

## IP CCTV – the future of surveillance?

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Since its origin in the 1950s, CCTV has proven itself to be an extremely important tool in the fight against crime, acting as both a crime deterrent and a source of evidence in court. However, increasingly sophisticated criminals and a rise in anti-social behaviour across the UK have highlighted the limitations of traditional CCTV networks in both fighting crime and protecting local citizens.

### **Limitations of CCTV**

One of the key limitations of CCTV is the amount of cabling associated with a traditional network, which makes the service hard to expand and highly restrictive. If a camera needs to be moved or a new camera needs to be added to the network, a complete new cable is often required. Traditional CCTV systems were also designed for point-to-point transmission of video from a camera to a recorder on the same site. There are numerous disadvantages to this as the tapes need to be changed and stored, recording needs to be monitored and, as they are stored on magnetic tape, images are susceptible to being damaged or lost.

### **Solutions offered by IP CCTV**

In order to tackle these problems, many organisations are now turning to IP CCTV, which is another step towards the convergence of data, communications and security onto a single network. As well as the significant cost savings, resulting from simpler maintenance and the ease of centralising control, IP CCTV adds flexibility and increased functionality to CCTV. The existing network and CCTV infrastructure can be leveraged to enable recording over IP, ensuring that existing investments are protected while benefiting from the new technology. Consequently, cameras can be positioned to address specific problem areas and tackle a wide range of crimes, including fly-tipping, damage to property and violent behaviour. Images from local trouble spots can then be sent directly to policemen on the ground via mobile phones or PDAs, enabling them to ascertain troublemakers and react to incidents more quickly.

Real-time policing, enabled by IP CCTV, has already been embraced by North Lanarkshire Council – one of the first UK Local Authorities to implement IPCCTV to combat anti-social behaviour. The council's IP CCTV infrastructure, which was part of a £3 million investment, is one of the largest in Europe and the council now has a huge advantage over criminals. The monitoring service covers a far greater area and the police have significantly improved their response times to incidents, reacting instantly to real-time images. Consolidating the CCTV network into a central monitoring station and establishing a 24 hour, 365 day monitoring location has also enabled the synergy of CCTV with other around the clock services, such as visual verification of alarm systems, a lone worker support service and a back-up service for community wardens and the social work department. There is also evidence of improved efficiencies and security in areas with high-rise flats as the CCTV system is linked to local caretakers and remote monitoring services, reducing the number of security staff required.

Unlike CCTV, IP CCTV images are saved onto a hard drive and can be backed-up at an offsite location, reducing the risk of footage being damaged. Other benefits of the digital format include the ability to store video images at different resolutions and

frame rates to the original video, which reduces the amount of storage space required, and the fast and efficient retrieval of images. For example, police officers no longer need to source hard copy tapes from image libraries, which may be off-site, as they can simply click and search on their PC to locate the relevant images. Each image is time and date stamped, providing more concrete evidence in court, and footage can be enhanced in size and quality to meet demands during major incidents and provide insightful support to police.

Police forces are not the only people to benefit from IP CCTV as the system also enables security guards to work more effectively. Rather than having a number of security guards patrolling on foot on-site, which can be both expensive and ineffective, a single CCTV operative can carry-out a 'point and click' search from one location and examine footage across various sites. This is particularly good when companies have offices across the UK and, if an incident does occur, the safety of security staff is no longer compromised.

### **Interactive applications**

The interactive applications that can be run over IP CCTV provide further filters that increase operators' efficiency. Applications such as Automated Number Plate Recognition (ANPR) ensure that IP CCTV is a proactive security system, rather than reactive. Contrary to popular belief, ANPR is not only used to monitor speeding cars. The application is often used by police forces to track stolen or wanted vehicles and an alert is triggered as soon as a wanted vehicle is spotted on the road. The vehicle's information and details of the alleged offence are then sent instantaneously to a police monitoring centre or motorway patrol. This allows for the fast apprehension of suspects and denies criminals use of the road. ANPR can also be used to deter 'drive-offs' in petrol stations.

Similarly, Automatic Face Recognition enables known suspects to be flagged to operators. The application is ten times more effective than the average policeman on the street and private organisations such as supermarkets can also use it to catch known shoplifters.

### **The future**

Before we see further advances in surveillance technology such as mobile CCTV, involving the transmission of video over high-speed GSM, more organisations need to embrace IP CCTV. This innovative technology has numerous benefits and North Lanarkshire Council, which is improving its own working efficiencies with IP CCTV, is leading the way with surveillance and providing an excellent example to other organisations.

### **Key Surveillance Statistics**

According to the Britain After Dark study, which was commissioned by ntl:Telewest Business and polled more than 2,000 UK residents, 88 per cent of the population are happy for CCTV to be used to fight crime. Other key findings include:

1. 76% of respondents believed CCTV should be used to find missing people
2. 79 per cent would employ it to prevent shoplifting
3. 70% felt CCTV should be used to track drivers leaving petrol stations without paying
4. Only 30% of the population supported CCTV's use in enforcing the Congestion Charge.
5. 70% were in favour of using it for crowd control