

QUEENSLAND STATE LAW BUILDING

BRISBANE, AUSTRALIA



For Information Call
Engenuity
SYSTEMS
PHONE: (480) 782-5600 OR (800) 375-3363
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Project Profile

Project	Integrated building management and security systems
Property	25 story office building owned by Suncorp Insurance and Finance
Square Feet	25,000 (approx. 269,000 sq.ft.)
Facilities Staff	3
CSI Equipment	I/NET® with I/DISC™ Access Control, an integrated PC-based system with color graphics (45 DCUs; 250 VAV controllers; 2,750 control points; I/DISC access for 900 people)
Installation	December 1994

“The State Law Building's systems are now more controllable, more efficient and more precise.”

-Peter Lang
Manager, Building Systems
Suncorp Insurance and Finance

“Extensive planning and constant communication with tenants and contractors enabled us to bring this complex project in on schedule.”

-John Outhwaite
Director
John Outhwaite & Associates

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It is not uncommon for a government agency to sign a 13-year lease for office space. However, the likelihood for renewal is almost nil if tenants have become dissatisfied with the accommodations.

Suncorp faced such a possibility as the leases for its State Law Building neared renewal—unless, of course, the property underwent some significant changes.

Built in 1971, the State Law Building sits on a prime piece of real estate in Brisbane's Central Business District. Since 1975, Q-Build (the state government property agency) has leased the office space for several government agencies, including the Office of Consumer Affairs and the Department of Justice and Attorney General.

By the late 1980s, the original building systems had outlived their usefulness. Tenant complaints about the air quality had increased, and Suncorp constantly had to contend with building maintenance issues.

It seemed as though everyone had become frustrated with the building's status quo. Motivated by a strong desire to protect its investment and keep tenants satisfied, Suncorp examined its options.

The building could be razed. However, a change in the zoning laws would force new construction back from existing property boundaries. Translation: a totally new 25-story building would result in less office space. Or, to maintain the same amount of office space, Suncorp would have to construct a new building with 32 floors!

Ultimately, Suncorp decided to refurbish the existing building—inside and out. And that meant gutting the building and replacing the facade, as well as all the antiquated building management, security and air-conditioning systems. But the biggest challenge of all was to accomplish this major facelift while the building remained 70 percent occupied.

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The project began in 1991 with a feasibility study and project design. Suncorp then asked qualified companies to bid on performing various parts of the project.

The original request for bids did not require building automation and security systems to be integrated. However, the fact that CSI Pacific could provide integrated systems with LonWorks technology along with extensive technical expertise and competitive pricing, enabled the company to win the contract.

When the construction phase began in July 1993, the State Law Building literally became a “work in progress” as workers renovated the building two or three floors at a time. They began at the roof and worked downward, shielded by a unique, hydraulically operated, “donut-shaped” scaffolding as they simultaneously refurbished the building’s exterior and interior.

According to John Outhwaite, project manager for the \$45 million renovation, “Sometimes there was only a one floor gap between our workers and a tenant. But everyone was still able to go about their business.”

Converting the building over to the new systems was an ongoing process. And in some instances, complete renovation of an area occurred in as little as six days.

“As soon as we finished working on a floor, we put it on-line to the I/NET® system,” said Leo Dobrovolski, CSI Pacific’s project manager for the State Law Building.

Before/After Data

	1971	1994
Building Management System	JC-80	CSI's I/NET®
PC based	No	Yes
Easy-to-use/maintain	No	Yes
Security System	MIL	I\DISC Access Control
Access	Card	Touch Memory
Integrated w/BAS	No	Yes
Technology DDC	No	Yes
LonWorks	No	Yes
"Fuzzy Logic"	No	Yes

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Today, the I/NET® system with I/DISC Access Control provides the Queensland State Law Building with an unprecedented level of systems integration and control.

The I/NET® system enables facilities staff to monitor and control the building's chiller plant and generators, as well as the lighting and fire alarm systems. For instance, chillers can be programmed to start or stop on schedule—or on demand. The same capabilities apply to turning lights on or off in the building and parking lot. And because the I/NET® system uses a high-level interface to the Lift Monitoring System (LMS), it also has the ability to activate “priority call” and other LMS features.

At the same time, the I/DISC security system monitors access to the building's main entry, parking lot, elevators and floors. What's more, the access control system constantly communicates information to the I/NET® system. And in the event of a security breach, the I/NET® will activate a local alarm and also send alarms to a pager and an off-site, centralized monitoring system.

The LonWorks technology embedded in the I/NET® system controllers makes it possible for these devices to sense, communicate and cooperate invisibly with other devices in the building's “intelligent” network. Also, the application of “fuzzy logic” produces considerably better performance and control of these devices.

For instance, the I/NET® system monitors and controls the comfort level and temperatures throughout the building with 250 Lon-based Variable Air Volume (VAV) controllers—10 per floor. Then the system determines the building's overall load and requirements before automatically making any necessary adjustments. “Fuzzy logic” is what prevents dramatic temperature swings as the system makes the adjustments.

Finally, the I/NET® system's point-and-click graphical interfaces simplify future system additions and modifications by enabling facilities staff to make them on-line. Moreover, the system's trend sampling capabilities make it possible for the staff to

monitor system performance, store results and then print them out in custom reports for periodic review or future planning.

Undoubtedly one of the largest and most complex building refurbishments ever undertaken in Australia, the State Law Building now strikes a grand pose against Brisbane's skyline. More important, this property now boasts building automation and security systems that utilize leading-edge technology and offer unprecedented control.

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Q-Build, the state government property agency, signed another 13-year lease for all the office space in the Queensland State Law Building.