



Installation **Scripps Research Institute, La Jolla, California**

Circon Integrator: **Dynaletric Information Technologies, San Diego, CA**

Building Type: **Medical research laboratory**

Physical Description: **25 buildings**

Duration of Project: **1998 ongoing**

## THE CLIENT

The Scripps Research Institute (TSRI), is a leading medical research center located in La Jolla, California. The campus includes a hospital, several multiple story laboratory facilities, office complexes and other miscellaneous support buildings. In total there are approximately 25 buildings and one million sq. ft. of usable floor space. The Institute is primarily involved in medical research, much of which involves valuable and fragile tissue samples.

## THE CHALLENGE

- *Accurate and reliable refrigeration monitoring system*
- *Immediate notification of any and all temperature fluctuations*
- *Phasing out of the existing monitoring systems*
- *Ability to add other building and subsystems in the future*
- *Low cost of expansion and maintenance*

With over 1,200 refrigeration units throughout the campus, TSRI needed to be completely confident that the monitoring and control system would operate effectively at all times. In addition, their expansion plans included both structural and technological growth, and they wanted a system that could easily accommodate any future changes.

The proprietary nature of the existing system does not allow for best of breed, interoperable solutions. TSRI desired a system that would standardize their facility and could be phased in over a period of time. They also wanted an open system that was not only capable of expanding, but would allow different applications to be added.

## THE SOLUTION

- *Single Circon System monitoring all points within five buildings at all times*
- *Information from individual points is sent directly to main security console station located across campus*
- *Custom graphic interface monitors all 1,200 alarm points*
- *Circon System notifies security of any problems or malfunctions*
- *Open protocol system provides simplicity and ease of future expansion*
- *Ease of installation and use keeps maintenance costs down*

The Circon Building Automation System proved the perfect solution to Scripps's initial temperature monitoring issues by providing reliable, failsafe control. As a flexible, non-proprietary answer to the customer's immediate objectives, the LonWorks® based open architecture provides the foundation for future control capabilities such as lighting, security and card access. The Circon controllers have proved to be so simple to install that the building engineers are able to perform their own maintenance and upgrades – saving both time and money.

*“We have just finished the fifth phase of this project which added security functions as well as refrigeration monitoring to a new three-storey laboratory building. Circon's system provided an excellent solution while maintaining a competitive edge against other bidders on the project. It has far exceeded the customer's expectation in reliability, expandability and maintenance.”*

**Bob Riel**, Division Manager, Dynaletric Information Technologies

## THE DETAILS

### REFRIGERATION MONITORING

- *Multiple phase job to replace existing systems*
- *Campus network used for communication between buildings*
- *Monitoring of 1,200 new and existing points within the campus*
- *Graphical user interface has an integrated database providing critical information about each alarm point*

Each of the refrigeration units is constantly monitored by the system. Any temperature fluctuations outside the specifically defined points trigger immediate notification to both the main and backup security consoles. Point and click maneuverability allows the security attendant to access a database of emergency contact information. These alarms will automatically be logged with the date and time of occurrence for record purposes. When the units are restored to normal temperature, the information is also logged providing proof that the tissue samples were not exposed to out of range temperatures.

For additional reliability all wiring and controllers are scanned to ensure that the system is operating properly. Should a controller fail to communicate, or a wire be cut or shorted, the system notifies security of a trouble condition and engineers are dispatched to resolve the problem.

### SYSTEM MANAGEMENT

- *Single system to monitor the whole facility*
- *Immediate notification of alarms*
- *Total, real time monitoring and management via Windows PC format*
- *Custom designed graphic user interface with point and click maneuverability*
- *LonWorks based technology allows unlimited expansion options*
- *Remote access via telephone dial in*

There are currently 76 HVAC controllers and one Intrusion Detection controller monitoring the campus. There are two Circon Site Management Controllers that collect, prioritize and transmits alarms from these controllers to the appropriate personnel, so that proactive maintenance can be performed.

The network backbone between buildings was established using spare pairs from the telephone system for short distances and the campus network for longer distances. At each building a router was installed to maintain efficient network traffic and to ensure the reliability of communication to the Site Management Controllers. Within the larger buildings Circon's Repeaters were used to maintain good signal strength to all controllers.

### SYSTEM COMPONENTS

Circon Programmable HVAC Controllers

Circon Site Management Controllers

Circon Intrusion Detection Controller

Circon Repeaters

Circon System Integrator software

Visual BASIC software

Remote Control Software and Hardware

Echelon® LonTalk Routers

Echelon LON Adapter Cards

Coactive LL Routers

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

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