
Video Surveillance As A Tool To Improve Security

Introduction

Closed-circuit television or as we know it CCTV is the system that helps you to keep an eye on your business, which allows you to see what's going on inside and around the premises of your business. The use of a monitor and cameras installed around the premises enables you to see events live as the action is happening and allows you to record the footage so you can archive it for future reference. This technology has been around for a number of years but recent improvements made this system more effective at capturing criminals during the crime, the recording of the action could be also used as evidence against the offender. CCTV could supply benefits to the business whether they want to detect any type of crime or to keep an eye on employees. These systems helped in increasing use in law enforcement in different types of issues, from traffic observation to observation of high-crime areas and domestic communities. It is stated that around 65% of the CCTV cameras are installed in Asia as different human activities influenced the locals to use surveillance camera systems. CCTV providers argued that this technology is effective at solving and deterring crime, this could provide enough protections that the individual's right to privacy could fairly be weighed against the benefits of surveillance. In Europe, the European Convention on Human Rights protects the rights of the individual including the right to privacy.

The use of CCTV and its advantages

During the years, CCTV systems made a huge improvement not only in their capabilities but also to connect with other security technology. Several statistics are showing that the rate of crime is increasing significantly and each year, businesses and homes are being the main target of various robbers and thieves. This shows that nowadays, public and personal security is of paramount importance. Although there are many different systems and ways how one can secure their property or business, CCTV is still the most used technology and the most effective tool in preventing crime. With improvements that were made during the last decade, it is easier that one can install a CCTV as the problem of wires, monitoring station and DVR is not an issue anymore. Nowadays they store the recordings in the cloud and have remote monitoring capabilities which could easily allow the user to keep an eye on what the camera is recording with an application on the mobile phone. It is normal that one notices that CCTV cameras are common in the business areas and in public spots but according to studies it shows that a low majority of people install a surveillance system in their homes which gives an advantage to burglaries and thefts in residential properties. CCTV cameras are one of the most considerable options in improving security and keeping an eye on a vast area. CCTV is a handy option in deter criminals, as it is normally that thieves usually target easy places and when they notice a surveillance camera covering the property, they will surely move for another option. According to statistics carried by the FBI, one of every three houses that are unprotected has a high risk of being burglarized while those protected by CCTV have only one chance out of 250 houses at risk. The same goes for shoplifting and petty fraud, according to NASP, yearly in America, business owners lose around 13 billion dollars in goods because of shoplifting. CCTV helps to decrease this loss to the owner as proof shows that not only the shoplifting will decrease from the shop but also sales will also increase. Having a surveillance camera around your premises

really helps as they also provide evidence in cases that were recorded which will help the investigators to understand exactly what happened. With CCTV, crimes could be solved sooner and easier which will help in location, time, and suspects identification. This will also help in prosecution, as criminals recently are prosecuted with the evidence that is collected through the security cameras. In court, they consider the evidence collected from security cameras as an essential element of prosecution which also helps in improving safety to the society as they are finding people guilty from records taken from these cameras.

Disadvantages and restrictions of CCTV

CCTV brings with it a lot of advantages but it also provides some disadvantages. One of the main disadvantages is breaching privacy. In a business such as shops, customers and employees might find a problem that they are being filmed and that they are under surveillance constantly. This could make the employer thinking that he's not trusted which is not a good dynamic. If one wants to install CCTVs in his business, the employers must be informed and given an explanation why they are being used, for their own safety and security. Another drawback is that CCTV cameras can only record a limited area. In a robbery, the criminals could vandalize the system in several ways like spraying on the lens and sticking gum. Also because some cameras are flexible, the offender could rotate and change the angle of the camera so he cannot be recorded. Like any other technology, surveillance cameras are vulnerable which could be a big obstacle to those who are planning to install these cameras. There are certain criminals, who are determined to commit the crime no matter what, that's why with their knowledge, they could easily disconnect or access the CCTV system. This brings with it some thinking on how to improve your safety so your system won't tamper, such as buy your camera from a trusted manufacturer. While it is proven that with the presence of CCTV criminal activities had decreased or almost every time helps to identify the offender, alone they cannot prevent and stop crime, it can only capture the offense and crime being done. CCTV cannot do anything about it, the least it can do is to detect an alarm system that can inform the authorities. This shows that CCTV cameras aren't the best way to stop crime on spot, while it is done. Because CCTV increased the information that they contain, it increased the risk that the system could be hacked. Hacking will lead to privacy issues such as taking images that were captured and will go around on the internet. It is difficult to protect the system from hacking as all systems that are connected to a network, will be exposed for hackers to hack the system from outside locations.

