WaterPark Place III

Toronto, ON Canada

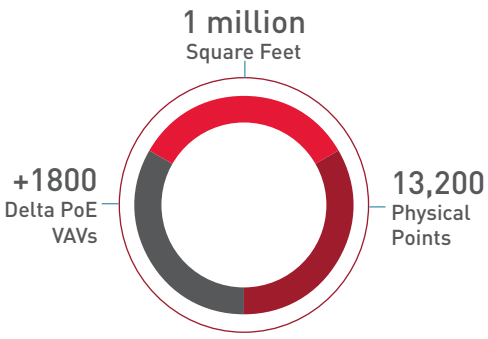
Overview

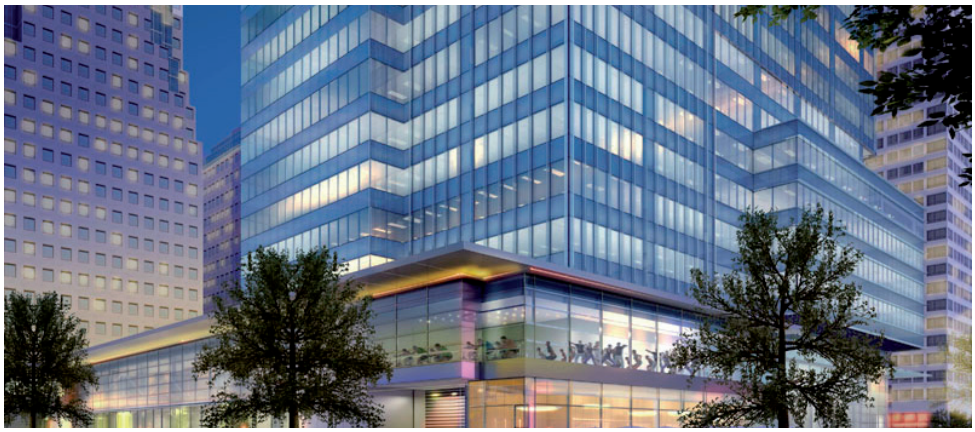
Vertical	Site build	Site size
Commercial	New Construction	1,000,000 ft²

The WaterPark Place III building in the heart of downtown Toronto, is the first LEED® Platinum Core and Shell Tower in Toronto. WaterPark Place is the global flagship for Oxford Properties as the first smart connected building of its kind and is the new home of CISCO Systems Canada and Cisco's New Internet of Everything (IOE) Innovation Centre. Adding to this building's accolades, at the time of construction WaterPark Place was the largest Cisco Smart Building PoE installation by Delta Controls, containing over 1800 Delta PoE VAV controllers.

Overview

Completed in Fall 2014, WaterPark Place is a distinctive sustainable building in the City of Toronto. A LEED Platinum facility managed by Oxford Properties, it uses sustainable design to deliver a smart connected building for its occupants.





The Challenge

How do you keep buildings up to do date with today's advancing technology?
WaterPark Place III, CISCO Canada's new headquarters needed to showcase cutting edge technology and demonstrate what SMART buildings can achieve. It is a LEED Core and Shell Platinum building, and was designed, built and is run on a CISCO Smart Building Converged IP Network, and leverages CISCO Power-over-Ethernet (PoE) to the Edge. The building holds high sustainability practices throughout, and the Delta Controls system needed to help them meet that standard. WaterPark Place was constructed as the first large scale commercial high-rise with converged/integrated PoE LED lighting and HVAC in North America. This meant that everything would run on the IP network, rather than electrical cables. Like with any first, installing the BMS in WaterPark Place may have unforeseen challenges. There was no previous installation that Delta Controls Toronto could refer to, WaterPark Place was going to truly be the pioneer project, which is exciting and challenging at the same time.

Today's world of real-time energy monitoring and ongoing building analytics can't be maintained using traditional Building Automation System (BAS) networks.
The amount of information being passed between system controllers and terminal devices requires the speed of an Ethernet connection in order to be able to keep up with the data requirements now and into the future. WaterPlace Park was one of the first buildings in North America to be built using PoE networks for the controls system.

We needed to combine power and communications into a single wire.
Without having to pull electrical as well as network wiring to each controller, you could reduce your man hours dramatically. Without needing to handle line voltage or provide stepdown transformers at each device, your materials costs can be more closely controlled. Power over Ethernet can be the answer you are looking for. Delta Controls was the first building automation manufacturer to develop a line of PoE controllers and Delta Controls Toronto were the first to install PoE in the commercial market in Toronto.

To find out how Delta overcame this challenge, please turn over. →

Delta™ CONTROLS

WaterPark Place III
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The Solution

All of these energy and control demands lead up to one thing; your BAS network needs to be able to do more.
A 1 Gbps Ethernet network is ten thousand times faster than conventional MS\TP networks. The backbone of WaterPark Place is comprised of a single converged IP network. This future proofs the building and leverages major current technology trends. Delta Controls Toronto was part of a team that integrated HVAC, lighting, access, fire, security, and CCTV systems via an Ethernet/PoE connection. There were high efficiency condensing boilers installed maximizing energy use and maintaining heating within the building. An Enwave Deep Lake Cooling system was used to bring in water from Lake Ontario for cooling systems and heat reclamation systems were installed on all ventilation units.

The Benefits

Ethernet networks for system controllers have been around for years, but only recently has there been a move to adopt Ethernet or PoE architectures on application level controllers.
Delta Controls' DVC-V322PoE controller was used for the PoE installation. It provided higher communication speeds between connected systems along with device power in a single cable. This simplifies wiring, and eliminates the need for a local control transformer, which reduced the cost of installation.

The PoE installation was much easier to manage. Compared to a traditional installation of MS/TP controllers, the PoE infrastructure allows a single source of problem solving. The building management staff can tell exactly which controller has gone down so they can pinpoint problems for resolution.

The converged IP network meant that the BMS could monitor external daylight levels, temperature, and occupancy in real-time. By having everything run on one network, lights can be integrated with access control or heating easily providing increased personal comfort control. The Delta Controls VAV air controllers enabled CISCO to have full control over the HVAC system throughout their offices in WaterPark Place which effectively reduced energy consumption.

The Results

Usually controls engineers are the last ones to go in, but PoE changed that.
WaterPark Place was unique as the IT core infrastructure needed to be established first before any systems were brought online. Prior to the curtain wall being installed, there were 300 VAV's, tested and verified, and online with temporary power during the initial construction phase of the project.

PoE connections help to connect you with your building's occupants
A connection between your building's BAS and its occupants can be achieved through devices, and the devices that the occupants have in their hands are often IP devices. The collection of data can be delivered very quickly to occupants in a format that is valuable to them and relates comfort conditions and system performance. IP infrastructure enables smarter and more responsive buildings, the CISCO building is even able to respond to individual workstation user's lighting preferences.

"Buildings like WaterPark Place III show how responsive and occupant focused all buildings of the future should be. With converged IP POE networks, "SMART Connected" buildings are an achievable reality now."

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To find out about how Delta Toronto can help.
Contact us now on **1-800-510-6285**
Alternatively you can email **deltasalestor@deltacontrols.com**

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