

CASE STUDY

2800 Tower, Phoenix, Arizona USA

Facility Type: Commercial High Rise

Circon System Integrator: MPBAS Building Automation



THE CLIENT

The 2800 Tower is a Class A 364,533 square feet, 21 story premier commercial high rise office complex located in the prestigious Phoenix Midtown Submarket and managed by the Gaedeke Group. Gaedeke Group is a professional full-service real estate firm providing investment, acquisition, leasing, management tenant representation construction management, and portfolio and asset management services. Their primary mission is to create high-quality office environments by investing in well built, Class A office properties across the USA.

THE CHALLENGE

The 2800 Tower was built in 1986 and the original building automation system was installed using a closed and proprietary product, which limited future expansion and integration. The client sought a replacement system due to high levels of component failure and the original system no longer being supported by the manufacturer. A key project goal for the owner was that the new system had to be based on an open control network platform and deploy industry leading open control products so that they would never be in the same situation with product obsolescence or lack of choice in their future BAS service and support.

Additional project objectives were to maintain continuity of the existing system functionality by providing tenants with a telephone-enabled override system to request afterhours HVAC control, and to ensure that the BAS upgrade was performed floor-by-floor without disturbing the daily operations of the existing tenants.

THE SOLUTION

The fully integrated, open protocol BAS solution provided by MPBAS made it possible for Gaedeke Group to have a seamless and expandable network to control the 2800 Tower's major facility functions. MPBAS deployed a LonWorks based building automation system Installed in phases floor-by-floor using multiple 3rd party LonWorks devices and software. The Circon BAS allows for the selection of best of breed products, implemented into one interoperable system, and with the new level of system control, the owner was able to reduce operating time of the HVAC system by over 15% through enhanced scheduling and override sequencing.

Under the lease agreement with the tenants, the HVAC system was required to operate on Saturdays even though 90% of the facility was unoccupied. MPBAS' solution was to program the system to allow the tenants who worked on Saturdays the freedom to override their individual HVAC equipment without being billed for the time. This resulted in a win for both parties as the lease agreement terms were fulfilled and significant energy savings were achieved by the owner.

THE DETAILS

HIGHLIGHTS

- Delivered a full featured, open and interoperable Building Automation System
- Implemented individual tenant temperature and afterhours override control
- A single LonWorks® network
- Provided a cost effective networked solution
- Circon heat pump, network management and graphical user interface software control products
- Provided a control system platform that facilitates future expansion and integration
- Multi-vendor control products
- A flexible and adaptable design

HVAC CONTROLS

- Integrated multiple vendor LonWorks components into one open system
- Provided efficient energy usage
- Delivered intelligent monitoring and control

Circon HVAC controllers control the 418 individual water-source heat pumps, with Smart Controls programmable controllers controlling the two 200hp circulation pumps and three fluid coolers. All HVAC controls are integrated onto a single, distributed network.

SYSTEM MANAGEMENT

- Centralized graphical user interface for monitoring and control
- Tenant override capabilities for afterhours system control
- Ethernet backbone

The implementation of Circon's Visual Integrator software enabled the BAS components to be represented through a customized graphical user interface for the owner. The password protection feature provides access to the information and status of each device on the LonWorks network for authorized users working from a site computer.

SYSTEM COMPONENTS

- 418 Circon Terminal Unit Heat Pump Controllers
- 21 Loytec LIP33-ECTB FT10/IP Routers
- Echelon LNS DDE Server
- Circon Visual Integrator & Network Integrator Software
- 4 Smart Controls EC-240 Programmable Controllers

If you would like further information on this case study, Efficient Building Automation Corporation (EBAC), or more on our products and services, please refer to the contact information below.

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