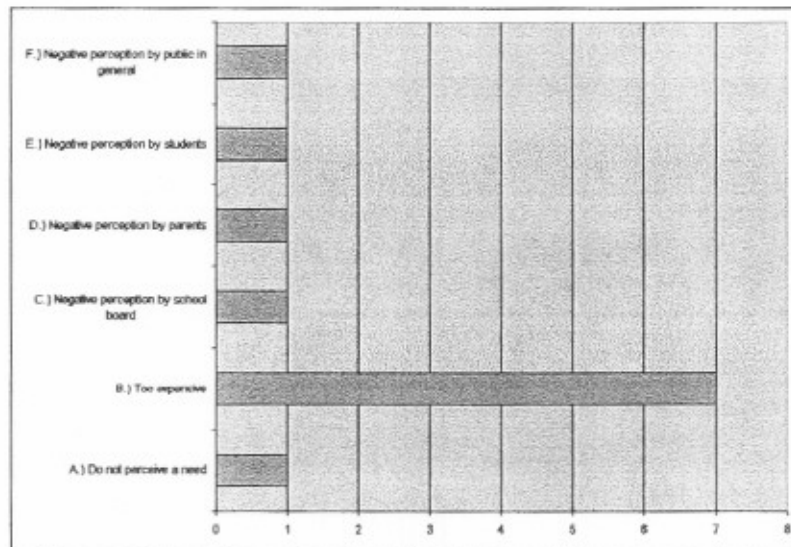


Figure 2: Primary Reason for NOT Installing Cameras

As the preceding figure indicates, the assumption that cost is the primary reason why district's that want cameras do not have them is valid. Out of ten (10) respondents, all but one indicated cost as the primary factor as to why they do not have cameras, with a second giving equal weight to cost, along with four other categories. The single lone district not indicating cost answered "A" – Do not perceive a need.

While it is true that there is cost associated with cameras, as with anything, the reality is that cost per se is probably not the real reason. Claiming that something is too expensive oftentimes provides a convenient excuse to those who simply do not want to perform adequate research as to what is available, do not want to reevaluate and reallocate expenditures and further, do not want to try to compare the finite cost of cameras with the abstract costs of savings by having them. That is to say, a definitive cost can be calculated to install a camera system. On the other hand, the savings are more intangible. They include things like lower insurance premiums, fuel saved in running false alarms, less potential liability from responding to false alarm calls, less theft of assets, less damage to buildings, and so forth. The list is almost endless. There is virtually no way to calculate how much is saved, by less theft for example,

because of the presence of cameras as there is no way to calculate what the theft would have been if cameras were not there.

As a point of interest, the question was asked concerning what grade levels used cameras. As expected, the majority of cameras are at high schools, a lesser amount at junior highs, and a significantly lower number at intermediate and elementary levels. (See Figure 3).

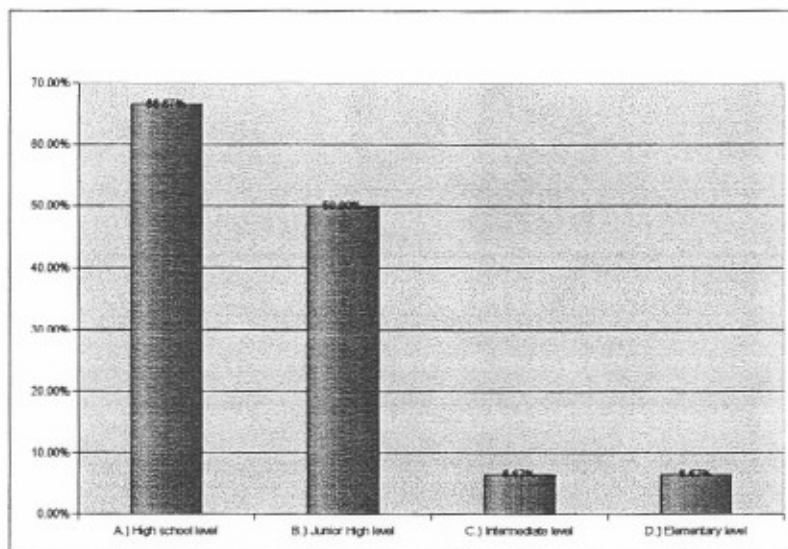


Figure 3: Grade Levels Using Cameras

This would correlate with the next hypothesis concerning crime prevention. Since the majority of reported criminal activity is documented to be in higher-grade levels, it would logically follow that if crime prevention were the desired result from installing cameras, then more cameras would be installed in the upper grades. This corresponds precisely with both the respondents' surveys of those who already have cameras, as well as the reason for why those who don't yet have them want to install them. The following figure shows the respondents reasons for installing cameras. Some of the respondents gave more than one reason for installing them, and did not rank them in order of priority. Therefore, the number of respondents shown exceeds the total of thirty (30) campuses reporting. (See Figure 4).

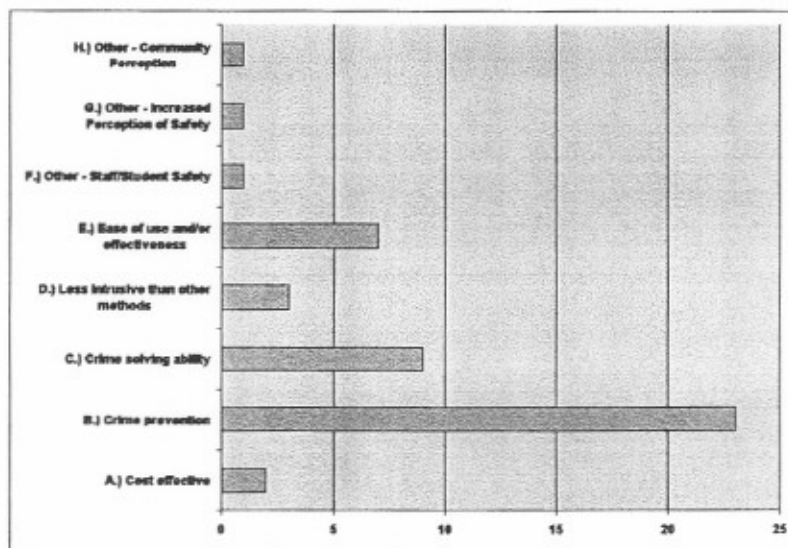


Figure 4: Primary Reasons for Installing Cameras

The preceding figure shows overwhelmingly that, of the schools that have installed cameras, twenty-three (23) districts out of thirty (30) list crime prevention as one of the primary reasons for installing them. Twelve (12) of the twenty-three (23) districts listed crime prevention as the only reason for installing cameras. If even further confirmation is needed, the following figure illustrates that the remaining ten (10) districts that do not yet have cameras are almost unanimous in their reason for wanting cameras.

