Securing Your Campus

Introduction

Security and Safety Officers are committed to providing a safe and welcoming learning environment that prepares students to be college and career ready. Typically, this means multiple buildings and facilities, which are often on separate campuses. Video remains the best crime solving tool in our arsenal. This article explores some challenges faced by campus security officers and describes recent technological advances to mitigate those challenges.

Video security has evolved and made great strides over the past 15 years. **_First generation_** systems used analog cameras connected to DVRs and matrix switchers. Over the past ten years, video surveillance has moved to **_second generation_** solutions with IP cameras and NVRs which provide the ability to view video using a PC and a network connection. Advanced second generation systems use software programs called video management systems (VMS) and can scale to hundreds of cameras by adding servers and software licenses.

Despite improvements with megapixel cameras and powerful VMS software, most systems are mostly used forensically or after the fact to investigate or solve a crime. It is well known that live monitoring of tens of cameras by a human operator is not effective. When a campus can have hundreds of cameras, the manpower needed to watch live video is simply not economically feasible, leading to video being used primarily for investigation.

CheckVideo is a **_third generation_** video security solution that works with existing cameras, and uses the power of the cloud and Homeland Security grade analytics technology. CheckVideo makes it possible to complete investigations up to 75% faster, and acts as a force multiplier that helps prevent crime, ensuring a safer campus for everyone.

Top Considerations for Campus Video Surveillance

Third generation solutions provide much more than recording and playback of video on a monitor. The top ten items to consider in a video surveillance solution are:

1. **Simplicity**

    This is arguably the most important feature. The solution should require no special training. All functionality should be available through a web browser, not requiring complex software installation and upkeep. It should be capable of being used by multiple users at the same time. Exporting video should be possible right from the browser, even when you are not on campus.

2. **Video Analytics and Alerts**

    While most new cameras include motion detection, they are prone to false detections to the extent that changes in lighting, blowing leaves, etc. can cause it to trigger. CheckVideo includes Homeland Security vetted analytics with full classification of people and vehicles and options to specify zones and detect activities such as loitering.   Analytics make your cameras an alarm system as well, because they can be programmed to instantly alert to the presence of people of vehicles in certain areas or at certain times. Law enforcement can be alerted and can stop crime instead of investigating it.

3. **Health Monitoring**

    It is often the case that when video footage is needed for a camera, it could be missing because of a prior malfunction of the camera, recorder or a programming error. This happens more frequently with complex network based systems that depend on networks to deliver video from the camera to the recorder.   CheckVideo monitors its own health for recording errors, communication loss, video loss and if cameras have been tampered with or vandalized.   Administrators can also be alerted via texts and system alerts.

4. **Cyber-security**

    Over the past few years, hackers routinely break into security cameras and DVRs, and use them to launch against your networks and attack external websites. CheckVideo isolates your existing cameras from your network, improving cyber-security. Timely patches are pushed to all devices ensuring vulnerabilities are addressed for the life of the hardware. All communications are encrypted and users have to be authorized to view video. Furthermore, with no passwords required per recorder or camera, CheckVideo eliminates paths for hackers to compromise your video security system.

5. **Lightning Fast Searches**

    Most schools use their video systems heavily for investigations. This means finding video by seeking to a date and time and playing through to find the relevant event. This can take tens of minutes to hours, especially if multiple cameras are involved. CheckVideo includes an industry-first search engine that enables searches in seconds, even for multiple cameras. This makes it possible to use video cameras to truly understand activities around your campus and deploying law enforcement to provide coverage where it is needed.

6. **Managed Service**

   It is often the case that a video security solution is upgraded or purchased over time, resulting in different systems, incompatible versions or a splintered system across buildings and campuses. As video surveillance has migrated to IP solutions, it is based on software that is only as current as the day it was installed. Updates to camera firmware and NVR/VMS software are available, but the effort to apply these updates is very labor-intensive, or may require faster computers, so they do not get applied. Like your smartphone, CheckVideo automatically pushes software upgrades which makes your system better over time and ensures it stays compatible with changes to mobile phones and browsers.

