fifthlight technology

CASE STUDY

Corus Entertainment

25 Dockside Dr.
Toronto, Ontario

November 2010

COOPER Controls

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Corus Entertainment

Background

The newly constructed Corus Entertainment headquarters has served as the catalyst for the remediation of Toronto's eastern waterfront, combining clean design with innovative and efficient technologies. The eight-storey glass clad structure takes full advantage of available daylight and was designed to LEED Gold standards. The interior is bright and vibrant and features a five-storey atrium with an impressive bio-wall, all designed to foster creativity and comfort for employees of Corus Entertainment.

In keeping with the design intent, an advanced, centrally managed lighting control system was desired to take advantage of all available energy saving opportunities and provide customizable lighting conditions. The system was required to control over 100 different types of fixtures, many of them unique and custom designed. To meet these challenges and the need to adapt to a constantly changing environment, a Fifth Light DALI system was chosen as the solution.

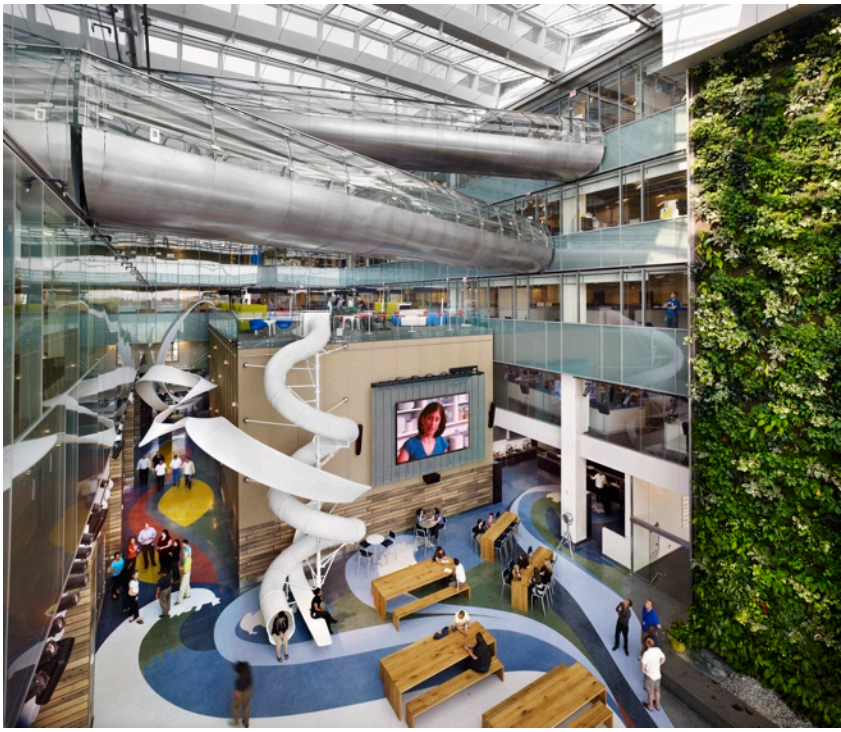
Project Objectives

The DALI lighting control system was designed to be flexible, adaptable, and scalable, while ensuring that the facility's power quality was maintained for the protection of the sensitive radio and television broadcasting equipment in use. The use of an open standard protocol ensured that the client would have a variety of upgrade options to meet their changing needs in the future.

Solution Overview

This Solution consists of the following components:

- 2,402 DALI dimmable linear fluorescent ballasts
- 552 DALI dimmable compact fluorescent ballasts
- 390 DALI field relays
- 146 DALI field dimming modules
- 14 DALI relay panels
- 21 Touchscreen control interfaces
- 380 low voltage switches & keypads
- 660 low voltage occupancy sensors
- 120 low voltage daylight sensors
- 35 Lighting Control Panels
- 1 multi-user web based Lighting Management Software application



Project Highlights

Lighting energy consumption reduced by

54%

A centralized lighting control system with over

4,670 control devices

DALI control through centralized

Web-based Software

Personalized lighting control through

VOIP Phone Integration

The key lighting management capabilities provided in this project include:

1 Adaptability. With such a wide variety of unique fixtures, the solution accommodates dimming and on/off control for linear fluorescent, compact fluorescent, LED, and incandescent sources, often mixed within the same fixture. All of the DALI devices worked together to provide seamless control over all the lighting.

2 Efficiency. By controlling all lighting in the facility, the system is able to capitalize on all potential energy saving opportunities. Through ballast factor tuning the maximum light level has been reduced, which has resulted in 35% power savings. In addition, advanced scheduling, continuous daylight harvesting and a network of occupancy sensors ensure that energy is used only when and where it is needed. With unpredictable and non-stop occupancy patterns, the installed solution is estimated to reduce overall lighting energy consumption by over 54% when compared against a non-dimming scheduled relay system.

3 Easy to Operate. Moving beyond the typical switch, the system is controlled by multiple users via touch screen controllers, desktop VOIP telephones, mobile phone applications, and a web-based control software. Access restrictions ensure each user can only affect the lighting in their area. The floor plan based graphical software makes visualizing all changes simple, and faults with lamps or ballasts are automatically detected with notifications sent to the facility management team.

4 Simplified Installation. The use of field mounted DALI dimming modules and relays dramatically simplified the installation, as all control devices were tied directly to a common DALI bus. Low voltage devices were minimized by the use of VOIP telephones for switching, and a distributed network of 35 Lighting Control Panels ensured minimal wiring. The installation of the roughly 3,000 DALI ballasts was coordinated with the various fixture manufactures, and Fifth Light Technology's team of experienced technicians were responsible for all DALI design, commissioning and startup services – included as part of the purchased turn-key solution.

5 Integration. Designed to be a smart building, the lighting system was required to integrate seamlessly with other building systems. Integration was successfully implemented between the Fifth Light DALI system and the VOIP telephone system, A/V components in conference rooms, security and fire alarm signals, and even the "on-air" lights for live radio broadcasts.

6 Personalization. Corus Entertainment's facility was envisioned to provide a comfortable and creative working environment for their employees in one of the world's largest radio, television, and animation production facilities. The ability to easily customize lighting conditions based on usage, time of day, and personal preference was a primary goal and has proven to greatly enhance user satisfaction.

Results

Since a successful launch in early 2011, the ongoing benefits of the Fifth Light DALI solution are just starting to be realized. The system has achieved greater than expected energy savings, undergone streamlined changes and expansion, and simplified management functions – resulting in a significant reduction in cost and creating a harmonious balance between form and function.

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