

LONWORKS® System is Number One Guest at The Fairmont Hotel Vancouver

Can businesses profit from a "green" mindset? The Fairmont Hotel Vancouver has—resulting in impressive energy savings, improved guest comfort and satisfaction, and a positive environmental impact using Echelon's LONWORKS technology.



The 556-room Fairmont Hotel Vancouver, in Vancouver, British Columbia is one of Canada's premier check-ins, with a history dating back to 1887. Though a jewel on the surface, the mechanical infrastructure of the current 20-story hotel, which was built between 1928 and 1939, was long overdue for an upgrade.

As an organization that both encourages and practices environmental responsibility, the excessive energy costs ran counter to corporate philosophy. Fairmont Hotels & Resorts' Green Partnership pro-

gram is widely recognized as the most comprehensive in the North American hotel industry.

In 1998, after careful consideration, the hotel selected Enbridge Integrated Building Technologies, Inc. (Enbridge IBT), Canada's top building system integrator, to implement a comprehensive energy retrofit program including the retrofit of the building's outdated control system. Enbridge IBT offered a complete solution based on Echelon's LONWORKS open-systems protocol. "We chose LONWORKS technology because of its ability to create low-cost networks that enlist intelligent devices to function independently. When linked together, these devices communicate with each other to provide distributed monitoring and control. The end result is a building that functions more efficiently and provides greater comfort than facilities lacking these intelligent systems," said Craig Stanford, Vice President Business Development at Enbridge IBT. Enbridge IBT is a member of Echelon's Open Systems Alliance and was the first Echelon Authorized Network System Integrator in Canada.

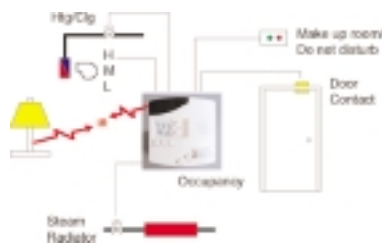


Comfort Control

The new LONWORKS based integrated Building Automation System (iBAS) installed by Enbridge IBT controls all major mechanical equipment, including 54 air handling units, the central heating and cooling systems, and the heat recovery system. Over 100 LONWORKS components help manage the system, including an Echelon router (RTR 202), six LONWORKS

Power Meters (four LON7300 and two Circon PM201), 18 variable speed drives (Circon VSD 200), 13 VAV controllers (Circon UHC 202), and 62 programmable unitary HVAC controllers (46 Circon UHC 200, 12 Circon UHC201P and 4 UHC 203P). In all, the control system was expanded from 400 to over 700 points.

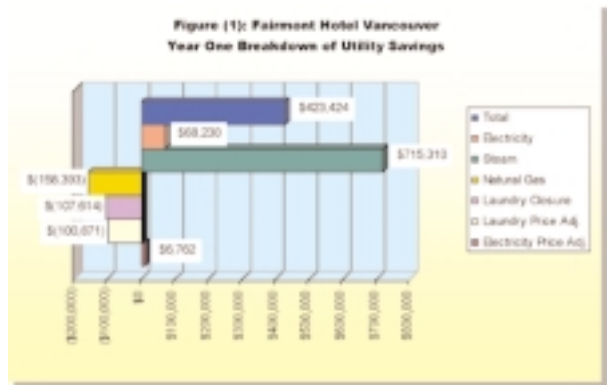
The hotel features a centrally controlled guestroom energy management system that includes amenities such as a welcome light that turns on automatically as the guest enters the room. Doors left ajar will set off an alarm for security. The combination of the occupancy sensor and door switch determine if the room is occupied or not and adjust the room temperature accordingly. The system is networked, and this information is fed into the iBAS, the backbone of the energy management system, to control the fan systems.



The two-pipe fan coils in each guestroom supply cooling in the summer and heating in the winter. The action on the valve must, therefore, be reversed to provide proper temperature control. Operation is dictated by water temperature, which is supplied by the integration of the iBAS and energy management system.

Sleeping Easier

Completed at the end of January 2001, the project has achieved remarkable results. Energy savings in the first year totaled \$423,424, exceeding the target of \$351,010 by 20.6 percent. The hotel estimates the CO2 reduction realized is equivalent to planting 893 acres of trees or removing 356 cars off the road, demonstrating their commitment to Canada's climate change program.



In addition, the easy-to-use LonWorks management system has enabled hotel staff to take on many of the duties normally outsourced to external contractors. "That enables us to troubleshoot problems ourselves and respond much faster," says Jack Harding, Regional Director of Engineering for Fairmont Hotels. "With the information we now have available through the building automation system, we know what the problem is before the guest does." Thanks to Echelon, guests are sleeping a little easier with improved temperature and ventilation control, lighting, and security.