Nine (9) out of the (10) districts that responded, who did not yet have cameras but have considered installing them, list crime prevention as one of their reasons for wanting them. As with the other districts, some of them listed more than one reason, however, five (5) of the nine (9) listed crime prevention as their only reason. Thus the assumption that crime prevention is the primary reason that districts want cameras is fully substantiated. (See Figure 5).

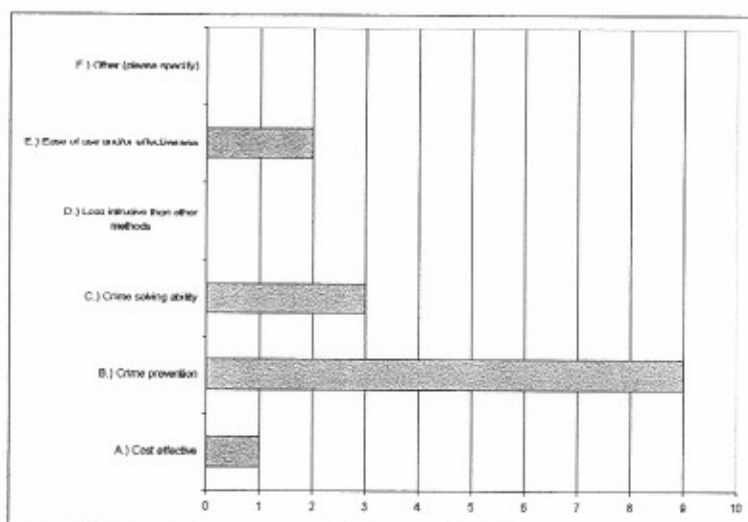


Figure 5: Reasons Districts without Cameras Want Them

Having thus established that the primary reasoning for installing cameras is crime prevention, several questions were posed in the survey to test whether or not this reasoning was correct. A series of questions were asked, as follows:

- (1) Were crime stats maintained before and after the installation?
- (2) Did crime overall appear to be affected?
- (3) Were any crimes prevented as a result of the system?
- (4) Were any crimes solved directly as a result of the system?
- (5) Without regard to crime statistics, was there a measured perception of an increase in personal safety by administrators, parents, and students?

In answer to the first of the series of questions, out of the thirty (30) districts that responded that already had cameras, eighteen (18) said they did keep statistics both before and after cameras were installed. From this group some insight can be gleaned as to whether or not crime, and the perception of crime, was impacted positively.

The answer to the second question in the series is illustrated by the following graphic, which shows that cameras did have an impact on crime. (See Figure 6).

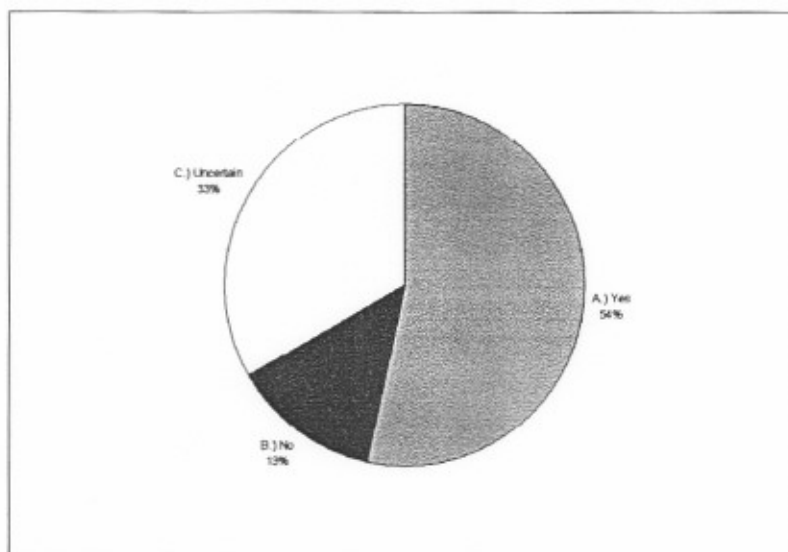


Figure 6: Cameras Affect on Overall Crime

As illustrated in figure 6, sixteen (16) of the districts, representing fifty-four percent (54%) of the respondents said "yes" crime was affected. Ten (10) districts, representing thirty-three percent (33%) were uncertain, and only four (4) districts, at thirteen percent (13%) said "No" it was not affected. All four (4) "No" answers came from districts that did not keep statistics before and after cameras were installed, so it is difficult to understand how they could arrive at this conclusion since they presumably had no documentation to prove or disprove this point. Nevertheless, the point is made that crime was affected by the presence of cameras.

The third question is somewhat subjective, in that it is difficult to know with any certainty whether the presence of cameras actually prevented a crime from happening. Still, it is possible to ascertain this fact in some cases, under the proper set of circumstances. Again sixteen (16) of the districts stated that "Yes" crimes were prevented by the presence of cameras. These were not the same sixteen (16) districts that in all cases answered "Yes" to the preceding question. Twelve (12) were uncertain whether crimes were prevented, and only two (2) said "No" crimes were not prevented. Interestingly, both of the ones who said "No" were also some of the ones that did not keep statistics. This again raises the question, how do they know? (See Figure 7).

