



"I believe this approach will ease the transition from construction phase to the on-going support contract which comes into play on project completion."

*Jon Jones
Project Manager*

PROJECT AT A GLANCE

Project Type:

Integrated Building Controls with Access Control, Fire Detection, IP CCTV, Intruder Detection, and Alpha Com Intercom System

Location:

Bristol, UK

Building:

Mixed-use including retail, leisure, office, public space, and state-of-the-art car park for 2,600 vehicles

City Project:

City centre regeneration with new buildings to reflect the city's character and heritage

Design & Build:

Bristol Alliance

Equipment Installed:

Andover Continuum

Objectives:

- Improve building performance costs
- Improve building efficiency
- Reduce overall operating costs

Cabot Circus

Cabot Circus is Bristol's largest and most important regeneration project since post-World War II reconstruction. Cabot Circus will provide around 1 million sq. ft. of retail and leisure space, as well as apartments, offices, and public spaces. Key features include a 13-screen 'Cinema de Lux' and a new landmark department store, alongside 15 major stores and 120 subsidiary retail outlets. In addition, 200 new homes will be integrated into the development.

THE CHALLENGE

Cabot Circus needed a building system that incorporates and integrates plant monitoring and control, access controls, fire detection, IP CCTV, intruder detection, and Alphacom's intercom system. Close co-operation of the systems was a key requirement, and it was critical that the third party companies established strong working partnerships from the onset. The high level of commitment from contractors and specialist providers resulted in a strong and united team onsite.

The onsite testing schedule presented additional challenges. With so many integrated elements, as well as complex wiring and installation programs that needed to be coordinated, integration testing onsite was unavoidably delayed. However, these delays were finally overcome and full testing was possible within the proposed timetable for the project.

Cabot Circus's location incorporates Bristol's historical buildings that date back to the 16th century. In one particular building, Quakers Friary, the BMS wiring and sensors had to be installed without damaging or changing the building's external appearance or internal structure.

THE SOLUTION

Cabot Circus is of the UK's newest and most technically advanced shopping centers, it has gone live with a BMS based on a converged IT and communications infrastructure. The solution is a centralized IP-based network design that provides core network services such as telephony, LAN and wireless, together with a wide range of IP-enabled building management systems, including CCTV, access control, pedestrian counting, energy metering, and lighting.

CUSTOMER BENEFITS

- Flexibility of controls across the different usage areas
- Multiple systems controlled via one system
- Excellent building performance
- Optimum energy efficiency
- Reduction in operating costs in comparison to similar sites

Cabot Circus



The installed Andover Continuum BMS has over 1200 hard points, controlled by 170 IP controllers/routers and covers heating, ventilation and air conditioning, lighting control, escalator and lift monitoring, and utility metering, as well as access control. It controls approximately 50 doors with entry readers; basement/yard entry/exit barriers with beam and safety loop and IP intercom via an integrated alpha-com system, and a residents' car park automatic gated entry system.

The system is accessed over the development's own high level IP network on which are located the access controllers and workstations, run/standby server and WEB client access workstations, alongside a direct link with the CCTV system and a Protec fire detection system. Other elements of the total package include intruder detection for over 30 doors, and a passive infrared reader (PIR) intruder detection system, which monitors the roof, internal doors, external doors, and the security suite.

With a system this complex, handover to the customer can bring its own problems, and in the worst case scenario it may be several months before a system is being fully optimized if the handover is not successful. As part of the senior team on the contract, TAC personnel worked closely with the Cabot Circus Facilities Manager and his staff prior to handover.

THE BOTTOM LINE

TAC's solution turned Bristol's city center into an "intelligent building" that engages and interacts with its occupants, resulting in improved indoor environment and functionality for occupants and tenants. The solution also controls costs and improves end-user security, comfort, accessibility, and productivity. The outcome was an efficient and effective fully integrated building and energy control system combined with critical safety and security systems.

The flexibility of control across the different usage areas results in excellent building performance. The multiple systems are controlled via one head end allowing for optimum energy efficiency and resulting in reduced operating costs without compromising functionality. Whilst unseen by the vast majority of both workers and visitors to the center, the success and reliability of such systems are paramount in ensuring a comfortable and secure environment for all users.

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