

Application Story

Burlington MTO COMPASS System



The traffic operations centre is the focal point for all communications and control

Burlington MTO COMPASS System Keeps an Eye on Traffic

Overview

The COMPASS system was installed in the Ontario Ministry of Transport's (MTO) Burlington, ON, facility in 1986 to alleviate traffic congestion due to construction and peak traffic volume on the Burlington Bay skyway. It enables operators to detect traffic slowdowns, disabled vehicles and collisions, resulting in a reduction in traffic congestion, accidents, and delays in the Skyway corridor. Its ongoing mission is to dispatch appropriate responses in a timely manner so that incidents can be dealt with promptly.

The COMPASS system consists of 24 CCTV cameras, six fiber-optic/flip-disk changeable message signs and 154 vehicle detector stations.

Inductance loop detectors, or vehicle detectors, are embedded in the freeway pavement to detect traffic congestion. The vehicle detector stations located at approximately 600-metre intervals transmit traffic data back to the Traffic Operations Center (TOC) every 20 seconds. The TOC central computer analyzes the data continuously using an incident detection algorithm and alerts operators of a suspected incident and requests confirmation. Closed circuit television cameras, placed about one kilometer apart, provide the primary means of confirmation. Once the incident is confirmed visually, the operator proceeds with a specific response plan and notifies the appropriate response services.

In order to minimize the traffic impact of an incident, motorists must be supplied with timely, accurate and useful information. This may allow them to divert around the problem area, or at least will lessen their chances of colliding into the end of queue of stopped vehicles on the freeway. An effective motorist advisory strategy not only encourages diversion and driver vigilance, it also reassures the traveling public that the responsible agencies are aware of the problem and doing their best to manage the situation.

Customer:

Ontario Ministry of Transport's (MTO)

Location:

Burlington, Ontario, Canada

Industry/Market:

Transportation

Partner:

Applied Electronic Limited's A/V group

Requirements:

- Display data and video feeds in real time
- Ergonomically advanced to avoid operator fatigue
- Configuring an operating command center in a tight space
- Easy maintenance with long lamp life

Summary:

The COMPASS system traffic operations centre receives feeds from 24 CCTV cameras to send commuters information through six fiber-optic/flip-disk changeable message signs and 154 vehicle detector stations. 54 monitors are constantly tracking different highway locations as a means of dispatching appropriate responses in a timely manner. The operations centre is the hub of all that activity.

Results:

The Christie TotalVIEW™ VideoWall solution provided to MTO was designed based on the following:

- 30 feet high x 30 feet wide (900 square feet) room design
- Christie CX50-D100U cubes
- Christie RPMX-D120U XGA rear screen projection engines

MTO has also realized an immediate ROI through reduced service costs, due to longer lasting lamps. They were impressed by the seamless integration and leading-edge monitoring capabilities of a Christie's innovative display solution.

The traffic operations center is the focal point for all communications and control — it's in operation 24 hours a day, 7 days a week and it is responsible for all Ministry freeway management activities within the Niagara, Hamilton and Halton regions and portions of Peel region.

The Challenge

Increases in traffic mean increases in the data and incidents that the Burlington TOC must handle. When the MTO made the decision to implement a control room video wall at the Burlington TOC, they were under serious time constraints, and needed to implement a system that would handle the data and video feeds reliably and in real time.

The room size, the lamp life, and the resolution required to suit the application – all of these factors made Christie a natural choice for Applied Electronics and MTO.

The Solution

The TOC's control room video wall was designed by Applied Electronic Limited's A/V group in close consultation with the MTO's experienced users. With a 30' x 30' room to design for, the Christie cubes made perfect sense. The system was supplied and installed by AEL in the summer of 2005. The large video wall is comprised of Christie CX50-D100U cubes with customized base assemblies, each fed by a multi-video processor. All images displayed are in real-time.



Decision Making Factors

The room size, the lamp life, and the resolution required to suit the application – all of these factors made Christie a natural choice for Applied Electronics and MTO. The Christie CX50 display wall cubes offer 50" of diagonal display space, long lamp life and native XGA resolution for large tiled displays.

Return on Investment

With \$800,000 in new equipment and a video wall with 54 monitors tracking different highway locations, the Ontario Ministry of Transportation Burlington COMPASS Centre keeps a watchful eye on highways in Niagara, Hamilton, Halton and portions of Peel Region. The people who drive these highways daily are the biggest beneficiaries, but MTO has also realized ROI in the form of:

- Reduced service costs, due to longer lasting lamps.
- Seamless integration and leading-edge monitoring capabilities: Christie's innovative display solutions help MTO maintain the flow of traffic more efficiently and effectively.

Contact Christie

Christie Digital solutions use state-of-the-art components to create high-performance video walls with the reliability you need for your 24/7 control room, and the flexibility you need to integrate and display real-time information from a wide variety of sources. You can count on Christie Digital not only to provide the best possible solution, but also to stand behind that solution with after-sales support and maintenance programs that are second to none.

Christie Digital has been manufacturing video wall controllers,

display enclosures and projection modules, and building control room display solutions, for over 25 years. We are the worldwide leader in projection equipment.

A Christie representative stands ready and able to answer all of your questions concerning the application of video wall technology to meet your control room needs. Contact Christie Digital today to find out how you can benefit from a Christie control room solution.



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