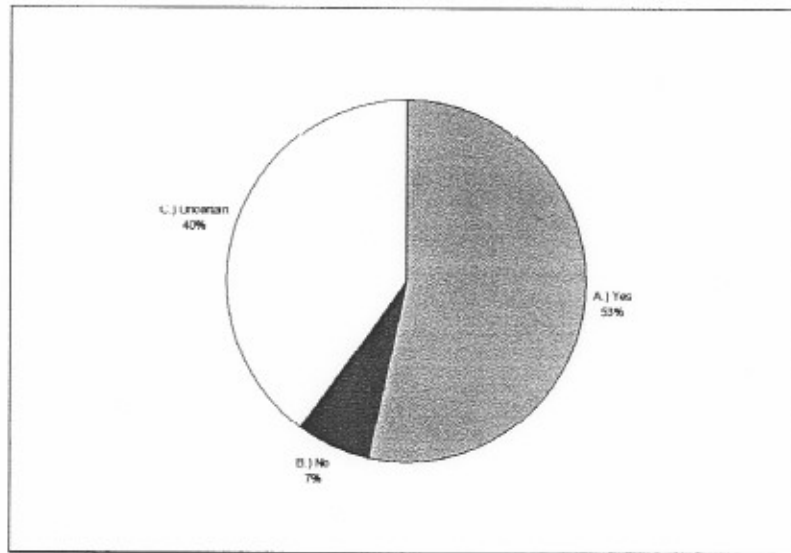


Figure 7: Crimes Prevented by Cameras

Thus, it is illustrated that crimes were actually prevented by the presence of cameras according to the thirty (30) districts that have cameras.

The fourth question asked if any crimes were solved as a result of cameras. This is a very objective question, since the evidence would exist directly on the media provided by the cameras themselves. Persons committing crimes in the presence of the cameras would readily be determined and, assuming image quality and so forth was of sufficient quality, apprehension should be relatively easy. The response to this question was overwhelmingly "Yes"; crimes were solved as a result of having cameras as dramatically shown below. (See Figure 8).

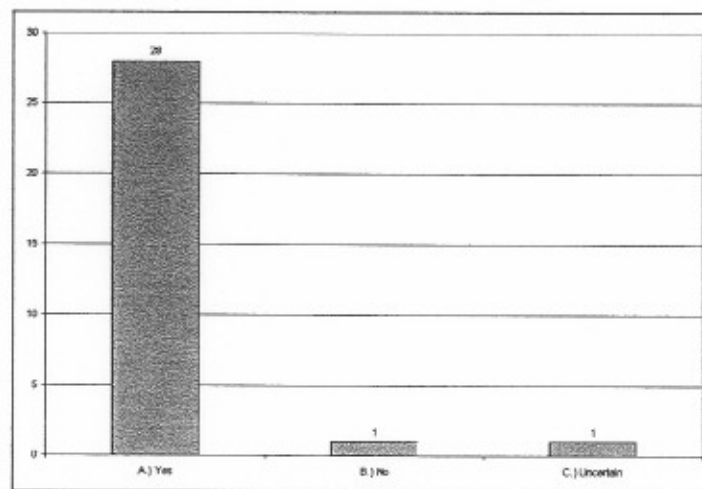


Figure 8: Crimes Solved by the use of Cameras

Twenty-eight (28) districts, representing 93.33% of the respondents with cameras indicated that cameras solved crimes in their districts. Only one said "no" there weren't any crimes solved, and one said they were "uncertain." The later response seems odd. This question appears to be more black or white, yes or no. Either the evidence is there to solve a crime and it was solved, or there is no evidence or evidence was present, but the crime was still not solved. Still, the presence of cameras shows vividly that crimes were solved. From a law enforcement perspective, as well as for a school district, the ability to solve crimes that do occur demonstrates a more protective environment. This will have the effect on person's perception that crimes, while impossible to deter one hundred percent, are solved and thus a positive correlation is established between cameras and solvability of crimes.

The final question in this series dealt specifically with the *perception* of crime in asking respondents to disregard actual crime statistics and deal solely with people's attitudes or feelings regarding safety as a result of cameras. The hypothesis in this research states that the *perception* of crime will decrease with the use of cameras. The presumption here is that the mere presence of cameras will help to change the mindset of students, staff and the general public as well, from a belief that crime is substantial, to one that crime is being reduced as a result of the pro-active installation of cameras. The response in regard to this question was surprising in it's affirmation that this is indeed the case. As the following graphic indicates, there was not a single "No" answer when asked if the perception had changed toward a safer environment as a result of the installation of cameras. (See Figure 9).

Twenty-one (21) districts [70%] answered "Yes", that the *perception* in the level of crime had been positively influenced by the installation of cameras. Nine (9) districts, [30%] answered "unknown", possibly simply indicating that no effort had been made to measure this effect. In any event, as stated, the hypothesis is overwhelmingly affirmed. There is a measurable decrease in the perception of crime as a result of installing cameras.

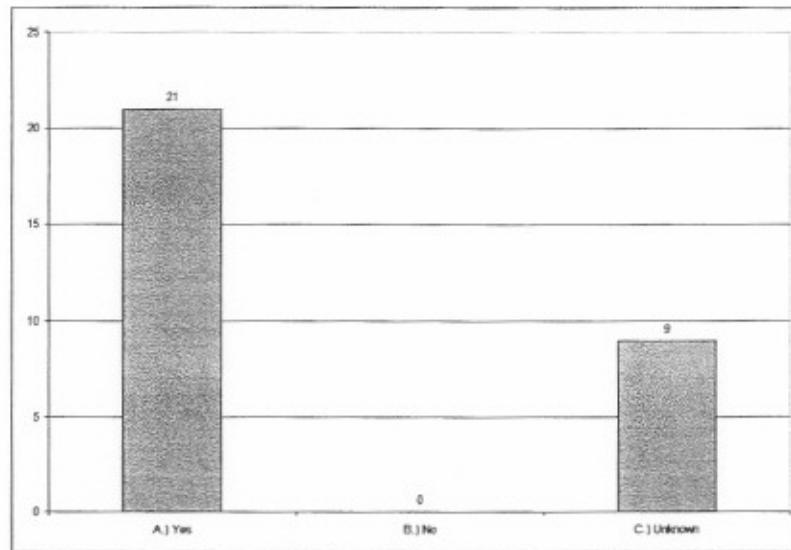


Figure 9: Measurement of the Change in Perception of Crime by Using Cameras

The remainder of the questions sought to determine the extent to which cameras were incorporated into other technology, specifically whether audio was also used, or whether the use of metal detectors supplemented their use. With regard to audio, the hypothesis was that audio would not play a significant role in being used in conjunction with cameras.

