



Echelon's Everyday Environment Exemplifies Energy Efficiency

The "smart" office building of the future is here. Echelon Corporation's new headquarters in San Jose, California is a showcase for the company's LONWORKS® platform of open, interoperable device networks.

The new facility integrates all the key building sub-systems—security, lighting, elevator, and HVAC systems—using LONMARK® certified devices from multiple manufacturers into a single smart building system.

Combining the Internet, LONWORKS technology and LONMARK certified products, Echelon is preparing to enjoy years of savings and efficiency—particularly with lighting and energy use. But the advantages are not just for Echelon—any company using Echelon technology can enjoy the same advantages.

The foundation of Echelon's technology lies in 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.

Consider a few examples from Echelon's headquarters:

For the facility manager, Echelon's new office provides the unprecedented ability to monitor and control lighting, security, HVAC, elevators,

and many other functions in the building. The operator can be at the building site or at a remote location and access the devices via the Internet using a PC. This remote control is enabled by Echelon's i.LON™ 1000 Internet Server, which uses an Internet Protocol (IP) backbone to route the building's sub-systems data to the remote operator.

"The benefits of this system are obvious," says Mark Kendall, president of KENMARK Real Estate Group, the facility management company that is operating Echelon's new headquarters. "If at 3 a.m. one of the roof top units goes down, not only are we notified, but we can get data on the operation of the system and react right away," he says. "Add several buildings with similar open systems and KENMARK can monitor a portfolio of properties 24/7 with even greater efficiency."

This LONWORKS network-enabled system contrasts with the way facility monitoring is done today, which requires a separate software package for each building system. That traditional method means several PCs might be needed, resulting in greater complexity and less efficiency for the building manager. The advantage of LONWORKS device networks stems from its ability to link products from different manufacturers together into one unified network.

To demonstrate how interoperable the technology is, Echelon is using VAV controllers from two different makers,





Invensys and TAC, in its new headquarters. All of the products in the building were installed using Echelon's LonMaker™ Integration Tool tailored to Echelon's LNS™ plug-in standard and are LONMARK certified.



Builders also benefit from the LonWORKS system because less wiring is needed to control all the various systems, saving on cost of construction or rewiring. "All the sub-systems run off the same set of wires," said Earl Gray, chief technical officer for Control Contractors, the company integrating Echelon's technology in the new building, and a member of Echelon's Open Systems Alliance. "I don't have six or seven networks to deal with. This has one set of arteries that connect to everyone's different organs."

In addition to a full web-enabled interface for facilities managers to monitor the building's control systems, Echelon's new office provides several benefits to its inhabitants, the employees of Echelon. By creating a unique *i.LON* 1000-served web interface for each office, Echelon has made it simple for employees to set up their individual workspace preferences. "It's important that people are comfortable in their offices. That's why we put the control in their hands," says Rob Guzikowski, Senior Network Integration Specialist at Echelon. "All they have to do is call up the building's interface to select individual lighting levels and temperature settings." An advanced occupancy sensing strategy coordinates lighting and temperature to desired levels when the office is in use. Energy usage is minimized when the



space is unoccupied. Also, telecommuters can specify when they are at work so that the building doesn't heat, cool or light rooms that are vacant. This eliminates waste, conserves energy, and cuts costs.

Echelon has implemented a system that will save money every day through lower operating costs and lower maintenance costs.

To find out more about Echelon's new building and the LonWORKS platform, go to www.echelon.com, or call 1-888-ECHELON.

Key Benefits

- Integrates all key building sub-systems into one simplified network
- Facility managers have remote access to control system 24-hours a day
- All sub-systems run off the same wiring—less wiring, less cost
- End-users set their individual comfort levels through web-enabled interface
- Conserves energy by providing end-users with voluntary curtailment program



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