

Centro protects public transport with Synectics

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Redvers Hocken
Centro Security Consultant
Redvers Hocken Associates



Synectics, a leading supplier of integrated high-level surveillance and security systems for specialized vertical markets, provides an upgraded surveillance solution for Centro, the West Midlands Integrated Transport Authority.

The Challenge

Centro promotes and develops public transport across the West Midlands region, with a primary goal of transforming public transport, to provide a world-class system. Centro's aims ensure everyone in the West Midlands can benefit from an effective transportation network that not only meets the economic, social and

environmental needs of the region, but also provides it in a safe and secure environment. To help achieve this, Centro operates one of the largest public transport infrastructure CCTV systems in the country, at the heart of which is the latest Synectics control and recording technology. Also responsible for promoting public transport, Centro is a highly customer-focused organization, one that is fully committed to achieving high standards in the services it provides, and giving value for money to its customers.

Redvers Hocken Associates have worked with Centro for a number of years, and have recently won a tender for a further 4-year contract to act as

Centro's security advisors, designers and project managers.

Centro has invested in a number of initiatives designed to improve and enhance the regional transport structure, one of which - an original CCTV camera network, was first installed in the late 90's.

Efficient Upgrade

Consisting of 604 cameras covering existing rail station and Park-and-Ride car parks, the camera network is linked via BT fiber to the Centro control room. Here it was originally controlled via an analogue switching and control system and archived via videotape recording technology.

Although appropriate at the time of its installation, the rapid pace of product development in the CCTV industry meant that by 2009 the system had been overtaken by the latest digital control and recording products. Keen to employ the latest technology in their expanding camera network, replacement of the control and recording technology was put out to tender.

The Solution

In competition with many other major security manufacturers, the supply of Centro's control and recording equipment was awarded to Synectics, who's SynergyPro Command and Control system and enterprise-class image archiving technology met and surpassed all requirements for the Centro system.

Centro's long-term security consultant, Redvers Hocken of Redvers Hocken Associates explains: "When specifying the new system, we were keen to streamline the operator workload as much as possible, to provide the most economical use of each operators' time in their daily working activities in the control room. In addition to providing intuitive routes to all camera and playback operation, we were particularly interested in streamlining the paper-based reporting system currently employed, into an automated/electronic version. We found that the manual reporting system that was currently in place was not as efficient as the latest electronic systems, this meant operators were becoming tied down with paperwork.

Now employing Synectics SynergyPro Command and Control software, Centro's management can access accurate and comprehensive reports swiftly, at the click of a mouse. From operator handover



notes to comprehensive incident logs, SynergyPro reports ensure Centro can build a comprehensive picture of what incidents occur, where, at what time, how they develop, and how they were dealt with. This guarantees patterns of incidents are spotted quickly, ensuring operators are aware of any potential 'hot-spots' of similar incidents occurring within the Centro network.

As well as operational reporting, system fault reports can also be generated. When a fault is noted, the system produces a unique reference number. This, along with details of the fault is then automatically sent directly to Centro's maintenance contractor for rectification. "In addition to fast fault-finding and rectification, the system provides a fully audited fault and maintenance trail," continues Redvers. "Not only can we accurately chart component lifespan and failure rates, the unique reference number generated and tracked by the system assists with the accounting of servicing costs—assuring every charge from each maintenance

job can be directly linked to each site and product.

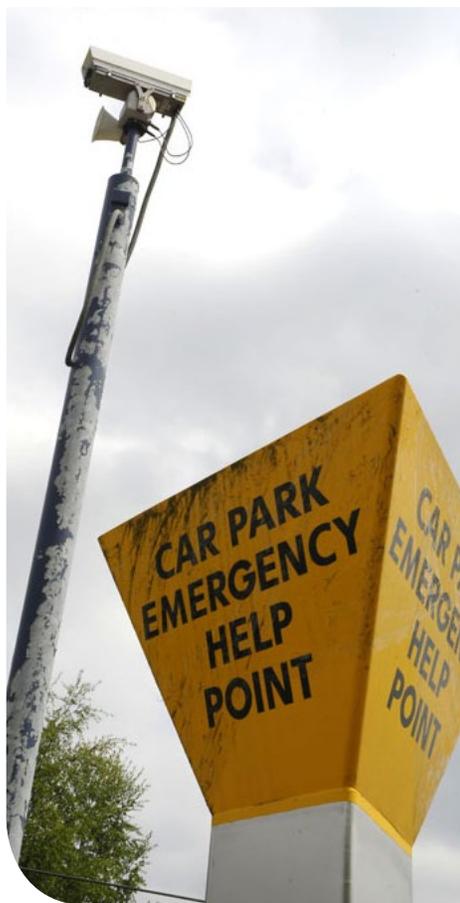
Networked Surveillance

With the superior control capability of the Synectics-based system, Centro camera numbers have now been extended. The mix of PTZ and static units cover all Park-and-Ride facilities, station car parks (43 in total), bus stations, key bus stops, and bus/train station passenger facilities such as cycle storage, cycle routes and designated 'Safer Walking Routes', to-and-from each site. With such a large geographical area of remote sites connected to one control room, ranging from large city-center railway stations such as Birmingham's Moor Street and the recently redeveloped Snow Hill, to outlying Park and Ride car parks, Centro operators require a wide skill set to identify and track a large variety of incidents. Incidents can occasionally include robbery and assaults, but statistics have been mainly dominated by car crime and anti-social behaviour— both of which

have been significantly reduced since the wider network of cameras were installed. “This really helps to boost customer reassurance, instilling a feeling of security whilst using the transport network,” adds Redvers. “This is a vital aspect in a customer’s decision to consider the use of public transport, and this is why we have worked hard to provide not only secure stations and stops, but secure car parking, cycle storage and the instigation of the ‘Safer Walking Routes’ scheme. If we can ensure that customers feel safe when accessing public transport through the Centro network of facilities, then we are more likely to attract and retain them, to the benefit of the whole public transport infrastructure across the West Midlands area.”