This hypothesis is correct. Most of the cameras, twenty-three (23) out of thirty (30), do not use audio. Only four (4) districts incorporate audio, leaving three (3) as an option to use it. While these results are not surprising, the research obtained by visiting Spring I.S.D. indicates that audio adds a significant level of intervention/deterrence as discussed elsewhere in this research. Therefore, it would seem prudent for districts that are considering the installation of cameras to also strongly consider the use of audio. (See Figure 10).

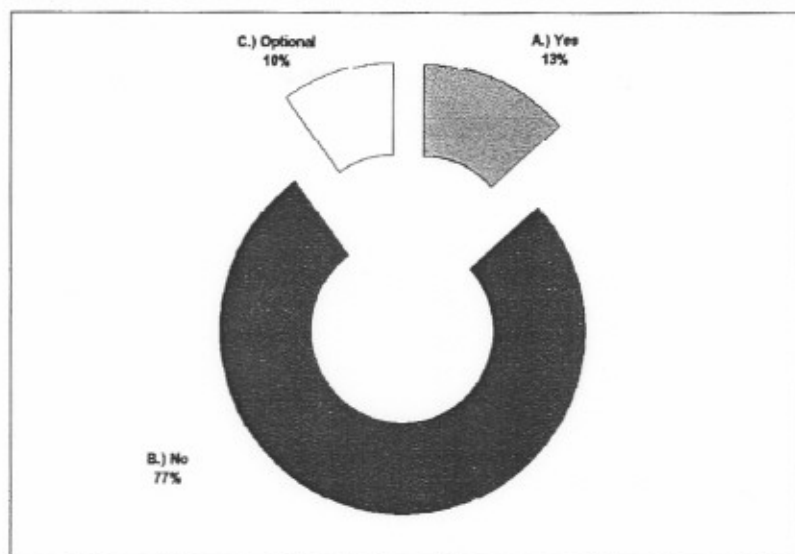


Figure 10: Cameras Accompanied by Audio

This paper also postulates that when cameras are used, they will usually not be the only means of prevention or intervention into crime on campus. Metal detectors have gained much publicity, as they are prominent in airports, federal buildings, and many commercial establishments. Because people have to interact directly with metal detectors, there is a perception that they are used more prominently, and exclusively, than cameras. This paper did not seek to address that question but did look at the use of the two together. The results here were that metal detectors are not always used with cameras. (See Figure 11).

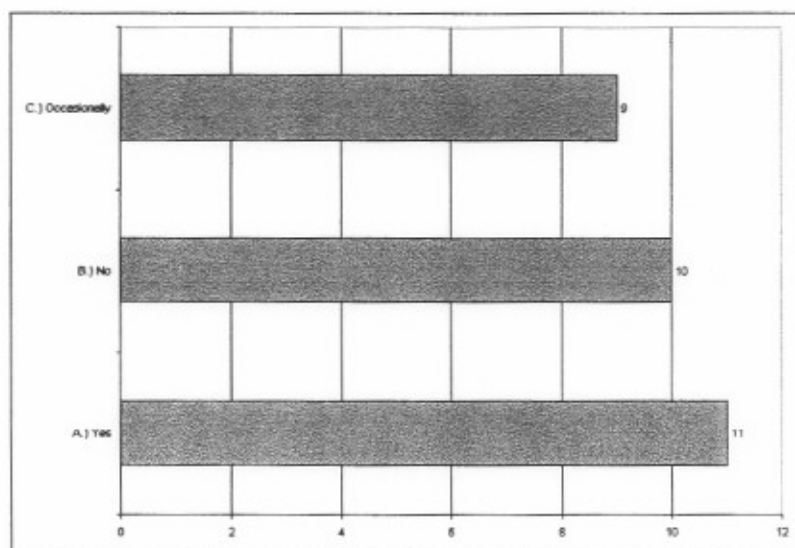


Figure 11: Metal Detector Use in Conjunction with Cameras

While thirty-seven percent (37%) said they did use metal detectors with cameras, thirty-three percent (33%) said they did not. The remaining thirty percent (30%) said they used them occasionally. This roughly breaks down into thirds, with a third always using them, a third never using them and the remaining third occasionally using them. The end result here, with regard to the hypothesis, is less clear on the surface, than other results. A follow-up question though, adds light to the subject. It asked if the use of metal detectors was daily or random. Nineteen (19) of the twenty (20) districts said their use was random. Other studies have shown that random use of metal detectors in schools is generally more effective, while at the same time being less intrusive, meaning the schools were not subjected to the appearance of prisons by the *daily* use of metal detectors by the entire population. This being the case, when viewed in that perspective, it shows that sixty-seven percent (67%) use metal detectors at one time or another in conjunction with cameras. Thus, the hypothesis is supported.

In concluding with the survey portion of this research, it is interesting to note where all cameras are used in schools. Not surprisingly, almost all districts use them in hallways, cafeterias, and the main entrance. It was noted that cameras monitored parking lots in twenty-five (25) of the thirty (30) districts responding. Four (4) of the districts indicated that they placed cameras in the classrooms. The following figure shows the various locations where districts are choosing to place cameras, which will be instructive to districts that are considering their use. (See Figure 12)

