Mircom Headquarters:

The Making of an Intelligent Building

Vaughan, ON, Canada

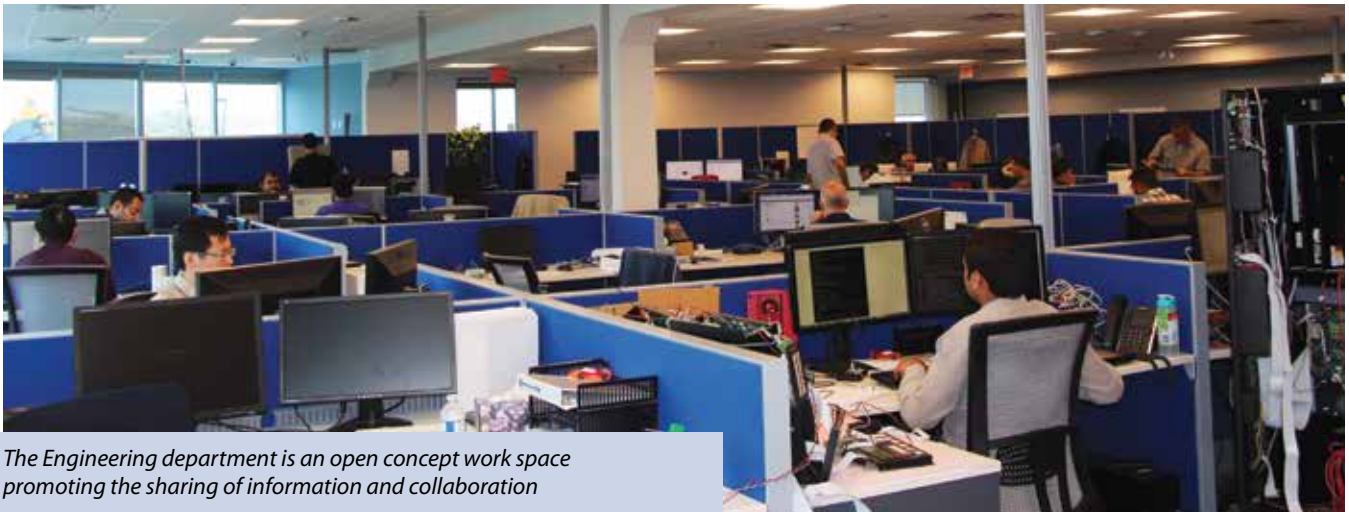**MIRCOM®**

> *"This case study details a project that's very special to Mircom: our own headquarters…"*

Safer • Smarter • More Livable Buildings

Mircom™

At a Glance

This case study details a project that's very special to Mircom: our own headquarters' building extension and retrofit.

This undertaking presented some unique challenges in that it was both a new construction effort and a retrofit of an existing building. We're incredibly proud of the end result. We believe it acts as a strong reference for the design of intelligent controls in buildings currently under construction or being retrofitted.

The success of this project relied on the expertise of Mircom engineers, project and product managers, and outside contractors. All design and planning was completed in-house, with the help of a shell architect and mechanical consultant.