Integration Provides the Key

To this end, complementing the CCTV



camera system is a comprehensive network of customer Emergency Help-Points, distributed across Centro’s 43 park and ride car parks and major transport interchanges. Originally a separate system, Synectics’ industry acknowledged third-party integration capability afforded the Help-points to be included into the Synectics SynergyPro Command and Control interface in the Centro control room. “This assures that each operator can answer, assess, and react to emergency calls without leaving the SynergyPro environment permitting the most economical use of operator time, and that each call is dealt with in the fastest period possible,” adds Redvers. “The ability to flexibly customize the SynergyPro platform to each individual customer and organization’s needs was a key element for the Centro control room. Our mix of cameras, both analog and IP from a number of different manufacturers are easily included, allowing Centro to add any camera, from any manufacturer—based purely on its technical merits for the particular application.

Additionally, and specially produced for this site, the Help-Points interface not only affords operators one common route to all system functionality, but means any potential expansion of the Help-Points network can be easily included into the network.” When a Help-Point is activated, SynergyPro automatically locates the nearest camera to the incoming call and instantly positions it to provide a corresponding view of the area and caller. This means operators can answer the call whilst being instantly and automatically presented with a visual overview of the situation—assuring a rapid and effective response, whatever the problem. Redvers continues: “Calls can range from the reporting of anti-social behaviour, to (in extreme cases) a customer feeling threatened by a potential situation. As

you can imagine, each needs to be dealt with in a very different way, and the presentation of crystal-clear imagery to automatically accompany the call is invaluable in providing a calculated and considered response.”

Audiovisual Deterrent

Also integrated into the SynergyPro interface at Centro is a ‘talking camera’ facility, which enables operators to audibly address persons involved in incidents. When an incident is spotted, operators can address the persons involved through the system via specially equipped cameras that carry public address horn speakers attached directly to the camera head. When another camera is selected via SynergyPro, the PA audio link is automatically released, further streamlining the operator process and allowing them to concentrate on management of the incident. “Giving advisory and warning messages that persons actions are being recorded means potential incidents can be averted before they develop,” explains Redvers. “For example, if we see a suspicious character checking for vulnerable cars in one of the car parks, we can advise them that they are being watched and recorded on CCTV. Once this happens, they very quickly leave the site.”

Effective deployment of resources In addition to the five SynergyPro workstations, the Centro control room also features a review suite where a dedicated SynergyPro review station allows both West Midlands Police and British Transport Police to view and download any incident footage to portable media for offsite investigation or presentation for prosecution. Assisting Centro control room operators on a daily basis, a British Transport Police officer is permanently stationed in the Centro control room affording a direct link to the

force's resources. This means a virtual police presence as soon as an incident or potential incident is detected on the network, affording instant and accurate evaluation of events and a swift and appropriate deployment of resources.

Additionally, live and recorded images can be selected for viewing via any Synectics SynergyPro workstation, for display in the British Transport Police National Control Room in Birmingham, affording further real-time assessment of any developing incident.

Novel Data Storage

Archiving the information from all 604 cameras in the Centro network requires a large amount of data storage space—which is all located in a purpose built, environmentally controlled equipment room, adjacent to the Centro Control Room. Equipped with Raid 6 storage arrays, Synectics Primary Storage Nodes ensure mission critical recording is maintained, even in the unlikely event of a system component failure.

Ensuring the quality and security of archived footage for evidential prosecution, Centro employed Synectics' MDRS storage solution including Time-Lapse Later technology. At Centro, footage from every camera in the network is recorded in full D1 resolution at 25FPS for 12 days, at which point it is then reduced to 1FPS for the remaining 19

days of the 31-day retention period. This system ensures that Centro retain the most detailed archive footage within the first 12 days of capture – i.e. when it will be most likely to be required for any retrospective incident investigation.

It also provides a usable record of activity up to the 31-day retention period, using the most economical amount of storage. Redvers adds: "The nature of Centro surveillance and the typical type of incidents experienced of anti social behaviour or vandalism to infrastructure means both West Midlands Police and British Transport Police usually request images within 24 hours, so the 12 days at full frame rate and resolution allows authorities plenty of time with which to secure valuable real-time footage. Of course, as soon as an incident is noted by one of the experienced operator team, the incident is automatically placed into the Evidence Locker function via the SynergyPro interface, where it is retained at the full frame-rate and resolution."

"Since the installation of the wider Synectics-based camera system, reported incidents have been reduced dramatically across the board," explains Redvers. "Especially in the Centro car parks where incidents have been reduced by an amazing 70%—illustrating the power and value of the investment Centro has made in the technology." Centro's Project Manager Colin Smith added: "The new SynergyPro system

has led to more effective and efficient use of the CCTV system and also makes report generation extremely easy. With spare capacity built-in to the already extensive system, we will shortly be adding even more cameras to our network, covering locations such as the recently refurbished Snow Hill railway station in central Birmingham. This will help ensure that passengers throughout the West Midlands continue to enjoy the best in electronic surveillance protection."

PROJECT DETAILS

Client

Centro, the West Midlands Integrated Transport Authority

Location

Birmingham, UK

Consultant

Redvers Hocken Associates

For further information on the products, services and systems offered by Synectic Systems, visit synecticsglobal.com.

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