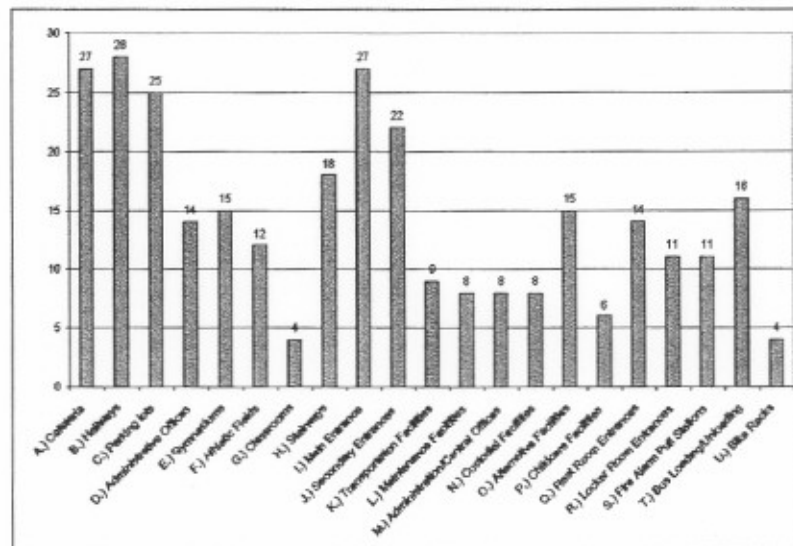


Figure 12: Location of Cameras in Schools

Of the three (3) districts visited, Spring I.S.D. had been using cameras the longest time. Their chief is a strong proponent of cameras and has been instrumental in their initial installation as well as upgrades over the years. As the oldest system visited, their systems still used the old VCR tapes for storage on site, although they were upgrading to digital when we met. Their camera system was the only one I visited that has audio capability along with video. Both were tied in with the various building's burglar alarm systems so that when an alarm sensor was activated at a site, the nearest camera associated with it was activated. An image was immediately transmitted to the school district's police station via telephone modem, along with the alarm notification and the audio signal. Police dispatchers thus could almost immediately determine if an alarm event was valid, or a false alarm.

The benefit of audio added a tremendous dimension to the video only. Even if slightly out of view of the camera, persons talking nearby on-site could still be heard by the police dispatcher. The ability to follow the movement of persons within a building as they tripped burglar alarm sensors and activated audio/video systems allowed police dispatchers to communicate via radio with responding officers. Thus, officers could arrive at the site, and go almost immediately to the location where the suspects were located within the building, making apprehension more likely, having it occur much faster, with the tremendous benefit of added officer safety. The monitoring system within police dispatch allowed the user to pre-set polling of various cameras, at any or all locations, and for a pre-determined time. Thus, via modem, each site could be called, cameras accessed and viewed for the set length of time, moving to the next pre-programmed site, then disconnecting and dialing the next site. Upgrades are being installed to eliminate the telephone modem, utilizing instead the WAN (wide area network) existing within the school district to transmit the signals. This will eliminate the delay in the dialing process and make the system much more reliable.

Cy-Falls High School was one of the most sophisticated, and thus the most costly, of the systems visited. It was a brand new system using state-of-the-art technology. All cameras were fully digital, each carrying it's own IP (internet protocol) address. This made it possible to access each camera by users via the Internet, by entering user name and password, followed by the IP address of the desired camera. Within the building, a full fiber-optic LAN (local area network) transmitted the signals for each camera to a bank of monitors in an office on-site, occupied by a contract deputy with the local Constable's office. The

signals were not transmitted outside the building to a police monitoring station. All of the signals were digitally recorded on a computer hard drive, eliminating the deterioration factor inherent with VCR tape, and further eliminating the need for someone to remember to change the tape at pre-determined intervals. Each administrator likewise had the capability of monitoring a single camera, bank of cameras, or series of cameras from their offices. Further, the system had antennas installed at various locations throughout the building. This provided wireless transmission for a limited distance, generally less than one-quarter (1/4) of a mile, plus or minus, depending on interference, structures and similar factors that adversely affect radio signals. Administrators were provided with personal wireless receivers, which were smaller in size than an average laptop, but slightly larger than the average Palm Pilot type device. With it, they could call up any camera in the building and view what was happening. Likewise, constables responding to an after-hours alarm could call up any camera from their patrol car once they got within range. One story was related, of a break-in by three students over the summer. A constable unit, using one of these remote devices, merely sat outside and watched where the intruders went within the building and simply drove to the exit where they were headed. They were immediately apprehended, without the officers need to enter the building, and a video recording existed for use in their court conviction.

The system further has the ability to capture single frames and print them out on photo quality color printers. This was useful to them even while the system was being installed. As one technician was focusing and aiming the camera, another was in the monitoring room evaluating the result. Both were thus in radio communication with each other. The monitoring technician thought he saw smoke coming from a bathroom down the hall from the camera and asked the installing technician to look directly and see. Indeed it was smoke. A trash can fire was thus immediately detected and extinguished, but there was more. Because the camera was recording the event, the technicians went back to the image of the last person seen leaving the restroom and printed a color picture of the suspect. This was given to administrators, who went out into the hallway and began asking students if they recognized the person. After about five (5) minutes, they had the persons name and within fifteen (15) minutes total, had a confession from the suspect after being confronted by the photos and other video captures.

Buckalew Elementary, at Conroe I.S.D., was the last campus visited. They had a situation in which eighteen (18) portable, or temporary buildings, were added to their campus one summer. They

had a very active, and relatively affluent, PTO who was concerned with the safety of children ranging from kindergarten to fourth grade, going to and from these portables from the main building unsupervised. The PTO paid for the installation of a basic system of four (4) cameras, one at each entrance of concern. A monitor was installed at the front desk, but additionally the teachers in the portables were given the ability of Remote View™. This software installation allows them to watch any of the cameras, but they essentially monitor only the camera nearest the main building doorway to their classroom, to see that students whom they sent to the bathroom, front office or so forth, actually enter the main building. They continue to observe the monitor while they continue classroom instruction and as the child returns past the camera, they know to expect the child back in class shortly. If the student does not immediately enter, they can quickly begin a search for the student. The Remote View™ is likewise being beta-tested, along with the networks compatibility, by transmitting images, real time, across the network to the district's police station and their technology department.

This system is very similar to, but a much less costly version of, the one at Cy-Falls High School. It too has the capability of using the Internet to view the cameras, so for example, an administrator at a seminar in another city could access the cameras, via a secure website with a user name and password, and monitor their campus. The system also archives all video digitally on a computer hard drive, can email entire video clips and can capture and print images both on-site and remotely at sites with authorized access. This system, as with most of the newer systems, is scalable, meaning that they can start small and grow as their needs, or budget, dictates. This is exactly what Buckalew is doing. They initially installed four cameras and plan to add four more in the summer of 2002.

