

# Intelligent Cameras Join The Forum



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Paul Main, ClearView Communications

**Project:** The Forum  
**Sector:** Leisure  
**Product:** Intelligent Video Motion Detection

Sophisticated technology from Bosch Security Systems has been selected by Chelmsford-based electronic security systems provider ClearView Communications, for use in the upgrade of security systems at the award-winning Forum building in Norwich.

The Forum, the landmark millennium project for the East of England, is home to the Norfolk and Norwich Millennium Library, and is built on the site of the former central library, which was destroyed by fire in 1994. The building also houses BBC East’s regional headquarters.



With some two million visitors each year, security at The Forum is a key priority for the management team. The CCTV system, put in place at its opening in November 2001 was due an upgrade, as Paul Main, Managing Director of ClearView Communications explains, “Technology and the capabilities of CCTV systems are changing at a rapid rate. Following a security audit, the management at The Forum decided that the existing CCTV equipment was in need of upgrading.

“They were looking primarily to migrate the analogue recording equipment to digital, upgrade the display monitors and install additional cameras. ClearView won the contract on competitive tender and selected state-of-the-art technology from Bosch.

“We upgraded the existing recording system to a digital system from Bosch, with a central hard disk RAID system to make tape management a thing of the past. We installed a number of new cameras, and corrected the performance of existing ones. We also used IP technology from Bosch to link the main Forum site to the management office across the concourse,” Paul said.



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Steve Falvey, Building Manager of The Forum

Paul continued, “Perhaps the most exciting feature of the upgrade is the incorporation of the latest Intelligent Video Motion Detection system (IVMD) from Bosch.” These IVMD cameras have the capability to differentiate between cars and people. They also detect and track idle and removed objects, as well as loitering.

“The Forum is testing various scenarios to establish how video analytics can help day-to-day. It is being used in the underground multi-storey car park to monitor antisocial behaviour. There had previously been problems with gangs of youths hanging around in car park stairwells, and so the cameras have been programmed to look out for this and alert the operators.

“When a person walks down the steps then out towards the cars, this is considered normal behaviour by the IVMD cameras. But when a camera detects a group of people who have stopped, an audible alarm sounds. In this instance, the recording quality is changed from a background rate of one image per second, to a higher resolution at more frames per second (FPS).”

The second generation Bosch Intelligent Video Motion Detection System offers reliable video motion detection for indoor or outdoor use. A licensed option already incorporated in Dinion IP and Flexidome IP cameras, and the VIP X1600 and VideoJet X family of encoders, IVMD 2.0 can be easily configured to select sensitive areas of the image, minimum object size and the motion detection that will trigger an alarm.

While the configurable detection filters and advanced tracking improve reliability and reduce operator workload, the background learning algorithm, developed in-house by the Bosch research group, brings a new level of intelligence to motion detection. It can cleverly adapt to changing lighting and environmental conditions and is able to detect and track objects under difficult conditions.

“These cameras have only been installed for a matter of weeks, so we are still monitoring their progress, but the technology certainly is advanced,” says Paul. Efficient technology from Bosch also enabled a streamlining of the control room, revising the layout to a more ergonomic solution.

“Prior to the upgrade, the control room was filled with big monitors, which could only show one picture per screen. Apart from taking up a huge amount of space, they were also emitting too much heat, so we installed five large TFT LCD screens and set up a virtual matrix using Bosch video management software. The screens can show up to 16 pictures per screen, which allows for much greater flexibility and functionality.

“The screens are controlled by a single computer, through which control room operators can select which cameras to view. The advanced Bosch software means that this can be done automatically, i.e the cameras can be set on timer to view car park entrances by day, and stairwells by night.

“We have received positive feedback from the control room operators, who have commented on the improved picture quality and ease of use of the system,” concludes Paul.

Steve Falvey, Building Manager at The Forum adds, “We have been extremely happy with both the Bosch products and Clearview Communications installation and after-sales service. We now have a CCTV system that a busy building such as ours needs to both operate safely and deliver the high level of service our customers and tenants deserve.

“We’ve already had a number of successes in identifying minor crimes in and around our building and due to the quality of images the Police have been able to quickly identify those responsible,” Paul concluded.



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