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Business & Corporate

Networked AV Brings Corporate Facility into the Moment

Techkinect shifts Deceuninck's thinking toward a scalable, flexible architecture on networked AV and control technology

Corporate AV technology is constantly evolving. From sound and lighting that sets the mood of a workplace, to bring your own device (BYOD) set-ups for remote workers, companies are constantly adapting to the ever-changing landscape.

The meeting space is increasingly the pulse of any modern corporate facility, with most workers spending a significant amount of their workweeks in meetings. Techkinect – a provider of audio-visual and technology solutions for the commercial and residential sectors – recently reinvented collaborative working for Deceuninck, a manufacturer of PVC (polyvinyl chloride) windows, thanks to a three-way divisible meeting space complete with customized control.

Jacob Reek, director of business development at Techkinect shares that their role in the storyline quickly evolved. "Deceuninck were reworking their training room and wanted to create a divisible three-way space with the option to mix and match rooms," he said. "That included bringing in additional video conferencing and sound reinforcement systems to support different meeting configurations. "

Reek shares that the Deceuninck team initially reached out to request some new projectors, and it quickly turned into a much bigger project.

"They were not thinking much beyond connecting a few computers and maybe adding some simple switching," said Reek. "There's a solution that will allow you to connect as many inputs and outputs you want across these three spaces and later scale throughout your building if you want, and hand you complete control of all the systems over the network." That moment started Deceuninck's journey into the world of networked AV and control, powered by Atlona's **OmniStream™ AV over IP** and **Velocity™ control solutions**.

Build Your Backbone

The in-house team at Deceuninck already began remodeling the room before Techkinect arrived on site, creating three separate spaces using acoustic walls while also painting and reworking other areas. Leo Acuna, director

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-Jacob Reek, director of business development at Techkinect

of Operations at Techkinect, was a vital piece to the project. The project required customized structuring in the drop ceiling to accommodate recessed projector screens that are also controlled with the system. He led their team in the installation and quality assurance for the integration. The Techkinect team instantly got to work on arrival, running new Category network cabling to each location to ensure availability of source device connections and positioning of displays.

"I have learned from experience that too much cabling is better than too little," said Reek. "People always end up adding more as a project develops, so adding it at the beginning creates a strong backbone. We decided on CAT6 plenum, and we ran multiple cables to every projector location because we knew that cameras and microphones would be in the vicinity. We also ran it to each wall so that we could add a touchscreen in every room, and optimize screen locations and speaker positions."

Techkinect crafted a schematic that placed the equipment they were integrating in each room. They broke down the IP addresses and MAC addresses for each piece of technology, as well as what port each product is plugged into on the network switch and patch panel. This meant that they could account for everything in the space, avoiding any problems later down the line. All three rooms have the same audio and video, but just two have microphones and cameras.

Divisible Networking

Techkinect used Atlona's OmniStream AV over IP solutions in each space because of the multiple devices in use. For the HDMI signals they chose a selection of single-channel encoders and decoders (**AT-OMNI-111, AT-OMNI-121**), as well as the dual-channel encoder (**AT-OMNI-112**). For routing USB signals over the network, the team employed

USB to IP adapters for host devices (**AT-OMNI-311**) and IP to USB adapters (**AT-OMNI-324**) for peripheral devices.

"There are a lot of USB devices in these three spaces, and they wanted the freedom to plug in flash drives and bring their own USB devices for presentations," said Reek. "The OmniStream USB/IP adapters create a harmonious ecosystem where the host computer in each room still works no matter what peripherals are added to the mix."

Completing the video distribution in the space, the OmniStream encoders and decoders are used to route 1080p video to three BenQ LU930 projectors and three DragonFly 120" recessed screens.

On the audio side, signals from various microphones and other sources in the space are mixed and processed by ClearOne Converge Pro 2 DSP mixers, then routed to Atlona **AT-GAIN-60** amplifiers. The GAIN 60 amplifiers power a total of eight Episode ECS-800-IC-6 70-volt ceiling speakers.