The district is looking at the system with the view towards tying it into the alarm system and transmitting both the alarm notification and the camera images directly to their school district's police station. Further, this system has the capability of wireless view, like Cy-Falls, and with software upgrades, (just recently authorized by the Board of Trustees) can overlay building floor plans, utility locations, and so forth on the computer screen, along with the alarm notification information and camera image. This feature could prove invaluable should a situation such as Columbine occur, in that emergency responders could immediately view the interior remotely, look at exact floor plans where the suspects are located and immediately make their plan and initiate their response. The system can be

integrated with GPS (global positioning system) technology to locate district vehicles, primarily police vehicles and school buses. The district is currently studying ways to begin implementing it throughout the district. As this research paper is being written, The Woodlands High School is initially installing twenty-two (22) cameras just like the system at Buckalew, with the view toward adding more cameras in the future. They are funding their system initially through the annual sale of parking permits to roughly twenty-two hundred (2,200) students who are vying for the six hundred (600) or so parking spots on campus. This is yet another example of innovative funding sources for cameras.

Additionally, the system has the capability of polling the various buildings from police dispatch using pre-set criteria. One criteria might be that the building should be empty of all personnel, including custodial, by say, eleven (11) PM. If the alarm is not set, the system would remotely set it, without the need to dispatch an officer to do so. Conversely, should some authorized person, say a contractor during the summer, enter before a district employee arrives to disarm the alarm, the dispatcher, via the camera could see it is an authorized entry and command the system to remotely disarm the alarm, again eliminating the need to dispatch an officer. An item of particular value to the police department is the electronic time and date stamp. These items are embedded in the image and any attempt to alter the image in any way destroys the stamp. This is a particularly necessary step in the preservation of evidence and in proving to courts that the images have not been altered in any way.

With regard to sales and marketing representatives, much information was provided that speaks to many of the issues noted previously, especially with regard to costs and technological issues. As has already been illustrated, the best systems are those that are scalable. The ability to start with a basic system and add to it in the future is a tremendous advantage to most districts. This is one of the functions of proper long-range planning.

A long-range tip that has the potential for the most savings is to pre-wire buildings for cameras as the building is being constructed. As much as half the cost of installing a camera system can be that of having to retrofit wiring into existing buildings. Ceiling tiles must be removed from suspended ceilings and cable 'fished' through the building. This has to be accomplished by working around the ceiling grids, which is constraining. Solid walls may extend above the suspended ceiling all the way to the roof, necessitating the need to drill through them. Some wiring may have to be run externally in conduit

because solid walls cannot be accessed at all. It is slow, time-consuming, labor intensive work, and the cost generally reflects it. (M. Kuhn, Vice President – Convergent Technologies, personal interviews, Jan – June, 2002)

In Texas, as is probably the case in most states, any wiring that is installed above the ceiling must either be Plenum™ cable or it must be installed in conduit. This requirement comes from the fire code for public schools. In a fire, regular coated cable gives off toxic fumes. Plenum™ does not, but the cost is roughly four (4) times as great as regular coated cable. It is generally much cheaper to “pull” regular cable through conduit, but how many existing structures have additional conduit available through which regular coated cable can be pulled? There are probably less than one percent (1%), if any at all. If just the extra conduit is put in place originally, the cost drops significantly. If wiring is pulled through it at the same time, the savings are even more dramatic. Thus, according to technology experts, the single most cost-effective measure that can be taken, in cases where cameras truly cannot be added during construction, is to at least provide the wiring necessary to add them later. This method spreads the cost over several years, rather than have it all come at once.

Another factor to consider is flexibility. Districts must consider what they want cameras to do in the long term, not just presently. Will there be a desire to send the image to a location outside the building itself? If so, network capabilities must be studied. This is a crucial component. The system at Cy-Falls for example, requires a full fiber-optic infrastructure to run properly. If that is not considered up-front, the system will not function to the full expectations of the user if they want to send the image over a network that has something less than full fiber. Is there a desire (and there should be for optimum use) to integrate the cameras with a burglar alarm system? If so, the selected system must have the capability to do that. The list goes on. The old axiom “Proper Planning Prevents Poor Performance” illustrates the lesson to learn here. (B. King, Supervisor of Teleproductions, Conroe I.S.D., personal interviews, Jan.- June 2002)

Systems should be researched with regard to non-proprietary hardware. That is to say, the supporting computers, monitors, keyboards, and the like should be off-the-shelf. This not only provides a cost savings up front, but also allows district’s technology departments to work on them. Proprietary

items generally cost more up front, and their replacement parts are likewise over-priced. (B. King, Supervisor of Teleproductions, Conroe I.S.D., personal interviews, Jan.- June 2002)

In every case, the company representatives that were contacted were more than eager to supply brochures, give live demonstrations of existing systems, provide websites for greater in-depth study and more. The most important thing is for districts to first establish their criteria for their system and then begin contacting vendors. Otherwise, they will end up comparing apples to oranges and wonder why they are getting such varied information. More importantly, not doing so could result in districts buying a system that will never function to their level of expectations.

(B. King, Supervisor of Teleproductions, Conroe I.S.D., personal interviews, Jan.- June 2002)

DISCUSSIONS AND CONCLUSIONS

Statistically, there are approximately 53,000,000 students in public schools in the United States as of 1999, the latest year of statistics. They attend one hundred eighty (180) days of school annually. This equates to 9.5 billion student school days per year. In that same year, there were thirty-eight (38) homicides reported in public schools, which is an extremely small percentage in terms of pure statistics. In terms of direct political and personal implications, and loss of lives in a public school, this statistic is alarming. In the communities where these crimes happened, in retrospect, there is probably nothing those districts would not have done, no cost they would not have incurred, to prevent these tragedies from befalling them. "What could we have done differently?" they all ask. Would cameras have made a difference?

Interestingly, there were cameras in the cafeteria at Columbine High School. It was an older, analog system requiring videotapes that had to be changed daily. The person in charge of doing so that fateful day forgot. When he remembered and started to do so, he was interrupted in the process. There was a twenty (20) minute time gap. During that gap, the propane bombs were placed in the cafeteria.

Cameras filmed Kip Kinkel as he walked across the parking lot of his school carrying his weapon. The system required tapes and those tapes had been used over and over. Additionally, the view was through cameras that were poorly selected for their task. The resulting image was so poor as to render the face unrecognizable and thus, useless. Even the rifle was difficult to distinguish, except under close scrutiny.

