

CASE STUDY HIGH TECH COMMERCIAL



Installation **World Trade Center, Seattle, Washington**

Circon Integrator: **Holiday-Parks, Inc, Seattle, Washington**

Building Type: **Office facility - international trade**

Physical Description: **WTC North (proposed) 140,000 sq. ft. 5 stories over a 4 story parking garage, WTC East 190,500 sq. ft. 7 stories over a 4 story parking garage, WTC West 67,000 sq. ft. 4 stories over a single level parking garage**

Duration of Project: **1998 - 1999**

THE CLIENT

The World Trade Centre of Seattle is an office facility currently comprised of two buildings. The facility occupants include a mix of national and international trade organizations as well as, in the East building, Visio Corporation, an information technology leader in the Pacific Northwest area. A third building, which will also be occupied by Visio, is in the proposal stage.

THE CHALLENGE

- *Develop state of the art suite of HVAC, card access and lighting systems which are completely integrated, interoperable and intelligent to service a world class international trade facility*
- *Ensure complete integration of all systems, in both present and future installations, for each building*
- *The systems must be expandable to allow not only for additions within the buildings, but for the inclusion of a whole new building that can be controlled by the same system manager as the east building*

The World Trade Center in Seattle, as a part of a global network of facilities devoted to international trade, offered Circon the opportunity to put the very best technology forward. With tenants the like of XY Point, the National Center for APEC, and Visio, the building's high profile came complete with high technological expectations. All of the systems - the HVAC, security, and lighting had to be completely integrated and controllable from a single station or remote source for each building, and all had to represent the very best in their efficiency and adaptability. To meet and surpass those lofty targets, Circon would be pressed to develop and adapt their existing inventory of controllers and to work intimately with the project's system integrator, Holiday-Parks Inc. of Seattle, and their own strategic partners, GE, Motorola and Raytheon, to develop an effective and efficient leading edge solution.

THE SOLUTION

- *Circon's IBAS hardware and software*
- *Best of breed mechanical system selection, including Echelon® routers and Raytheon's "Control By Light" fiber optic based LonWorks® router*
- *Laptop interface systems affect portable management utilizing Circon Visual Integrator™ software and allows building engineers to institute tenant changes as requested*
- *Highly efficient and cost effective system monitoring*
- *Unlimited capability for future control function expansion*

The Circon Building Automation System was chosen because it offered a flexible, non-proprietary answer to the customer's immediate and long term objectives. Circon's open architecture provides the foundation for future control capabilities such as lighting, security and card access. Circon's programmable controllers and network management software facilitate the integration of all control functions for true peer to peer communications.

The state of the art system is effectively monitored from within the building itself, optimizing both the time and the cost of management, monitoring and troubleshooting. At the same time, the facility is assured the highest levels of efficiency, reducing energy consumption and maintaining comfortable temperature levels year round.

Circon is involved in the planning the BAS (building automation system) for the proposed new building, which will include a fiber optic link to allow its entire systems to effectively become a part of the East building's existing BAS network.

THE DETAILS

HVAC CONTROLS

- *Extremely efficient energy consumption guaranteed by intelligent monitoring and controls*
- *Unsurpassed levels of tenant comfort*
- *Air quality monitored and controlled to highest standards*

Circon programmable and terminal unit controllers effectively operate all HVAC systems including carbon monoxide monitoring and subsequent exhaust fan control with Circon BASIC language installed to program the sequence of operations to allow greatest efficiency and load handling capability.

MECHANICAL SYSTEM

- *Echelon routers effectively handle and stabilize overall system connectivity*
- *51 unique lighting zones utilizing GE RR7 lighting relays and Circon VAV controllers*

Holiday-Parks Inc. worked to develop a system which incorporated the best available system hardware to effectively meet the clients' current and future needs. In a security sensitive environment, emphasis was placed on the ability to completely control and secure individual areas within the buildings and each tenant's space. The systems were tied in with both the elevator system and the fire alarm.

SYSTEM MANAGEMENT

- *Total, real time monitoring and management via laptop PC*
- *Expanded selective access to system provided through both wall mounted overrides and Circon's TouchBASe telephone interface software*
- *Custom designed user friendly GUI (graphical user interface) with point and click maneuverability*
- *Site management controller intelligently handles all alarms*
- *Diagnostics, troubleshooting and repairs occur before building occupants are aware of a temperature change*
- *LonWorks based technology allows unlimited expansion options*

Circon's Visual Integrator™ software allows the building engineers total monitoring control, with the ability to view real time information on building conditions and mechanical system status. Circon's programmable controllers allow building engineers to monitor and control the air temperature and quality, security access and lighting in each of 51 separate lighting zones and 47 individual access doors through the East Tower office space. Overall management can be affected through a single laptop computer, and control of individual areas can be accessed by both wall mounted overrides and through the telephone, using Circon's TouchBASe telephone override software. Carbon monoxide sensors, installed throughout the parking garages of both buildings, activate exhaust fans as necessary and the BAS system works in complete conjunction with both the fire alarm system and the elevator cab controls.

When the third building comes on line, complete integration via fiber optic routing will be affected without the need for reconfiguration or substantial expense.

For more information about this case study, please call us at 1-800-338-1866.

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