Well-implemented city surveillance assists with more than crime detection

By Jan de Beer   29 Feb 2012

Central Business District (CBD) and city surveillance have become increasingly common over the years for a number of reasons. While crime detection may be a strong prevailing factor in the decision to implement such a solution, there are many other benefits.

However, it is vital to obtain the services of a specialist from the outset, as any surveillance solution requires considerable time, effort and money - from planning through to implementation and maintenance. If it fails as a result of a false step in any of these phases it can become a costly mistake for taxpayers and municipalities alike.

Crime detection is one of the core reasons for the implementation of many city surveillance systems, including detection of break-ins, drug trafficking, gang behaviour, fights and riots. The footage obtained from surveillance cameras can be used to identify offenders and as evidence for prosecution. This, in turn, has a crime prevention effect, as higher levels of successful prosecution tend to act as a deterrent to future crime.

Far wider applications

But the same systems that help law enforcement to catch criminals can also have far wider applications. When traffic accidents occur, this footage can be used to verify exactly what happened and who was to blame, whether it be malfunctioning traffic lights, either of the drivers breaking the law and so on, for both insurance and possible prosecution purposes.

Surveillance can also be useful for enforcing traffic regulations and prosecuting traffic offenses, particularly if linked into national database systems, such as eNatis, which can then be used to verify that number plates belong to the correct vehicles. Following this application, stolen vehicles, as well as those with fraudulent plates, can also be identified more easily.

Aside from its application in the sphere of law enforcement, city surveillance can also be used to improve service delivery. By monitoring cameras, operators can steer reaction teams to where they are needed in the case of accidents and emergencies, and ensure that the correct emergency-response personnel can be on hand depending on the nature of the crisis. Municipal problems, such as burst water pipes, blocked drains, flooding, faulty traffic lights and street lights can also be dealt with more quickly, as the areas are monitored constantly and problems can be identified and the relevant parties alerted in short order.

Round-the-clock monitoring

If any of these implementations are to provide these benefits it is vital that the surveillance solution is manned and monitored 24 hours a day, seven days a week. As crimes tend to happen late at night and very early in the morning, they may not be spotted if the camera feeds are not monitored at all times, rendering the entire system useless.

Selecting the correct equipment is also crucial to the success of CBD surveillance. Static cameras are pointless, as they have blind spots that can be exploited - so cameras with pan/tilt/zoom motion control are essential. High-speed domes are the most common type used for city surveillance, as they can be set on an automated tour of a certain coverage area and can be manually overridden should suspicious activities be spotted. These cameras should then be linked into a monitoring site and control room so that surveillance can take place from the footage.

Cameras themselves, however, are not enough, as they will only show an image of events as they happen. For prosecution and evidentiary purposes it is vital to incorporate video recording equipment into the control room, with quality image and recording at a frame rate that is high enough to record movement. Cameras also need to be reliable and operationally stable, and be able to deal with tricky lighting situations, such as times when police or ambulance lights are flashing within the camera's frame of view. If the camera is unable to focus with flashing lights in view, it leaves the entire system vulnerable to exploitation.

Importance of the control room

The control room itself is also an important aspect of any surveillance solution, as the footage is useless if suspicious activity or problems are not picked up as they occur. With the convergence of video and data reaching maturity, remote monitoring has become increasingly viable, and a data link that is capable of sending video is a simple matter to achieve thanks to the prevalence of 3G and mobile data. Wherever the control room is located, however, it is desirable to create a Joint Operations Centre with representatives from emergency services and reaction teams, including security, fire, paramedics, police and so on.

System design is another important aspect, along with the experience of parties involved in the implementation with regards to design, as city surveillance is unique and has very specific requirements if it is to be successful. Staffing of the control room is also of great importance, as the operational element is crucial to ongoing usefulness and long-term functionality. And while every city has certain common elements, each is different so there is no out-of-the-box, one-size-fits-all solution. Successful CBD surveillance needs to be tailored to each individual city and setting.

Outsourcing makes sound business sense

For these reasons, along with the cost implication of a failed CBD surveillance solution, it is vital to ensure that the right partner is selected. Outsourcing makes sound business sense in the city surveillance case, as this enables cities to access specialist skills and service level agreements can be attached to ensure functionality and monitoring occur to the required standard.

As technology evolves and matures, and systems are implemented in cities across the globe, city and CBD surveillance becomes increasingly successful and, therefore, more likely to be implemented elsewhere. With improvements in technology, recording quality has been boosted, making post mortem analysis more successful and aiding law enforcement with the apprehension of criminals.

Although city surveillance remains a costly exercise, the true value of these systems can be realised when looking at other areas where surveillance can play its part, such as in improving service delivery. CBD surveillance is useful for crime detection, but its uses are far broader and greater benefits can be leveraged from these implementations.

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