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CCTV Systems—Get the Best from Your CCTV Investment

Closed Circuit Television (CCTV) is a common tool for security applications but many installations fail to deliver quality images or serve as a deterrent to criminal activity. The failures are most commonly related to the initial installation not having specific goals to accomplish. Just telling a vendor to put in some cameras will get you some equipment, but not necessarily an effective security tool. Let's review some of Hanover's suggested uses and applications of this tool.

Decide the Intent of the System

If you do not define what you want to do, then you will probably not get a system that delivers the intended result. Long fuzzy images of shadows emptying showcases may prove you had a burglary, but it does little else.

Having the Right Amount and Type of Lighting

A change in light bulbs from incandescent to fluorescent may seem to be no big deal. Each lamp has a specific color rendering index that affects how you see color. This is critical to match the camera with the lighting source and intensity. The wrong lighting source can distort colors and make the images less valuable. Insufficient light means no useable image. Too much light means no useable image. If you intend to monitor areas after closing, consider the need for local lighting. Your CCTV supplier can help you properly match cameras and lighting needs.

Identifying a Person

This seems to be self-explanatory and an obvious goal, but look at your CCTV images.

How many capture visible images of faces with sufficient clarity to identify someone? Look at any bank robbery video and you will see that cameras designed to capture faces deliver images that do not work well. Consider placing cameras that are aimed obliquely at entry points to capture video of everyone that enters your premise. By using two cameras, it makes shielding your face from the camera more difficult. Many large retailers have the monitor visible and people wave at themselves as they enter. This obvious set up will cause a criminal to turn away or try to shield their face from the camera. This can be a warning sign that this "customer" may be suspicious. In the event of an incident, you can retrieve a good facial image from this source.

Observing a High Value Area or Object

Do you want to watch your safe or vault area? Then placing a camera that lets you observe this area is a good idea. Will there be enough light for after-hours viewing? If the area is of sufficient value to need

surveillance, make sure that lighting is adequate to allow after hours viewing.

Consider tying these cameras into an off-premise feed. In the event of an alarm at night, you can immediately see if your high value area has been compromised. A blank image may tell you that it has been compromised due to the loss of video.

These cameras can be installed covertly to allow you to monitor this area without being obvious. There may be advantages to this for detecting internal theft and addressing mysterious disappearance of items. One way to handle this type of installation is to route this video directly to a recorder and bypass monitors. That way the only time anyone finds out about the camera installation is when you produce video of the suspect activity.

Observing Approach Areas

The two uses above assume that the person of interest has already gained access to your premises. CCTV positioned to observe approach areas can allow you to see trouble coming. Having these cameras in place can also tell you if the "false alarm" from your burglar alarm was someone testing your response. CCTV that covers approach areas can also answer the question of direction of travel for a perpetrator fleeing the scene.

Recording CCTV Images

The real value of CCTV is capturing and retrieving high-quality images after an incident. This means that your recording must be of sufficient quality to be useable. Selecting recording methods that allow you to do this today means digital recording. VHS tapes wear out and leave deposits on the recording heads of the VHS recorder.

Without routine cleaning and maintenance, a VHS system is of little value. It may be a liability as you are relying on a system that may not deliver. Digital images can be streamed off-premise for remote viewing or remote storage. Consider the retention time that allows the highest quality of image while retaining the data as long as possible. With the plummeting cost of digital storage devices, the cost issue here is becoming less of a constraining concern.

Protect the recording equipment by placing it in a locked cabinet. Recording equipment is a prime target for destruction if the thieves can find it easily. Off-premises data storage of digital images is a prudent control to protect the evidence from destruction.

Hidden Camera or Obvious Camera

The use of covert cameras has a place in your CCTV program. Many thieves will attack or obliterate the obvious CCTV cameras to defeat them. You can have hidden cameras that can monitor specific locations or even duplicate the image of an overt camera. One method is to have an exposed camera broadcast its image to a visible monitor. A second hidden camera with a similar view is transmitted to storage. If a thief destroys the obvious camera, the hidden camera continues to record the activity.

Cameras placed in the open may deter the most inexperienced and opportunistic thieves. Well placed CCTV cameras will communicate to more sophisticated thieves that you have put a good deal of thought and planning into your security program. This may cause them to look for a softer target. Openly installed CCTV can also have an impact on controlling staged slip and fall incidents or other liability incidents on your premises.

Camera Housings

The smoked glass dome has become a common sight. Camera housings keep the cameras clean and prevent casual vandalism or simply changing the camera angle. Cameras located outside may require heated enclosures and will require weather-tight enclosures. Rotating bases may look like a great idea, but they are easily defeated by simply timing the movement of the camera. In many cases, you can install a second camera for the cost of the motorized base and associated power and control wiring. A second camera can also provide continuous coverage for an area versus partial coverage with a moving camera.

Wired or Wireless

Consider the security and potential for jamming or signal compromise with wireless equipment. Ask the vendor about signal strength and the ability of a thief to simply overpower the signal with a separately generated signal. If using wired cameras, be sure to route the wiring in areas that are protected by your alarm system. Resist the cost cutting of running exposed cable outside the building that can be easily cut and defeated.

CCTV as an Alarm

If you have remote exit doors that are only for emergency use, you can configure your CCTV to alarm when the image changes. This way you can be alerted to changes in images that should be static.

CCTV systems can be a great security tool. A great CCTV system requires initial planning to get the right lighting, cameras and image quality. The system must be maintained to keep the image quality crisp. This includes relamping when needed and recorder maintenance. Mixing recorded and streamed images can add a significant layer to your security program.

Put some thought into the installation and upkeep of your system and you will be able to retrieve images that can help catch a perpetrator. A well designed and implemented system can also serve as a deterrent to thieves casing your premises.

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