Techkinect emphasized the performance aspect of the audio system, adding that ClearOne's voice tracking technology and Atlona's powerful amplification optimize the audio in each room. "The ClearOne BMA 360 Microphone System used in the space has beamforming Voice Lift technology," said Reek. "This ensures seamless sound reinforcement without any acoustic or feedback problems."

Reek chose camera tracking systems for Rooms A and B to capture various settings including conferences, virtual calls, and presenter tracking. "We deployed cameras so that they face the presenter, and they work with ClearOne's BMA 360 voice tracking capabilities. We use these to follow the host as they move around or between rooms. The microphone system and camera system pick up which room they're in so operators don't have to perform any manual switching." Reek adds that all technology components are loaded into Atlona's Velocity control system, with an **AT-VGW-HW-20** hardware gateway that is expandable to 20 rooms. "Velocity is also a powerful device management system that manages and configures Atlona IP-controllable devices on the network. It's the brains of the entire system," continues Reek. "It is a browser-based user portal that lets you discover, set up, and commission both Atlona and third-party IP-controllable products to help streamline the configuration of AV installations. Velocity provides continual system monitoring and the ability to manage firmware and credential updates."

Techkinect added **AT-VTP-1000VL** touch panels in all the rooms. "These are 10-inch touchscreens with bezel LED lighting for room scheduling and AV control," he said. "Deceuninck has three computer inputs in each room and a wireless input, as well as three outputs depending on the way the room is set up. For example, I have custom programming set up on the DSP, as well as in Velocity. Depending on what room they are in, I can send custom programmed serial commands to the DSP and explain how it is configured. This gives users the ability to control what they see on the screen and what they hear from the speakers." The entire project includes a custom programmed user interface from Techkinect's design team, including company branding and integrated control.

The upgrade to Deceuninck's facilities offers complete versatility for every kind of meeting. Reek summarized the advantages of Deceuninck's updated space. "Across all three spaces, it's a story of using flexible, expandable and reliable AV systems within a divisible space that evolves with the times, and keeps up with the technological demands of corporate facilities," he remarked. They use the space(s) every day for operations and productivity.

SELECT FEATURED PRODUCTS

MODEL	DESCRIPTION	
AT-OMNI-111	The Atlona AT-OMNI-111 is a networked AV encoder for HDMI sources up to 4K/60 4:4:4 and HDR (High Dynamic Range), plus embedded audio and RS-232 or IR control pass-through.	
AT-OMNI-112	The Atlona AT-OMNI-112 is a networked AV encoder with two independent channels of encoding for two HDMI sources up to 4K/60 4:4:4 and HDR (High Dynamic Range), plus embedded audio and RS-232 or IR control pass-through.	
AT-OMNI-121	The Atlona AT-OMNI-121 is a networked AV decoder for HDMI output supporting resolutions up to 4K/60 4:4:4 and HDR (High Dynamic Range), plus audio embedding and de-embedding, and RS-232 or IR control pass-through.	
AT-OMNI-311	The Atlona AT-OMNI-311 works in tandem with the AT-OMNI-324 for extending USB from peripheral devices to a PC over Gigabit Ethernet. The OMNI-311 interfaces with a PC or other host device.	
AT-OMNI-324	The Atlona AT-OMNI-324 works in tandem with the AT-OMNI-311 for extending USB from peripheral devices to a PC over Gigabit Ethernet. The OMNI-324 features a four-port USB hub for peripherals.	
AT-GAIN-60	The Atlona AT-GAIN-60 is a compact power amplifier designed for low or high impedance applications. A mode selector switch allows the Gain 60 to deliver two channels of 30 watts each into 4 or 8 ohms, or a single channel of 60 watts at 24, 70, or 100 volts.	
AT-VGW-HW	The VGW-HW-3, VGW-HW-10, and VGW-HW-20 server gateways deliver 3, 10, or 20 rooms of AV control, respectively. Velocity offers comprehensive system control for Atlona as well as third-party AV devices.	
AT-VTP-1000VL	The Atlona AT-VTP-1000VL is a Velocity 10" touch panel with integrated surround LED lighting. It features contemporary, refined styling with 1280×800 native resolution, and a capacitive glass surface that supports multi-touch.	

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