

"Give us full video- and teleconferencing capabilities, but keep everything—everything!—out of sight." Those were the marching orders issued to systems integrator Absolute Video Theatre (AVT) when awarded a contract to upgrade the board room of Toronto-based Wittington Properties. To say the least, it was a tough demand, but that's what Wittington wanted.

Obviously, any kind of intrusive A/V equipment—be it front projection TVs, cameras, speakers, or microphones—were simply out of the question for this installation. Hence, AVT and the interior designer, Rebanks Architects, had to consider both performance and invisibility when they came up with the design. Unfortunately the A/V industry has yet to invent invisible equipment.

Faced with this truth, AVT's strategy was to install everything so that it could be concealed when not in use. Central to this strategy was the board room's 24-seat Corian™ table. For teleconferencing, the requirement was for AVT to install 12 table microphones, then connect them to a teleconferencing bridge that could handle up to 15 telephone lines at once.

After suffering numerous line drops through the local telephone company, Wittington decided to build its own teleconferencing bridge. "It was embarrassing to the users to keep having such problems with Ma Bell," said AVT president Mark Corlett. "Rather than risk more dropped lines, they decided to install a telephone bridge of their own. However, it's not easy to find equipment to handle 15 lines. In fact, when I went down to Infocomm in June of 1998, there wasn't anyone who could do this," Corlett further explained. Thankfully for AVT, "the Gentner people came

through and said they could make it happen for us," says Corlett. As a result, Wittington's 15 telephone lines and 12 microphones terminate into fifteen digital telephone hybrids and three interconnected Gentner AP800 matrix controllers that are installed in an operator booth located outside of the board room. Other equipment is concealed within the board in two cabinets, or inside one of the table's legs. The teleconferencing system itself is controlled using a bi-directional wireless Crestron control system. It monitors the status of each phone line, allowing the operator to either remotely connect or terminate connections, as well as detect and recover dropped lines.

As for microphones, they had to be quick to install, yet invisible when not in use. To solve the problem, Corlett chose Shure MX 393 Microflex table mics. He fitted the back of each with a right angle, gold-plated 1/4" jack made by Switchcraft. In use, the male jacks plug into female jacks embedded in the table and are connected to cables that travel underneath to one of the three table legs. Being hollow, the table legs conceal the cables as they snake to the floor, then travel via conduits to the operator booth. To conceal the connections when not in use, the mics are removed, and decorative disks styled to match the table are inserted. For speakers, AVT mounted four Atlas Soundolier Fa-95-6 loudspeakers over the table. At the front of the room two AEG IWS8 in-wall speakers and an Atlantic 272-PVM sub-woofer were installed.

Sound complex? Well, the Wittington videoconferencing system is even more complicated. The heart of it is an nView 455 video data projector. Back in early 1997, when

AVT did its first installation for Wittington, the video projector was built into the boardroom table. Specifically, AVT installed an Auton lift assembly into another one of the table's three legs. When needed, the nView simply rises up 8 inches and fires at the Draper screen. When finished, it descends back into the table, leaving a flush-mounted surface on top. Of course, AVT didn't want the concealing panel's edges to stand out. That's why this edge matches the table top's hex line design.

As for heat? Obviously a ventilating fan would ruin the room's ambiance. That's why the projector's heat is drawn away by a special cowl, which feeds hot air directly into the plenum space of the room below. The result is there's no noise from the projector, or its cooling system, heard within the boardroom.

Then there's the video camera, which feeds the board room's PictureTel Venue 2000 videoconferencing system. In a burst of inspiration, Corlett realized that he could attach a 14-point Hirose connector on the projector's housing. In turn, he could then connect the system's PicTel pan and tilt video camera to this. The Wittington system has six 'Look at Me' buttons. When one is pressed, the PictureTel camera automatically homes pans, tilts, and focuses on the person who pushed it.

As a result, even videoconferencing is quick and easy at Wittington. Just mount the camera when needed, then remove it when the projector has to be concealed. Feeds from this camera travel back to the equipment rack, where they're sent out via ISDN telephone lines. Meanwhile, the projector can also display feeds from either VHS, computer, or cable TV inputs. The bottom line: AVT was able to give Wittington exactly what they wanted, although not without experiencing much frustration. It wasn't just concealing the equipment that was difficult, Corlett explains. The board room's midtown location made it prey to lots of RF interference, which AVT had to trap out with ferrite bead filters.

Thanks to AVT's "tenacity", Wittington Properties now holds banquets in the same room where they videoconference. For the guests who dine there, it's the perfect illusion of low-tech elegance ... as long as no one looks underneath the boardroom table.

## **Equipment list:**

**3 Gentner AP800 Matrix Controllers**

**15 Gentner AP10 telephone hybrids**

12 Shure MX 393 microflex table mics

Creston Crestnet II master controller

Creston CTP-4000RF wireless remote control

Crestron STX-3500C bi-directional wireless remote control

2 Crestron wireless gateways

Sanyo 14" color monitor RMA-7514

Xantech IR control system

PictureTel Venue 2000, System 50 videoconferencing system

6 'Look at me' buttons

Auton lift assembly

Aiwa Multi Standard VHS Hi Fi HV-MX100u

Sony SLV-770 VHS Hi Fi

Kramer VIZ-5x4 AV matrix switcher

Extron automatic switcher SW4

Kindermann Famulus reflex low profile overhead

Draper tab-tensioned screen

Draper 1400 series white board

nView 455 video data projector

4 Atlas Soundolier FA-95-6 coaxial speakers

2 AEG in-wall IWS8 speakers

Atlantic 272-PVM subwoofer

Lantex PPX 120 watt power amplifiers

2 Furman SP20A amplifiers

Rane SM92 line mix

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