The Engineering department is an open concept work space promoting the sharing of information and collaboration
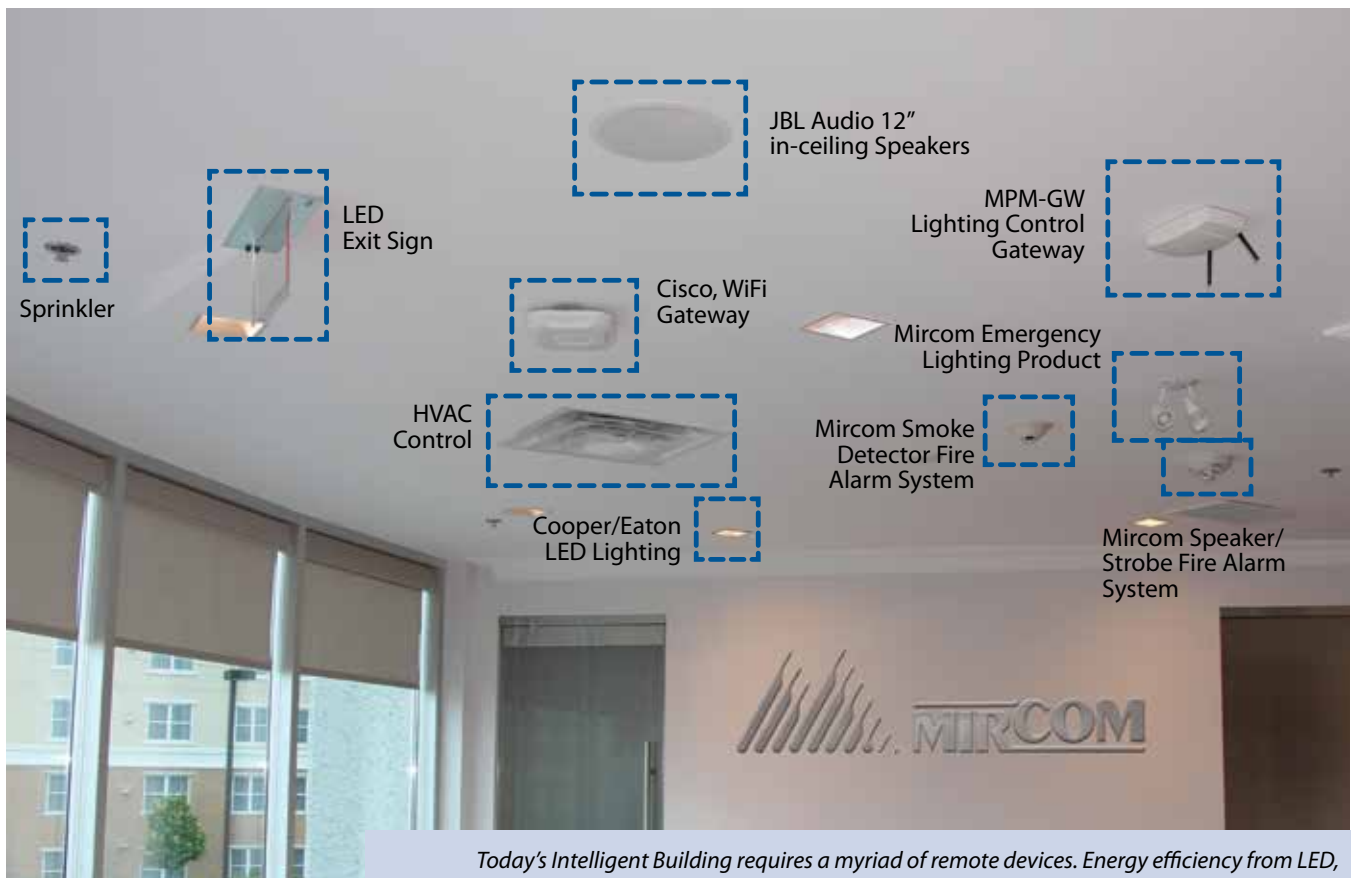
What is an Intelligent Building?

Throughout the case study you'll notice that we refer to the extension as an "Intelligent Building." An Intelligent Building, by our definition, is one that seamlessly integrates fire detection and alarm, communications and security, mass notification, and building automation and smart technologies.

> *"Intelligent Buildings are safer, smarter, and more livable – and people notice the difference..."*

The solutions deployed are as environmentally conscious as possible. Whether the application is residential high-rise, mixed-use, condo, military, transportation, campus, or other, Intelligent Buildings are the new standard. Intelligent Buildings are safer, smarter, and more livable – and people notice the difference.

JBL Audio 12"
in-ceiling Speakers

MPM-GW
Lighting Control
Gateway

LED
Exit Sign

Sprinkler

Cisco, WiFi
Gateway

Mircom Emergency
Lighting Product

HVAC
Control

Mircom Smoke
Detector Fire
Alarm System

Cooper/Eaton
LED Lighting

Mircom Speaker/
Strobe Fire Alarm
System

Today's Intelligent Building requires a myriad of remote devices. Energy efficiency from LED, Power over Ethernet, and low current draw devices will be key to controlling power costs.