These two school tragedies thus were not thwarted by the presence of cameras. Does that lead to the conclusion that cameras in schools are of no value? Not in the least. In fact, just the opposite is true. Were both camera systems of the quality referred to within the context of this paper, their value would have been overwhelming, especially at Columbine. One of the greatest criticisms at Columbine was the delay of the SWAT team in making entry. While there were other ramifications to consider also, what if the school had digital cameras capable of Remote View™ and the police had the authorization and capability of controlling the cameras and watching movement? They could readily see where victims

were, perhaps even determine the extent of some injuries, and more importantly, could have located the perpetrators, giving officers on the SWAT team the ability of making rapid entry and quickly ending the ordeal.

What if an administrator, sitting working at his or her desk, with Remote View™ running on the office computer, saw Kinkel walking across the parking lot with his weapon, and ordered an immediate lockdown of the building? Would shots still have been fired? Maybe. Maybe not. In any event, they would not have been fired inside the building, which could have led to the possibility of a protracted situation such as happened at Columbine. Cameras will not deter every criminal mind bent on completing an act of terror. Likewise, neither will any other technological device or person for that matter. In both of these school tragedies, the perpetrators, repeatedly, sent numerous warning signs and indicators to others. Administrators, teachers, and fellow students had strong suspicions, and some even had direct knowledge that something was going to happen, yet they did nothing. In these cases, and others of a similar nature, only another human being could have intervened and possibly prevented these tragedies. No piece of technology, not even cameras, would have stopped that.

From that, one serious caveat needs to be stated relative to cameras, or any other piece of technology. That is the fact that *sometimes, nothing* can substitute for the human mind. It's ability to take sight, sound, etc., and process and develop that information into deductions and conclusions are unique only to humans. Certainly, no technology existing today can do that. In those unique cases, only they hold the key. Anyone who purchases cameras, or any similar technological innovations, will be remiss in doing so if they believe that these inanimate objects will substitute totally for human intervention. They won't, and thus they should never be installed as an omniscient presence, with the purpose of eliminating human beings from the equation. Cameras can, and will, provide tremendous augmentation to any safety equation, and have repeatedly been shown as a reliable supplement to people as they pursue their quest for safe schools.

Nevertheless, in many cases, cameras will, when appropriately selected and properly installed, prevent some criminal acts, as evidenced by the surveys herein. Further, when criminal acts do occur, quality systems will record the proof necessary to apprehend the perpetrator and provide court-approved evidence of the act and actor(s). Additionally, cameras in schools have repeatedly been shown to deter

acts of violations of school codes of conduct. Food fights, to name just one, drop dramatically in schools where they were frequent, after installation of cameras. Parents lose the will to defend their child when faced with irrefutable evidence, i.e. pictures, of their child caught in the act.

Cameras are in place twenty-four (24) hours a day, seven (7) days a week, three hundred sixty-five (365) days a year. No other piece of technology can make that claim. They are like having a round-the-clock guard on campus, at considerably less cost over the long term. Cameras, unlike metal detectors, are not invasive into the daily activity of the campus. They work unobtrusively and do not yield false readings, as metal detectors frequently do. They also do not lend themselves to the human frailty of mistakes, such as overlooking the pistol hidden in the waistband because of the large metal belt buckle the perpetrator shows them.

When combined with a quality burglar alarm system in schools, cameras provide a tremendous advantage to law enforcement. Response to false alarms is virtually eliminated. Response to valid alarms is made safer for responding officers, as they, or their dispatchers, can "see" their villains and know their exact locations. No camera system should ever be installed in a school that is not also linked with their burglar alarm system. Together, these two pieces of technology work hand-in-glove to provide quality round-the-clock protection of persons and assets.

The use of cameras is enhanced dramatically when audio is added in the mix. The ability to hear persons, as well as see them "real-time" at police dispatch is almost like having an officer already on location. When the audio is two-way, and the dispatcher can communicate directly with the person they are looking at, an even greater level of deterrence is added. Even teachers entering the building unauthorized, after-hours, can be seen, and told they are being seen and recorded.

Cameras are becoming much more widely accepted by society. Although there will always be some who will never accept the presence of cameras for any reason, anywhere, the old perception of "big brother" watching is of very little concern today. Cameras are everywhere. Almost all major department stores routinely install them, as do convenience stores, gas stations, and even freeways, especially within major cities. People have come to accept the fact that cameras are watching them. This is of no concern to persons who are merely going about their daily activities legitimately. Only those with evil intent need be concerned with their presence, which is precisely one of the major deterrent advantages of cameras.

Besides, from a school perspective, have a "big brother" to watch over and help protect one has always been a positive concept. Cameras in schools merely provide an electronic version of this protection.

Cameras are rapidly becoming the wave of the future for schools and law enforcement. The benefits far outweigh any perceived disadvantage. Done right, cameras can be installed at prices that are very cost effective. When educated minds properly analyze the costs of cameras compared to all the savings mentioned, such as lowered insurance premiums, less fuel running false alarms, et al, the price is almost negligible by comparison. When viewed in terms of human life, especially that of America's future, their youth, the cost is absolutely inconsequential. Cameras are a "must have" in today's world of anarchy and terror, some of which is just outside in the school's neighborhood. Crime, and the perception of crime, will be reduced when schools produce their own video via their own cameras, leaving the media to look elsewhere for their stories.

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SURVEY

Video Monitoring / Metal Detectors in Schools

Please circle the letter beside the most appropriate answer unless otherwise instructed.

1.) Do you use video surveillance (cameras) in any of your schools?

- ☐ A.) Yes (If 'Yes', skip to question # 4)
☐ B.) No (If 'No', continue to question # 2)

2.) If "No", have you considered installing them?

- ☐ A.) Yes
☐ B.) No

3.) On a scale of '1' to '10', with '1' being the most important and '10' being the least, indicate your reasons for not installing a video system. (Indicate all that apply)

- A.) Do not perceive a need
B.) Too expensive
C.) Negative perception by school board
D.) Negative perception by central administration
E.) Negative perception by on-site administration
F.) Negative perception by teachers
G.) Negative perception by parents
H.) Negative perception by students
I.) Negative perception by public in general
J.) Other (please specify)

Note: Even if your answer to question # 1 was 'No', if you have given any consideration to a video monitoring system in your school(s), please answer questions 4 through 27 from the point of view of "what if" cameras were to be installed.

