Due to the highly confidential nature of this installation, actual photos were not available. The photo above is a rendering of a typical command and control facility.

G8/G20 Summits Achieve Secured AV with Fiber Optic Products from Extron

"We used Extron because they had everything required for this major job."

Wolfgang Pechmann
Project Manager
Applied Electronics

The Joint Security Forces responsible for information sharing and security at the G8 and G20 economic conferences in June 2010 required a full, secure AV system to coordinate efforts. Applied Electronics was selected to design and install the AV system to support mission-critical operations at and between the four, temporary command centers in the Ontario province: one in Barrie, one in Huntsville, and two in Toronto. Reliability, flexibility, and ease-of-use were vital system requirements; Applied Electronics chose Extron products for complete end-to-end routing and control of the AV signals. "We used Extron because they had everything required for this major job, and the equipment provided the level of performance that was needed," says Wolfgang Pechmann, Project Manager for Applied Electronics.

Red/Black System Design

Event scheduling and current media information were displayed for the news services while command center monitors and displays provided an extensive selection of security graphical and contextual data. Extron fiber optic products formed the core AV system for the command centers in Barrie and Toronto with twisted pair products supporting the command center in Huntsville. Fiber optic cabling and unidirectional fiber optic links provided electrical isolation between unclassified AV signals from non-secure sources and classified secure data link signals. Video sources included secure computer feeds, computer workstations, satellite receivers, a traffic camera system, and an air-to-ground camera system. Applied Electronics integrated Extron FOX Matrix 7200 modular fiber optic matrix switchers populated with FOX I/O 88 MM 8x8 input/output boards to provide up to 72 inputs and 72 outputs for routing digital AV signals.

Extron® Electronics
INTERFACING, SWITCHING AND CONTROL

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Fiber for High Performance Reliability

The FOX Matrix 7200 fulfilled the requirements for security, reliability, and robustness. It provides dual redundant and hot-swappable power supplies, hot-swappable input/output boards, field-upgradability, and the capability to switch high speed AV signals, with any source being routed to any destination with zero latency or processing of the signals. The front panel controls, configuration port, and Ethernet port simplified the setup and configuration of the matrix switchers. The wide range of signals were routed to a variety of displays that included Panasonic® 65" LCD displays and a set of 1080p DLP® projectors that formed a 1x4 videowall.

FOX Matrix 7200
Modular Fiber Optic Matrix Switcher from 8x8 to 72x72

To simplify integration, Extron FOXBOX and FOX 500 Series DVI and RGB fiber optic extenders provided all-digital, pixel-for-pixel performance and direct conversions from RGB to DVI-D. Computer-generated data was transmitted through FOX 500 DVI fiber optic extenders to a local monitor and each site's matrix switcher for system-wide distribution. Media feeds were converted from standard definition composite and component signals to high resolution RGB signals using Extron DVS 304 scalers. The scaled signals were then transmitted via FOXBOX VGA fiber optic extenders to the main distribution system, while the secure feeds utilized FOXBOX DVI transmitters. Displays and projectors included discreetly mounted FOXBOX DVI Plus receivers.

AV Control from Multiple Command Centers

Other products were designed into the system to perform specific tasks. Integration of an Extron TouchLink™ control system with TLP 700TV seven-inch touchpanels and IPL 250 Ethernet controllers enabled control of the comprehensive AV system from multiple locations within the command centers. TouchLink™ controllers were also used in conference rooms and boardrooms to operate the room's AV. Separate breakout rooms utilized the Extron MLC 62 RS D, a MediaLink controller in a decorator-style wallplate. All mixing and processing of audio signals was managed by DMP 64 ProDSP™ digital matrix processors.

The installations utilized Extron products to create a reconfigurable AV system that provided complete, end-to-end transmission of digital signals. Dave Patterson, Audio Visual System Project Manager, who is stationed at the Royal Canadian Mounted Police Headquarters - Assets Management section - in Ottawa, said, "The system met the security requirements, and supplier and factory support was exceptional."

Reconfigurable for Future Events

With the training provided by Applied Electronics integrators and Extron engineers, the Canadian security forces are capable of installing and controlling AV systems in various configurations for use at other events with very little assistance. They are quite pleased with the reliability of their AV equipment, the ease with which system designs are reconfigured, and the dedication and personalized service provided by technology experts from Applied Electronics and Extron.

Extron Products:

- FOX Matrix 7200, Modular Fiber Optic Matrix Switcher from 8x8 to 72x72
- FOXBOX DVI Plus, Fiber Optic Extender for DVI, Audio, and RS-232
- FOXBOX Tx VGA, Fiber Optic Transmitter for VGA, Audio, and RS-232
- FOX 500 Tx, Fiber Optic Transmitter for RGBHV, Audio, and RS-232
- FOX 500 DVI Tx, Fiber Optic Transmitter for DVI, Audio, and RS-232
- DVS 304 DVI, Four Input Video and RGB Scaler with DVI Output
- MTPX Plus 3232, 32x32 Twisted Pair Matrix Switcher for RGBHV, Video, Audio, and RS-232
- MTP T 15HD A, MTP Twisted Pair Transmitter for VGA and Audio
- MTP RL 15HD A, MTP Twisted Pair Receiver for VGA and Audio
- MLC 62 RS D, MediaLink Controller in Decorator-Style Wallplate
- DMP 64, ProDSP™ Digital Matrix Processor for Audio
- TLP 700TV, 7" Tabletop TouchLink™ Touchpanel
- IPL 250, IP Link® Control Processor for Ethernet Control
- IPL T SFI244, Two Serial, Four Flex I/O, and Four IR Port IP Link® Control Processor with IR Learner
- MGP 464 DI, Four Window Multi-Graphic Processor with Four DVI Inputs

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