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Montréal Landmark's AVL Challenges

Conference Center enhances the guest experience.

By **Pasquale Fantone**


Top: The Sarah Bernhardt Ballroom set up for a panel discussion. The projection and sound systems were permanently installed by PFT Solutions, yet PSAV Presentation Services has supplemented those components with additional microphones and loudspeakers, all plugged into the system via the wall plates.

Bottom: The St. Francois Xavier Room with a 90-inch display.

Opposite page: The St. Jacques Street entrance to the Hotel InterContinental Conference Center, showing the 1888 facade of the Nordheimer Building.

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The InterContinental Montréal has renovated its Conference Center and equipped it with the latest audio, video and lighting control technologies. When the four-star landmark hotel was restoring its beautiful Victorian rooms to their original appearance, senior management sought to integrate the latest meeting room technologies without negative impact to the 20th century structure or to the aesthetic grandeur of the rooms. The goal was to dramatically improve the guest experience during business meetings and social events.

Several Proposals

The venue explored several proposals by various vendors and my systems integration company, PFT Solutions. The proposals from other vendors included different lower-cost solutions with the use of iPads and manufacturer-supplied free apps. It was a challenge for PFT to get the client to grasp the advantages of installed systems with customizable and centralized control, and to understand the disadvantages of using non-centralized solutions spread across multiple apps that would have been non-customizable and non-supportable. In the end, thanks to a face-to-face between us and these other parties, the client realized how our concept was much more reliable and powerful, and would actually meet their needs.

After the contract for system design and integration was awarded to PFT Solutions, the timeline for Phase 1 was compressed to three months with a tight deadline for the work to be accomplished. Our scope in Phase 1 included AV upgrades and automation/control of the AVL and HVAC systems in 13 of the 18 conference rooms. Phase 2 will involve installing systems in additional rooms, providing more communications features for guests, and



The St. Louis
St. Jean
Baptiste room
with an 80-inch
display.



the integration of Crestron Fusion RV asset management software.

Preserving Elegance

The technology upgrade was part of a \$3 million investment to renovate the historic Nordheimer Building, a striking Victorian landmark that serves as the hotel's conference center. The Nordheimer was originally built in 1888, and repurposed by the InterContinental Montréal in 1992.

Among the Nordheimer meeting rooms is the beautiful Sarah Bernhardt ballroom, a theater from the original structure where Bernhardt, Maurice Ravel and other luminaries performed. On the second floor is the Vieux Port/Vieux Montréal ballroom, which can be used in tandem with the Sarah Bernhardt ballroom. There are four conference rooms on the third floor, and six on the fourth floor.

One of the AV system design challenges had to do with the age and historic status of the building. The Nordheimer's landmark status protects its heavily wood-paneled interiors, and installation of any new wiring was a major concern. We were fortunate that three equipment rooms were created during the 1992 restoration, and that the entire building had been rewired at that time.

Design & Installation

Presentation needs in the various rooms vary widely. A hotel client may request anything from a single microphone to projection, sound, videoconferencing and webcasting support for a multi-day, multi-room event.

The Sarah Bernhardt Ballroom is a single space, but the Vieux Port and Vieux Montréal Ballrooms can be combined, so we equipped each space with its own projection system that can be used independently or in tandem when the rooms are combined. We installed AV devices on Middle Atlantic AV racks in the equipment room on the third and fourth floors to serve the presentation needs in the meeting rooms on each of those floors.

The entire second floor shares a Crestron DigitalMedia matrix switcher, making it possible to send any signal from any source to any combination of rooms for a large meeting or event. Five of the Nordheimer rooms feature high-definition, 5500 lumen NEC

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projectors and Da-Lite Advantage and Contour projection screens. Six rooms feature Sharp 70-inch, 80-inch or 90-inch LED-backlit LCD displays. Our crew installed DigitalMedia wall plates and Crestron touchscreens in all of the rooms, including the two rooms that did not have installed displays for easy plug-in of portable systems as needed. Two Tannoy Di5t loudspeakers and a Crestron keypad were installed in the Atrium.

Hum Killer

In two rooms where a projector is used as an HDMI audio extractor on different electrical outlets with out-of-phase grounds, it was necessary to install an RDL stereo audio hum killer to mitigate electrical noise from the projector or the client's laptop computer. Kramer HDMI repeaters are also installed in these rooms.

The main equipment closet houses a Crestron DM switcher, control processors, touchpanel and CresNet distribution block; Atlona video preview monitor; Biamp Nexia CS audio DSP; Kramer audio switcher; QSC audio amplifier,



The Vieux-Port Room with projection system set up for a breakout session. It is also used as part of a larger space.

and several audio devices from RDL. Five additional equipment closets house similar devices. Middle Atlantic racks, cabinets and power strips are used in all closets, as are Tripp Lite UPS.

The hotel's electrical contractor installed 13 new Crestron multichannel dimming consoles in adjoining racks. There was no need to touch the paneling or plaster to do any of this work.

We were also able to reuse the ceil-

ing speakers installed in each meeting room, so there was no need to run new wiring there. We did, however, have to run wiring to the Crestron wall plates and touchscreens we installed, as well as to the new projectors and displays. The use of twisted-pair Crestron 8G cable greatly simplified this process because we were able to snake it through the walls and ceilings with little or no disruption to the décor.