4.) At what grade levels are cameras used? (Indicate all that apply)

- ☐ A.) All grades
☐ B.) High school level
☐ C.) Junior High level
☐ D.) Intermediate level
☐ E.) Elementary level

5.) Are the cameras located throughout the entire complex?

- ☐ A.) Yes
☐ B.) No

SURVEY

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6.) Indicate each location where cameras are located.

- ☐ A.) Cafeteria
- ☐ B.) Hallways
- ☐ C.) Parking lots
- ☐ D.) Administrative Offices
- ☐ E.) Gymnasiums
- ☐ F.) Athletic Fields
- ☐ G.) Classrooms
- ☐ H.) Stairways
- ☐ I.) Main Entrance
- ☐ J.) Secondary Entrances
- ☐ K.) Transportation facilities
- ☐ L.) Maintenance facilities
- ☐ M.) Administration/central offices
- ☐ N.) Custodial facilities
- ☐ O.) Alternative facilities
- ☐ P.) Childcare facilities
- ☐ Q.) Rest room entrances
- ☐ R.) Locker room entrances
- ☐ S.) Fire alarm pull stations
- ☐ T.) Bus loading/unloading
- ☐ V.) Bike racks

7.) Is the video recorded?

- ☐ A.) Yes
- ☐ B.) No

8.) Does the system require live monitoring?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Optional

9.) Is the video monitored on location, off site or both?

- ☐ A.) On site only
- ☐ B.) Off site only
- ☐ C.) Both on and off site

SURVEY

Video Monitoring / Metal Detectors in Schools

10.) Is the video automatically transmitted to a police agency?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Optional

11.) Is the video accompanied by audio?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Optional

12.) Is the audio one-way or two-way with the site?

- ☐ A.) One-way
- ☐ B.) Two-way
- ☐ C.) Optional
- ☐ D.) Does not apply (no audio)

13.) How/by whom was the system installed?

- ☐ A.) Commercially installed (turnkey system)
- ☐ B.) Part commercial / part self-installed
- ☐ C.) Self-installed

14.) Who is responsible for the direct maintenance of the system?

- ☐ A.) Commercial contracted
- ☐ B.) Part commercial / part self-maintained
- ☐ C.) Self-maintained

15.) Was the system initially installed in a new building or retrofitted?

- ☐ A.) New
- ☐ B.) Retrofitted
- ☐ C.) Some new / some retrofitted

16.) Was any technology already installed in the building used in the installation?

- ☐ A.) No,
- ☐ B.) Yes, fiber optic cable
- ☐ C.) Yes, _____
- ☐ D.) Other (please specify)

SURVEY

Video Monitoring / Metal Detectors in Schools

17.) How was it determined which buildings received the system first?

- ☐ A.) Crime statistics indicating a need
- ☐ B.) Traditional high crime area (no personal statistics collected)
- ☐ C.) Cost
- ☐ D.) Ease of incorporation into new construction
- ☐ E.) Ease of retrofitting into old construction

18.) Were crime stats maintained before and after the installation?

- ☐ A.) Yes
- ☐ B.) No

19.) Did crime overall appear to be affected?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Uncertain

20.) Were any crimes solved directly as a result of the system?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Uncertain

21.) Were any crimes prevented as a result of the system?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Uncertain

22.) What was your primary consideration for installing a video system?

- ☐ A.) Cost effective
- ☐ B.) Crime prevention
- ☐ C.) Crime solving ability
- ☐ D.) Less intrusive than other methods
- ☐ E.) Ease of use and/or effectiveness
- ☐ F.) Other (please specify)

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23.) Did any person or group express concern over installation of the system? (Circle all that apply)

- ☐ A.) School board
- ☐ B.) Central administration
- ☐ C.) On-site administration
- ☐ D.) Teachers
- ☐ E.) Parents
- ☐ F.) Students
- ☐ G.) Civil rights groups
- ☐ H.) Media
- ☐ I.) Other (please specify)

24.) What did you do to overcome their objections?

25.) Is the system tied in with an alarm system for after hours monitoring?

- ☐ A.) Yes
- ☐ B.) No

26.) Without regard to crime statistics, was there a measured perception of an increase in personal safety by administrators, parents, and students?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Unknown

27.) Are there any other factors not covered in this survey that impacted your decision to use or not use cameras in your schools? (please specify)

28.) Do you use metal detectors in your schools?

- ☐ A.) Yes
- ☐ B.) No
- ☐ C.) Occasionally

29.) If so, are they used daily or randomly?

- ☐ A.) Daily
- ☐ D.) Randomly

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30.) Who determines when they are used?

- ☐ A.) Central administration
- ☐ B.) On-site principal
- ☐ C.) School Police Department
- ☐ D.) Outside agency Police Department
- ☐ E.) Other (please specify)

31.) Are they permanent or portable installations?

- ☐ A.) Permanent
- ☐ B.) Portable
- ☐ C.) Both permanent and portable

32.) Are they used for extracurricular events?

- ☐ A.) Yes, always
- ☐ B.) No, never
- ☐ C.) Occasionally

33.) What extracurricular events are covered?

- ☐ A.) Football
- ☐ B.) Basketball
- ☐ C.) Soccer
- ☐ D.) Baseball
- ☐ E.) Track
- ☐ F.) Band/Orchestra/Choir
- ☐ G.) Other (please specify)

34.) Are hand held detectors used, in addition to or instead of walk through detectors?

- ☐ A.) Yes, always
- ☐ B.) No, never
- ☐ C.) Occasionally

35.) Are there any other factors not covered in this survey that impacted your decision to use or not use motion detectors in your schools? (please specify)

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36.) Approximately how many students are enrolled in your district at this time? (Rounded off to the nearest 100)

37.) Approximately how many employees are in your district at this time? (Rounded off to the nearest 100)

38.) Does your district have it's own police department?

☐ A.) Yes

☐ B.) No

Today's date: , 2002

Thank you for taking the time to complete this survey. Your answers will be kept in strict confidence.

OPTIONAL INFORMATION:

If you choose to include the following information, the results of this survey will be forwarded to you upon its completion.

School district

Name of person completing the survey

Title of person completing the survey