



“The wireless solution provided an extremely cost-effective method of implementing communications when compared to installing 10,000 feet of conduit. It not only provided a technical solution, but also added to the project’s return on investment (ROI).”

*Andrew Marsh
Sr. Manager, Simon Property Group*

COMPANY PROFILE

Simon Property Group:

- S&P 500 company
- Largest public U.S. real estate company

Properties:

- 322 in 41 U.S. states & Puerto Rico, comprising 244 million sq.ft. (GLA – gross leasable area)
- 49 shopping centers in France, Italy, Poland
- 6 shopping centers in Japan, 1 in South Korea and 1 in Mexico

Property portfolio:

Regional malls, Premium Outlet Centers®, The Mills®, community/lifestyle centers, international properties

Project applications:

Building/energy management systems, HVAC and lighting control, security

Simon Property Group

TEAMING UP PAYS OFF

Three highly successful companies leveraged their expertise and experience in different industries to deliver an innovative building management solution in an upscale mall, setting the stage for others to follow suit.

BACKGROUND

Innovative ideas often emerge when successful companies join forces to achieve a targeted business objective. In this instance, the objective was a cost-effective solution using high-tech products and “outside-the-box” thinking.

The three companies joining forces included: Simon Property Group, Roth Bros. Inc., LLC and TAC. Simon is the largest public real estate company in the United States. Roth is a nationally acclaimed solutions provider known for its long-term customer relationships. And TAC is a leading provider of building automation solutions based on Open Integrated Systems for Building IT.

Simon relies on Roth for its ability to develop energy/building management solutions that are both innovative and cost-effective. And Roth relies on TAC’s comprehensive portfolio of energy/building management products, services and support.

COMPANY PROFILES

Simon Property Group owns and/or operates hundreds of properties in the United States, Puerto Rico, France, Italy, Poland, Japan, South Korea and Mexico. Its retail channels range from community, power and lifestyle centers to value-oriented regional/super-regional malls and mega-town centers.

Founded in 1923, Roth creates a synergy between its products and services to reduce customers’ building operating costs and to provide the information they need to effectively manage their building investments.

CUSTOMER BENEFITS

- Cost-effective system operation and integration
- User-friendly GUI, alarms, scheduler, reporting
- Centralized and remote system access/control
- Interoperability, expandability, reliability

Simon Property Group

With partners and branches in 80 countries, TAC has more than 80 years of experience in the HVAC, building automation, security and energy services arenas.

THE CHALLENGE

Simon's goal is to install an enterprise-level energy management system (EMS) throughout its property portfolio. Achieving this goal will help solidify Simon's strategies for creating standard times, set points, wiring and energy solutions for all its U.S. properties. Ultimately, this achievement offers the potential of saving 15 percent annually on Simon's entire energy spend for HVAC and lighting.

Simon wants all new EMS retrofit installations to meet stringent ROI criteria with a proven energy model. Due to high labor costs in some regions, though, the cost to hardwire various components together can cause the ROI to exceed corporate guidelines.

In 2007 Simon Property Group asked Roth to provide a solution that would integrate the HVAC units and lighting system with the building management system (BMS) at an upscale U.S. mall, and to install the new equipment without disrupting the structural integrity of the roof – that is, without any visible wiring.

In addition, Simon wanted the controls for this mall to be networked to its headquarters in Indianapolis. This approach gives Simon flexibility to monitor and control individual sites and nationwide energy spending – anytime and from any location.

Roth and TAC worked together to develop a cost-effective way of connecting the air handlers to the building management system at this site.

THE SOLUTION

Challenged to find a more cost-effective solution than hardwiring the HVAC units together, Roth worked with TAC to design an open, integrated wireless solution. Ultimately, this innovative solution saved Simon Property Group 30 percent of the funds it had budgeted for the entire HVAC controls project, enabling Roth to use those savings to install the same wireless technology for lighting control. In addition to generating a projected 6-8 percent annual energy savings by connecting the outside lights to the BMS, this solution did not add any new wires or cables to the mall's roof area.

Roth installed wireless adapters and repeaters on the mall's roof where each AHU would be placed. By creating a wireless mesh network, they were able to connect the actual HVAC units to the BMS and to provide ongoing communication between them.

A high-speed Ethernet V-LAN (virtual local area network) provides local and remote access for monitoring and managing building controls and surveillance systems. Simon, Roth, and the mall's facilities staff can quickly change set points, schedules and cameras as needed. Using a TAC CyberStation® and web.Client Enterprise Manager makes it possible for Simon to maintain the company's standard comfort levels while monitoring and maintaining the nationwide energy spend.

THE BOTTOM LINE

Long-term customer relationships are built on trust, consistent performance and shared goals. Over the years, Roth has installed TAC's Andover Continuum™ products in 122 Simon properties nationwide. Since 2003, Simon has consistently reduced its energy usage as a result of its energy management practices.

REAL ESTATE INVESTMENT PROFILE

Real estate investment organizations manage properties in ways that will improve the bottom line. With vast holdings of square footage around the world, controlling energy usage and costs is one aspect of building management that can have a positive impact on financial goals. Integrated building automation and security solutions enable investors to sustain well-managed buildings, affecting cash flow and tenant comfort, thus contributing to the success of a real estate portfolio.

TAC has the expertise and experience to enhance indoor comfort and manage energy usage for building owners everywhere, delivering energy efficiency while streamlining operational costs.

On April 1, 2008, the U.S. Environmental Protection Agency (EPA) presented Simon Property Group the ENERGY STAR® "Partner of the Year" award. Simon is the first REIT to win this prestigious award in the last five years and the only REIT recognized in 2008.

The successful use of wireless technology within the Simon portfolio has opened the door for Roth and TAC to implement the same strategy when installing HVAC and lighting systems for building or upgrade projects.

Going forward, all the lights and HVAC systems at existing and future Simon developments are – or will be – networked via the Web to SQL servers located at Simon's headquarters in Indianapolis.

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