7. **Video Backup**

   DVRs and NVRs have a single point of failure with all video being recorded on that device. If the recorder fails, a hard-drive fails or the recorder has connectivity issues, video evidence is lost. Enterprise solutions that include RAID technology and a failover server can get very expensive. Fortunately, cloud backup can provide an always-available, highly secure backup of your video. CheckVideo includes 24x7 on-site recording PLUS event video backed up to the cloud, from 3 days to 2 years depending on your needs. The best part is, this video is at the highest resolution supported by the camera, and does not consume much bandwidth.

8. **Unified System, Single Login**

   With multiple servers and possibly systems from multiple vendors, security officers have to individually log into each NVR to view and download video. CheckVideo unifies multiple systems and cameras spread across campus or across the state. Each user receives a virtual NVR that shows cameras that they are authorized to view, regardless of physical location. Users always use a browser pointed to CheckVideo's service and enter in their username and password. They can see, search, and save live, recorded or event video on the cameras they are authorized to access across multiple sites. Video access can also be enabled for first responders in the event of an emergency, without requiring physically access to the NVR.

9. **Pro-active Monitoring**

   It is common to display multiple cameras in a grid or matrix on a monitor, or even across multiple monitors on a display wall. With the increase in cameras, it is virtually impossible to keep an eye on every camera. With *Smart matrix*, CheckVideo is able to push video into the matrix view based on activities of interest. This makes it possible for a single operator to monitor tens or even hundreds of cameras and dispatch appropriate response. This stops crime and would-be criminals, ensuring a safer campus for everyone.

10. **Cost-Effective Upgrades**
    Most schools and colleges already have a large investment in video security infrastructure such as cameras, cabling, networks and workstations. CheckVideo offers cost-effective options to keep existing cameras and up-convert a first generation (DVR) or second generation (NVR) solution to a smart third generation system. It can also function with existing NVRs, which do not have to be replaced.

Schools and colleges continue to be on high alert from a security point of view. An upgrade to a third generation solution costs less than a new installation and ensures that you always stay current. It enables the security team to further leverage existing camera infrastructure and use it more effectively without the complexity of new software and servers.

"*I also wanted to let you know that we have the platform up and running at two of our campuses and I've heard numerous times how easy to use and accessible it is. I have a number of people at the central office who are basically self-taught experts at this point, as well as folks at the campuses who have been able to figure out the system just by playing around with it. That never would have been said about our old platforms. Things are going very well.*"
 KM - Managing Director of Operations for a Charter School System

Comparison Matrix

Feature	NVR /VMS	CheckVideo	Benefits
Live Matrix View	Yes	Yes	CheckVideo Managed VMS combines the best of on-site functionality with the reliability and scalability of managed services.
24x7 recording	Yes	Yes	Better than a motion-only recorder, CheckVideo offers 24x7 recording on site.
Web and Mobile	Yes	Yes	View live, playback recorded video and export - all from a browser. There is never any software to download or install.
Automatic S/W Updates	No	Yes	Unlike traditional NVRs, updates are automatically pushed without any on-site effort or additional expense.
Federation – single login	No	Yes	Single web interface shows cameras across multiple locations. There is no need to connect to a server at a time, or download and set up viewing software.
Advanced Analytics	No	Yes	NVRs offers motion detection which will generate many false detections. CheckVideo incorporates advanced analytics with person and vehicle classification, loitering and tracking at no extra cost.
Video Search Engine	No	Yes	CheckVideo includes a powerful search engine. Find video across multiple cameras in seconds. NVRs offer timelines and thumbnails which take a lot longer to search.
Installed COST	High	Low	With CheckVideo, there are no servers or software licenses to purchase up front lowering your install cost.
Backup	No	Yes	CheckVideo offers a hybrid of on-site recording and off-site backup. Off-site backup can be purchased from 7 days to 24 months.
Unlimited Users	No	Yes	CheckVideo allows unlimited users, no extra cost. Camera groups can be customized per user, through a web interface.
Cyber Security	Low	High	CheckVideo VMS encrypts communication from your cameras. Our servers are available 24x7 and are always patched with the latest updates.
Software License	Purchase in advance	Subscription	NVR and VMS software is pre-purchased. CheckVideo is a subscription that lowers up-front expenses and includes ongoing support and training.