Project Background & Scope

Mircom's head office is a very dynamic environment. Under one roof, you'll find Engineering and R&D, production, applications engineering, sales, marketing, and customer care teams. Co-location enables our teams to seamlessly collaborate on solutions and work with customers and suppliers.

Mircom's engineering and R&D department has more than tripled in size in the last five years, and is continuing to grow at a rapid pace, along with other teams in the company. In order to accommodate the rapidly growing Mircom family, an extension was added to the existing building. The space is a multi-tenant environment shared between a sales and service branch office on the first floor (8,000 square feet) and the Toronto Engineering and R&D team on the 2nd floor (10,000 square feet).

The Challenge

This was an interesting project in that it was both a new construction effort and a retrofit of an existing building. It was important to complete the project in a timely manner, with minimal disruption of the current environment.

The two 'tenant' groups in the facility had different needs for the space. This meant that a common technology base for the building had to be designed to provide solutions for the unique needs of each group.

For example, in the branch office space, inventory stocking and frequent customer visits meant a more intense focus on security, including CCTV and intrusion, while the second floor office space was more concerned with productivity and comfort of occupants, which meant introducing solutions such as intelligent lighting control and IP multimedia systems.

The Solution Deployed

As a leader in the Intelligent Building Solutions space, it is important for Mircom to ensure a comfortable space for employees as well as to create a living demo environment that is used for customers to see the real world application of Intelligent Building Solutions as they currently stand. A number of products were utilized in this project in order to create intelligent solutions that work together seamlessly. For each solution deployed, the following products were used:

Fire Detection and Alarm
- Mircom's Flex-Net Fire Detection & Alarm with Mass Notification System

Facility Monitoring
- Mircom's OpenGN Control Edition
- Schneider's SmartStruxure Enterprise Server

Mass Notification System
- Mircom's Flex-Net In-Building Mass Notification Solution

Telephone Entry & VoIP/SIP Intercom System
- Mircom's TX3 Series of touchscreen and LCD phone entry systems

CCTV Video Surveillance System
- Schneider/Pelco IP ONVIF Cameras
- TYCO ExacQVision CCTV Surveillance Server
- IONodes Hardware/Server
- Antaira, Trendnet, Cisco Switches & POE Routers
- APC UPS Power Supplies

Access Control System
- Mircom's TX3-CX Access Control Panels
- Mircom's TX3-IP IP connectivity module
- Assa Abloy's Aperio Wireless Locksets and door hardware

HVAC Control System
- Schneider Electric's SmartStruxure
- York Roof Top Units
- Bellimo Actuators and Sensors

Power Metering
- Schneider SquareD power distribution panels
- Schneider Lighting distribution panels
- Xiamen ZT Technology Co., Ltd Split Core Transformers
- Mircom's OpenBAS PM-11 Power Meters with BACnet output

Lighting Control System
- Schneider's SmartStruxure Lighting Control
- Cooper/Eaton LED Lighting

Emergency Lighting System
- Mircom's Emergency Lighting Products

IP Multimedia System
- Savant's IP Multimedia Server
- Atlona multimedia switches and controllers
- Cisco, D-Link Networking switches and routers
- Samsung Smart TVs
- JBL Audio 12" in-ceiling speakers

Conclusion

At Mircom, we feel that one of the big factors to our success is our complete vertical integration. Manufacturing, Engineering and R&D, Canadian and International Sales, Marketing, Applications Engineering, and numerous other teams are housed under one roof, creating a unified team that's quick to respond to the demands of the market and our customers.

The successful completion of this project, amidst the hustle and bustle of day-to-day business operations, is a unique achievement for Mircom. This concerted effort to retrofit the existing building and create a modern Intelligent Building extension not only satisfied our employees, but also resulted in a safer, smarter, more livable environment that's the new standard for mixed-use buildings like our own.

For the extended version of this case study, and to learn more about technical specifics for each solution deployed, please visit **go.mircom.com/IntelligentBuilding**

About Mircom

Founded in 1991, Mircom is a global designer, manufacturer and distributor of Intelligent Building Solutions. Reaching customers in over 100 countries worldwide, Mircom's portfolio includes: fire detection & alarm, communications & security, mass notification, nurse call, and building automation & smart technologies. Mircom's vision is to make buildings worldwide safer, smarter, and more livable.

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