# Smarter than the average gear

Nicknamed "bug-eyes", Viseum is a new approach to surveillance. Using an array of cameras looking in all directions, specialist software identifies interesting activity and directs a more powerful camera to zoom in and record it. **Stuart Thompson**, the entrepreneur behind Viseum writes

STUDIES HAVE SHOWN THAT with a small number of operators and an ever-increasing number of moving cameras, operators can only monitor and "move" around 20% effectively at any one time. Monitoring effort therefore needs to be focused on those areas that are known to produce most crime.

This means that operator resource cannot be spared to monitor effectively the many cameras covering areas where unpredictable crime happens. Most moving cameras are therefore not effectively monitored, and are either left stationary, looking at nothing, or left on preset tours, which allows them to look at different places but still record nothing in particular.

Consider when a moving camera's historical video is reviewed to find evidence of an incident that was not reported until after it happened. The typical result after searching through hours of video would be to find nothing at all because it wasn't pointing in the right direction.

Potential wrong-doers often assume they are not being watched or these cameras are dummies. This has significantly reduced the original deterrent effect that CCTV networks had when they were newly installed, and ultimately means that in the wider areas random and unpredictable crimes will still go unnoticed and remain a threat.

At present the areas protected by local authorities' CCTV are in and around town centres. However there are many other populated areas within a local authority which do not fall within "town centre" CCTV coverage. There is evidence that CCTV moves a proportion of crime and youth disorder out to these areas, and they become a casualty of those few "premium" areas that are fortunate enough to have protection. This has aggravated the problem of random crime in wider areas. It has become apparent that crimes in these areas can be no less serious than those committed where CCTV is in operation.

## Moving targets

One attempt to protect more areas whilst meeting budgetary constraints has been to use CCTV systems which can be re-deployed to different places. However, in practice these re-deployable systems have shortcomings which discourage users from actually re-deploying them.

In particular they need to be manually operated and the resulting need for mobile remote communications that can be more costly to set up and use. If crime does move on, users often leave these systems at their original installation but no longer even try to allot time to monitor them. Alternatively

they may take them down and store them. Either way, all the benefits which these re-deployable systems offer are lost.

To discourage the break-out of youth disorder and anti-social behaviour hot-spots, a long term crime deterrent is necessary. This requires two main elements:
• to achieve and publicise consistent crime clear-up, and
• to ensure that moving cameras can be seen to be constantly reacting to events.

This and problems identified during our nationwide survey led to a software solution providing intelligently automated moving camera surveillance, described here as "Intelligent Moving Cameras" (IMC). To improve operations and save money the solution had to:
• Detect incidents and react by moving the PTZ camera accurately day and night in all kinds of weather
• Consistently capture close-up evidence automatically
• Be easy to install, use and rapidly re-deploy

Teams of developers have attempted to produce effective IMC technology, but in every case, after several years of development have failed to overcome the many technical obstacles. In fact, prior to supporting this development the UK DTI initially declared it would be impossible.

## The acid test

Once development of the Viseum IMC solution had been completed it was time to test it live, in the field.

Various product models incorporating this software were placed under rigorous trialling with a number of local authorities. Areas which suffered from random crime were chosen and a like-for-like comparison was undertaken between the IMC and the existing operator monitored infrastructure.

The results were outstanding. Every crime reported had been captured by the IMC and its close-up evidence was used on all occasions, but nothing had been captured by the operator monitored infrastructure.

In one particular installation the IMC even captured evidence of a crime that had not been reported. In another installation it caught evidence of several unreported misdemeanours which the council acted upon and intelligence was provided to the police on a potential drug dealer.

This sent out strong deterrent messages and eventually that authority even relied on it as a management tool to ensure staff were maintaining certain areas properly. Throughout all IMC trials the deterrent effect was highly noticeable and proven by the drop in crime statistics.

• *For more information, visit www.viseum.co.uk*

### What end-users say about Viseum

**Community safety partnership:** "This is exactly what the communities need."

**Police:** "We have fixed cameras everywhere in our local shopping centre but nothing as sophisticated as this."
• "This is great, it sees everything at once."

**Shop Owners:** "Before Viseum, shopping parades away from the town centre accepted that having CCTV was not achievable."

**Operators:** "Before this camera was driven by Viseum's intelligent system we had this camera on a small shared screen, but now it's doing the same as we do; it's on its own dedicated screen so we can all watch it."
• "When we operate our cameras we don't know what to look at until we zoom in to take a closer look...it chooses what's boring and then goes to look at something more interesting in just the same way we do."
• "Some areas can be left alone to protect themselves and in other areas the IMC can support our efforts."