

# CASE STUDY

## Complete IP CCTV solution for Strasbourg European Capital



### Project Overview

COE has completed the supply to SPIE, France, of a sophisticated city-wide CCTV surveillance system based on mixed analogue and digital video technology. The system was supplied in several stages and incorporates wired and wireless transmission to meet the stringent design goals defined by the End user. This unique CCTV system design covers several sites including Strasbourg City Centre; several municipalities around Strasbourg, La Meinau Stadium (Strasbourg's 27,500 seater football stadium), the Zénith (which holds up to 10,000 spectators and hosts a variety of shows and large-scale sports meetings) and Strasbourg Hospital.

COE supplied its X-Net G3 MPEG4 video codec and free Software Development Kit (SDK) for integration with several software applications: Two Command and Control software suites provided by SPIE and Hymatom, a digital NVR system provided by CASD, and a Video Analysis system. Two main Control Centres manage the city's street cameras while several smaller satellite control centres provide Police access. More than 290 cameras over wired and wireless infrastructure are transmitted across the Metropolitan Area IP Network (MAN) to the various control locations. 50 analogue monitors are used in conjunction with the various PC based control stations and the whole system has significantly contributed to crime reduction within the urban area.



COE worked closely with the Integrator and has provided design advice and on-site support for this, one of the very first IP-centric CCTV systems in France.

SPIE provides services and expertise in CCTV systems and communication networks to industrial, commercial and institutional customers. The company partners with customers to build their projects, and supports them in their operation and maintenance.

### Technical Overview

COE supplied its X-Net product range including X-Net G3 digital video codec, X-Net OPT1 fibre transmission cards, and X-Net 4U chassis. Each G3 codec is connected to a camera dome through a pair of X-Net OPT1 cards and provides real-time MPEG4 compressed video and telemetry data streams through the Gigabit Network. Video streams are then decoded and displayed on the main Control Room monitor wall and Operators' spot monitors. The X-Net G3 codec also provides transmission of alarms from external motion sensors spread around sensitive areas to the Operation Control Room. The alarms are linked to software driven event triggers for automatic display of video upon the receipt of an alarm. Each operator has a PC running SPIE software with COE three-axis control joystick for Pan/Tilt and Zoom functionality for rapid and responsive control of the cameras. As well as the traditional camera selection facilities, vector-based City-wide maps are available to the operator via the software interface for camera selection and navigation.

## Transmission Network

In order to transmit the video from each street location to a central monitoring Operation Control Centre (OCC), a secure Gigabit Ethernet network was deployed based on a meshed architecture with Rapid Spanning Tree Network Protocol (RSTP). RSTP enables parallel paths for video traffic and ensures that redundant network paths are enabled if the main path fails. The X-Net G3 codec has been specifically designed for operation over wireless networks which is vital when Operators are using PTZ real-time cameras.

### Key project application needs met by COE X-Net suite include:

- The combination of digital technology providing a complex CCTV system with advanced functionalities based on our SDK. This allowed four separate software systems to access the video streams independently
- Industrial grade product for continuous operation 24/7/365
- The support of LAN, WAN and wireless infrastructures enabling a 'best fit' solution

### Other COE city references sites using X-Net IP products include:

Over 30 major UK city centre schemes including Leeds, Bradford, London boroughs, Nottingham; TFL-Transport For London (UK); Rouen City Centre (France)

X-Net Chassis



X-Net G3 Codec Card/Box



X-Net OPT1 Card/Box



For further information, visit [www.coe.co.uk](http://www.coe.co.uk) or contact:

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