MMA-10G

Network Based AV Distribution

Evertz' new MMA-10G multimedia aggregation and visualization system is the ultimate solution for distribution and display of digital media over IP. Evertz' MMA-10G solution consists of Video Over IP input transmitters, output receivers, windowing/video wall processing, an IP-based routing core and a robust control system. MMA-10G is the ideal IP-based solution for corporate communications, higher education or any professional AV application.



The projection system in this divisible room unifies the independent systems from the Vieux- Montréal and the Vieux-Port Rooms.

A lighting control screen allows the choice of four preprogrammed screens or individual zones. Hotel management pages are password protected and include room combining, where applicable, and remote room panel simulation.



Guests have full control over the room's lighting, temperature and AV systems.



TIPS

- Provide key functions and an intuitive GUI on the guest's touchscreen to minimize the need for staff support.
- Use occupancy sensors with AV controls so systems shut down automatically when not in use.
- Ensure that the media network and control infrastructure are flexible to allow for future upgrades.

Centralized Control

The hurdles we would encounter in replacing a 20-year-old lighting system were not apparent at the start. Many undocumented changes had been made during the past decades. The manufacturer we chose for the lighting system helped us with the initial analysis, which alleviated the extra surprises discovered onsite once the work was underway. Regardless of the required changes and add-ons, we had to respect the client's deadline and budget. Proper and rapid coordination with the client's general contractor and electrician was crucial.

Another challenge was the connection into the heating and cooling systems. Crestron provided all the hardware and BACnet software protocols required, and we were able to coordinate with the HVAC contractor to make these work from the same multifunction Crestron touchscreens that staff and guests would use.

BACnet integration was a first for us. The manufacturer we chose for the control system that had integrated BACnet IP protocol helped us along the way. The information supplied to us from the HVAC supplier

was incomplete, so we had to "sniff" the required information directly off the LAN communications.

When the system would glitch during the initial commissioning, there was some finger pointing, which made it tough to keep our heads up. However, thanks to our client's understanding and our determination, we were able to prove that our solution was reliable, once we had the proper information from the HVAC supplier and our parameters properly set up.

Also related to centralized control, every room had local mechanical audio controls (four sources of background music, volume control) that we had to eliminate, and then integrate those same controls into the new single-user interface touchpanel while retaining the existing in-house sound system.

The occupancy sensors are all ceiling mounted and strategically located to avoid any dead spots. We also supplied the client with a vertical and horizontal network cabling infrastructure for new access points supplied and installed by others; this was just a matter of pulling and terminating network Cat6 wires.

Enhanced Experience

Now, guests at the hotel have everything they need for routine meetings right at their fingertips. The staff only

has to provide cables to connect the laptops or video gear to the wall plates installed in the front and back of every room. Once they are hooked up, guests can push one button that turns on the projector, lowers the screen, dims the lights and adjusts the sound.

If a guest needs a videoconferencing connection or multiple microphones for a panel discussion, the hotel staff can run the signals through the DigitalMedia wall plates without having to run cables across the room.

Peter Tertsakian, the hotel AV Director, is ecstatic over the centralized control capability. "A great feature of the control system is that you can be in any room, yet have full control over the lighting, volume levels and even the temperature of a meeting room from any of the touchpanels," Tertsakian said. The system can also be accessed remotely for troubleshooting, using the Crestron smartphone app. "I can show a guest how to access everything he needs using one or two buttons. I can then leave the room and go to lunch, confident that, if there is a problem, I can fix it from wherever I am," Tertsakian explained.

The new systems also provide significant energy savings because the AVL and climate control systems are integrated into the Crestron occupancy sensors. For example, if there is no movement in a room for a specified period, the system shuts down the audio, video and lighting equipment, and returns the temperature to default settings. "In the past, for an evening meeting, we might have shown the client how everything works and then gone home," Tertsakian said, noting that, "When we returned the next morning, the projector would still be on. We don't have that issue any more."

Futureproofing

Although the hotel continues to use its lighting fixtures from 1992, when it is ready to upgrade to LED, the Crestron dimmers and control processors will be ready, as well. Should the hotel decide to make 4K ultra-high definition its presentation standard, the staff will find that their mainframe and wiring are already compatible.

We also worked out the param-

eters for an upgraded version of the room automation system. When the InterContinental is ready, we will set up the system so guests can request additional services without having to make a phone call. If they want more croissants, for instance, they will be able to hit a button on the touchscreen to make the request, and catering will instantly receive an email.

In the same way, if they spill something on the floor or want an extra microphone, they will press two buttons and the right person will automatically receive the request. Should they prefer to speak to someone instead, they will be

able to do so from the touchpanel itself.

During Phase 2, we will update the control system to include Crestron Fusion room scheduling software. Today, the installed touchscreen outside each room is just a name tag; but when our implementation is complete, it will tie into the hotel scheduling system to show who is occupying the room and at what times, as well as allow staff and guests to view the schedule of future events.

With the completion of Phase 1 upgrades in technology, the InterContinental Montréal reported an uptick in bookings from both repeat and new customers.

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