Improvements in the future

To keep premises secure and the guard will continue to be the main challenge over the years and throughout the years, CCTV cameras improved in their quality and in their main aim. that to protect and to create security, thanks to advancement that the technology did in a short period. Those things that we meet every day will be evolving and these changes will surely affect our day-to-day life. Looking in the future of this system, we could easily see improvements that will surely help in reducing criminals on the roads and reducing time for the authorities to solve cases and to react immediately when a crime occurs. There is no secret that companies' objective when investing in a surveillance system is to protect their business but that doesn't stop criminals as they know what they can do to say unrecognized. In the future we will see businesses' security cameras more effective as video analytics will be able to notice unusual behavior, preventing the crime to go further and inform the security staff. Different than just recording the scene, this will increase to intercept, manage and prevent thefts and robberies,

giving the real definition and use of CCTV. Video analytics will also give crucial insights which will help businesses to make more reasoned decisions about their business as this will provide footage of customers' attitudes in the stores and recording of the car park. This improvement will give back the companies the chance to expand their security and will behave in return the maximizing of the system.

When a crime occurs and a CCTV camera has the footage of the offense, the police will have to look at all the footage that was recorded to try to create the crime's timeline. But now, it is proposed that new cameras with advanced analysis abilities will be tested. These cameras will include the facial recognition of a person in a crowd of people. These security systems will analyze the recording of the scene and will put every person's face who was in the area on different screens and group them in different instances. This will then provide the operator to click on the face and will know what was that person doing at that time to establish if that person was involved or not. Together with this, the investigators would want to know what that person was doing before and after the crime was done, which usually takes some time to create as it needs a lot of tracing and questioning. This will reduce the time drastically as this allows them to highlight the person from the footage and will find footages recordings of similar people. As facial recognition will have a good rate of probability that it will match, a human operator will still be needed to have the final determination in the cases. It's hard to predict the future of Wifi security cameras as they will evolve more in the future. In the near future, we could also see drones flying around our roads and noticing crimes before they will happen which could be networked with police offices and informing the authorities for an instant response.

Nowadays, we are living in a time where technology is taking over a huge part of our world. With constant improvements and advancements, technology is facilitating one's life for the better. As for security, as previously discussed, a CCTV system is only one method how to provide surveillance. Having said this, there exist other methods to ensure security however similarly to CCTV systems, these also bring about their advantages and disadvantages. Taking for instance security guards and police patrol, both provide service to businesses and citizens. Businesses usually install CCTV systems to prevent crime as much as possible however for added security, businesses also hire security guards or may rely solely on security guards. Taking a supermarket as an example, a CCTV will provide reliable 24/7 service coverage and recording. The system cannot be threatened or disarmed, opposingly the system may be equipped with an alarm system that goes off when a crime is detected. Having a CCTV surveillance camera is a one-time cost device purchase that incurs only running expenses. Security guards are able to provide better visual observations as well as a multi-sensory response when a crime such as a break-in occurs. The latter may detect dangers and crimes before the CCTV captures the area being affected. Guards could also be equipped with guard dogs when necessary to detect other types of crimes that may not be detected through security cameras. Although security guards provide a good service, they could cost the companies more than installing a CCTV which is likely to cost around €150 while wages for security guards are calculated to cost more along a period of time within which they are hired. Similar to security guards, police patrol can be used to protect the citizens by making random checks around the streets of the locality. Also, councils can increase the number of streets lighting, to reduce unlit areas which are the main aim for thieves. In terms of cost, this will be more useful for citizens and they will be paid for by the government and they will be able to do without a personal CCTV camera. Another competitor to CCTV systems is the IP cameras. Seeing how these two systems work, an IP camera provides a relatively similar service but with different costs and advantages. While a CCTV is considered to be lower in price than an IP camera, calculations show otherwise. CCTV cameras also use

more cabling and DVR which is restricted in terms of storage. IP cameras, in reality, cost less than CCTV and may hold more storage, therefore, using fewer cables. This will, in return, reduce the cost of cables whilst benefiting recordings with better resolution and higher definitions.

Conclusion

All things considered, a modest CCTV camera provides security and protection for citizens in their neighborhood as well as business owners and employees within their premises. Advancements in such systems, incorporating alarms and facial recognition can further help in concluding crimes. It can be noted that following an increase in CCTV installations especially at residences has helped for a substantial decrease in robberies considering these were quite popular even in broad daylight.

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