All photos courtesy of Nottingham Trent University

Extron NAV Pro AV over IP Systems Enable Nottingham Trent University's Innovative AV Display Stands

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Graeme Bagley
Teaching Space Designer
Nottingham Trent University

"Roche Audio Visual and the University are incredibly pleased with the streamlined commissioning thanks to Extron NAV® Pro AV over IP."

Peter Midgley
Sales Director
Roche Audio Visual

Nottingham Trent University – NTU – is a public research university in Nottingham, UK. It traces its beginning to the founding of the Nottingham Government School of Design in 1843, still a part of the university. It is the ninth largest university in the UK, with over 33,000 students at five campuses. The University was already making plans to subdivide and repurpose existing classrooms and offices on its City Center and Clifton campuses - combined student population 26,000 - to create 40 new learning spaces for more students. Then the COVID-19 pandemic hit the UK in early 2020. The reduced room capacity that came with social distancing made the need for more space even more acute.

Challenges

With rapidly changing government guidance regarding COVID and the need to adopt new teaching styles, AV systems designed for the new teaching spaces had to be flexible to support changing room arrangements and to scale AV deployment up or down. Graeme Bagley, Teaching Space Designer in the University's Digital Technologies organization, envisioned a stand-type system with a large flat panel display. The stands would have a permanent look yet be easy to relocate when necessary. A search for off-the-shelf AV stands turned up no products that could provide the right features at the right price. So,

Primary Stands can control and share AV content with up to five Secondary Stands via NAV Pro AV over IP connections through NTU's network infrastructure. 110 Stands are installed in 40 classrooms across multiple buildings at the City Center and Clifton campuses.

NAV Pro AV over IP Encoders and Decoders provide connectivity through NTU's 1 Gbps enterprise network, allowing AV content and system control originating in the Primary Stands to pass to the Secondary Stands.

Primary Stand eBUS Button Panel controls AV source selection, soundbar volume, and power on-off. Control is extended to Secondary Stands via NAV Pro AV over IP through the university's network.

Bagley worked with pro AV integrator Roche Audio Visual, headquartered near Leeds, UK, and Extron to design, fabricate, and commission a custom solution to mount the displays and distribute the AV signals.
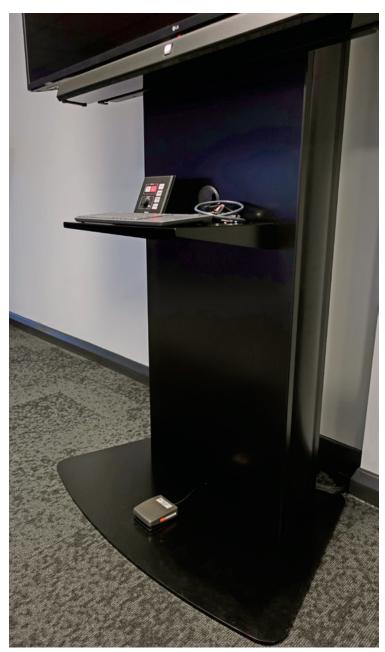
Solution

In all, 110 Primary and Secondary AV Stands were built and commissioned over Summer 2020 break. All Stands feature a 65" flat panel display and soundbar.

Primary Stands Control Secondary Stands and Also Send AV Content to Them

Primary Stands originate the AV content, which can be viewed locally on their own displays and distributed over the network for viewing on up to five associated Secondary Stands.

Each Primary Stand can select HDMI program content from a built-in PC or external sources. A Miracast™ receiver and Apple TV allow external content to be shared to the Primary Stand from BYOD devices via Wi-Fi, and an HDMI input jack allows external program sources to plug-in via a wired connection. A SW HD 4K switcher in each Primary Stand selects among the sources. The selected HDMI content is fed to a NAV E 101 Pro AV over IP Encoder. The Encoder passes HDMI to the Primary Stand's display and soundbar. It simultaneously feeds the AV content from the Primary Stand to the associated Secondary Stands through NTU's 1 Gbps enterprise network. The Secondary Stands have a NAV SD 101 Decoder to receive AV content and control from the Primary Stands. The Primary Stands include an IPCP Pro PCS1 control processor and an EBP 100 Button Panel that allow users to select the AV program source, adjust soundbar volume, and turn display power on

or off. The user selections apply to both the Primary Stand and the associated Secondary Stands.

Rapid Roll-Out and Reconfiguration

NAV® Pro AV over IP allows the university to leverage its existing network cable plant to easily combine or separate the AV systems across rooms as class sizes and social distancing requirements change. Roche Audio Visual worked in partnership with Extron to program, set up, and test each NAV system off site. The two companies then worked in concert with Graeme Bagley and the NTU technical staff to install, test, and commission all 110 stands on the university's network in only two weeks. Roche AV's Sales Director Peter Midgley, responsible for managing the project, notes that, "A project of this scale utilizing traditional AV switching and transmission technologies would have been impossible to complete within the two-week window." NAV Pro AV over IP enabled rapid initial roll out and makes ongoing reconfigurations just as quick and straightforward.

Results

According to NTU's Graeme Bagley, "we decided on a one size fits all custom solution to achieve expedited deployment with a predictable per-unit budget. Timely delivery, established partnerships, and strong support were key factors when selecting the system integrator and the suppliers of system components." Reflecting on the success of the project, Roche AV's Peter Midgley praised Extron, observing that, "Roche AV and the University are incredibly pleased with the streamlined commissioning phase thanks to the utilization of NAV Pro AV over IP. There's always a risk when integrating new technology. But NAV quickly demonstrated reliability, allowing on-time handover of every room containing the new AV Stands, with high confidence that they were ready to play their role in delivering quality multimedia in support of the university's teaching mission."

Primary Stands include a foot switch that provides no-touch control of main power and AV source selection.

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