



# CNL Software Case Study

City of Manchester - Safe City

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## Greater Manchester Police

Greater Manchester Police (GMP) is one of the largest forces in the UK and covers the cities of Manchester and Salford, including 10 metropolitan borough council areas. It has a resident population of almost 2.6 million, and an estimated 8 million people visit Greater Manchester's sporting, entertainment, business and educational facilities each year.



## The Challenges

As with any large city, GMP needed to deliver visual intelligence to secure both high profile events and to meet day to day operational requirements. The UK has more CCTV cameras per person than any other country in the world, so rather than installing hundreds of additional cameras, GMP decided to integrate feeds from cameras already in position at a range of public facilities as well as their own cameras including: -

- Manchester International Airport (all terminals and transport interchange)
- Manchester City Council
- Trafford Council
- Manchester City Soccer Stadium
- Manchester Central Convention Centre
- Radisson Edwardian Hotel
- Force fixed and rotary wing aircraft
- Mobile CCTV Van
- Body Warn Cameras and Mobile Evidence Gatherers
- Rapid Deployable Secure COFDM

This created a new challenge; how to connect video from all of these disparate proprietary systems and present it in a unified format, which only required operator interaction through one Command and Control platform.

GMP required a method of distributing intelligence to guide local officers at the location where an incident was reported. These officers needed to not only view the cameras, but to have PTZ control over them when necessary.

The CCTV had to be managed and displayed to police staff in a Silver categorized Command and Control Module, strategically located some distance from the city center, which would reduce risk and allow for continuity in case of a major incident. Importantly, this Command and Control center needed to deliver relevant video for a range of agencies and different levels of command including;

- |                     |                            |
|---------------------|----------------------------|
| • Gold Commander    | • Triage                   |
| • Silver Commander  | • CCTV Gatekeeper          |
| • UK Armed Services | • Roads Policing           |
| • Protected Persons | • Public Order             |
| • Firearms          | • Communications Operators |

## Facts and Figures

- 8,034 officers
- 3,534 Police Staff
- 4,93 SQ Miles
- Budget \$800 Million
- 333,776 Victims of Crime (2006-2007)
- 2nd Highest Incidence of Reported Crime in the UK

## Situational Awareness

The Silver Commander team is responsible for planning and managing all aspects of an event. For them to do this, they required situational intelligence to guide officers to an incident, and importantly to ensure their safety, by sending in backup based on visual verification rather than merely relying on audio communication.

The Gold Commander team is a strategic planner who is based in the Command Module and is responsible for overseeing the management of events and operations. The Team was required to make key decisions in the event of an incident, and therefore had to have absolute awareness of what was happening on the ground.

Finally, the range of other agencies needed visual intelligence each with their own specific requirements, all of which had to be accessed instantly, with the ability to multiple viewers to access the information on a large scale display.

## The Solution

IPSecurityCenter™ is technically superior to anything GMP has ever deployed, with 40 dedicated operator workstations, a record 1,511 CCTV feeds and 16 BARCO display walls powering NEC LCD displays and BARCO displays; all managed through one intuitive interface. Over a 100 users have immediate access permission controlled visual intelligence for major event and incident management through desktop and web client interfaces.

In order to be utilized to protect the UK government and Prime Minister, the software was tested and validated by the UK Home Office through their Scientific Development Bureau, as well as other responsible agencies for the Labour Party conferences in 2006 and 2008.

Since the system has been deployed, additional departments and agencies have benefited from the systems including covert surveillance operations, counter terrorism division and the Serious and Organised Crime Agency (SOCA).

## Future Developments

As with any enterprise level system, there is a always a need to increase the system, both in terms of users and in terms of new functionality. IPSecurityCenter™ answers both of these, as it is has an easy migration to incorporate new technologies and additional infrastructure.

Use of the system is expanding with GMP's vision to provide access to all 8,000 officers; they recently added the IPSecurityCenter Web Client, which gives control of cameras requiring users to install no additional software, other than a web browser.

GMP are currently connected to 1,511 cameras, with another 1,096 scheduled to be added from additional sources in the Greater Manchester area. Once this is completed, plans are in place to add a further 632, bringing the total to 3,239 cameras.

Opportunities to increase the effectiveness of the system include, integration with GMP's GIS, APL and AVL systems. This will allow IPSecurityCenter to provide access to CCTV from the nearest camera to a specific incident, officer or vehicle, increasing situational awareness and reducing the time needed to respond to incidents.

### Integrated Technologies

- 1,511 Analog & Digital CCTV cameras
- Heli-tele & Fixed Wing cameras
- Bosch recording and encoder/decoders
- Genetec Omnicast NVRs
- Analog monitors and joysticks
- BARCO video walls
- Public space cameras



## Operational Benefits

Task	Benefit	Outcome
Use Network For Video Source collection from public space CCTV	Best Utilization of Network Asset	Visual Information Available To Appropriate Parties
Enable Additional CCTV Sources, Train Stations, Highways Agency etc.	View live and recorded video from CCTV Cameras, Anywhere, Anytime	Greater Decision Making Capabilities
Expand Video Distribution Footprint	Full Visibility Of Events To All Required Police Sources	On-going Appropriate Response To Incidents
Prioritize Distribution To Gold & Silver Command Teams	Full Control Of Visual Information Resources	Collaboration On Major Incidents and Events

## Technical Benefits

- Integration capability allows IPSecurityCenter to reach all new technologies and legacy systems required to increase availability of visual intelligence
- IPSecurityCenter has been scaled to receive and process ~6.9 million triggers and process ~2 million alarms with associated camera and operator interaction per 24 hrs.
- Exceptional connectivity tools allow camera images to be accessed and provide first PTZ control in <41 milliseconds and <1millisecond after the PTZ lease has been obtained
- Integration with response / communication systems for immediate situational awareness and to direct resources to combat threats and assure an appropriate response
- Rapidly deployable role based interfaces, defined by user type or workstation, provide their operators, key task commanders with clear access to the appropriate resources to manage events and incidents and optimizes performance
- The compliance workflow engine provides process Integration, integrating the human and machine processes used to execute standard operating procedures, SOP's and any major incident and event management policies
- Management Information and reporting engine providing timely and effective reports and statistics on system and device availability and operational effectiveness

## About CNL Software

CNL Software is a world leader and global provider of Physical Security Information Management (PSIM) software, designed for complete Integrated Situation Management. Our award winning PSIM technology is deployed to secure major cities, critical infrastructure and global commerce. CNL's software sits at the heart of some of the largest, most complex and ground-breaking security integration projects in the world. Our work with leading organizations is helping to shape the future of security by offering thought leadership on key issues such as asset protection, energy reduction, process compliance and business advantage in converged physical environments.

## About IPSecurityCenter™

IPSecurityCenter is the ultimate PSIM software based integration and management platform. It connects and manages disparate building and security technologies such as video surveillance, life critical systems, radar, analytics, HVAC, PIDS, GPS tracking and GIS mapping. Through aggregating intelligence from these systems, it allows organizations to react faster and more precisely to incidents. IPSecurityCenter provides operators with real-time Situational Awareness through a Common Operating Picture (COP) and following an alert, alarm or event presents step by step process guidance, ensuring complete compliance to security policies.



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