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Collaboration was at the very heart of a large-scale AV project by integrator Pure AV at Staffordshire University in the UK. Nial Anderson looks at how the project enables students and staff to interact seamlessly.



Shared goals

Staffordshire University in the UK traces its roots back to 1901 when a site was acquired in the city of Stoke-on-Trent for mining education. Soon afterwards pottery classes were launched to bolster the local area's dominant industry. While mining and pottery have largely disappeared in Britain in the years since, the college has survived and evolved, officially becoming a university in 1992.

This year Staffordshire University crossed a new boundary when it completed a comprehensive AV installation in its classrooms with the aim of making collaboration easy and intuitive.

"[Achieving] this would enable us to provide an opportunity for our students to learn and interact with each other and with staff as seamlessly and productively as possible," explained Mark Savage, associate dean of learning and teaching at the university, who oversaw the project.

"The idea was to create an environment where they can flourish. The room would be flexible and adaptable to meet the needs of a variety of learning styles. Everyone learns in different ways – there'll be up to 48 students in this

“It's not a perfect science but it's our best attempt to meet the needs of what we believe our students want and aspire to.”

- Mark Savage, Staffordshire University

room and there'll be potentially 48 different ways of interacting with the material. It's not a perfect science but it's our best attempt to meet the needs of what we believe our students want and aspire to.”

This initial installation was to involve two classrooms that at a later date could be replicated across campus.

Dave Parkes, the university's associate director of information services, was involved in the initial planning of the spaces.

"We sat around and had a wide-reaching discussion about what a future learning space would look like, how it would support learning and how we could measure that," he recalled. "We thought about what our staff wanted to achieve and what the students require. Once we got started it was about understanding the detailed spec. The starting point was the most basic request that everyone wanted a visualiser in the room."

After the initial plans came together and a budget

was established, the university's IT & learning technology team went to work to establish what equipment would help the stated goals be achieved. One of the main challenges to be solved was how to enable BYOD within the classrooms across the range of devices students and teachers would be using.

Ed Matthews, the university's senior IT & learning technology officer, said a discussion with integrator Pure AV and a trip to ISE in Amsterdam helped.

"It was at ISE that we spotted Wolfvision Cynap which seemed to tick all the boxes on what was required," he explained. "We had a limited budget so it was a case of having less functionality in both rooms or have one all-singing all-dancing room, and another with a slightly lower spec. So in the best room we had the Wolfvision Cynap and used a different product in the other room."

Cynap was first shown in Europe this year at ISE but

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Extron amps and speakers
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< was not officially released until the end of September. It enables multicast streaming of content to any device and allows students to make notes, annotate and record. Cynap handles multiple wired and wireless inputs, as well as multiple input and output streams. The unit currently installed at Staffordshire University has 64GB of space, which would be more than enough to store around a week's worth of lectures. The university intends to pursue a lecture capture strategy, and plans to install a lecture management tool like Blackboard to help organise content.

Both rooms installed by Pure AV are located in the Brindley Building, home to the university's business school. The 'high-spec' room consists of a built-in computer housed in a lectern at the front of the class that also contains the Wolfvision Cynap, a blu-ray player, and visualiser. The room also features a Smart kapp interactive whiteboard which has the ability to broadcast content to students' devices for them to capture.

The whole system is controlled from an Extron touch panel at the lectern that enables switching between all of the sources and adjusting volume and lectern mic levels. Lecturers can plug in their laptop either via an analogue VGA connection or digitally via HDMI. All of the sources are then put into an Extron IN1606 switcher/

scaler and through a distribution amplifier to each of the four displays in the room. With lecture capture and flipped learning on the horizon for its students, the room was designed with two

screens at the front and two at the back of the class so students can see one easily wherever they are seated.

Tony Crossley, pre-sales technical director for Pure AV, said that while BYOD threw up a range of security concerns, he didn't see having to use the university's preferred range of manufacturers as a disadvantage.

"We were quite like-minded in terms of technology - there were no disagreements there," he said. "When it came to security, we know that all universities sit on the Janet network and the people who administer this network have particular requirements.

"Essentially the rule of thumb is if someone comes in with a device that needs to sit on the network the university needs to know who that person is.

"So it needed to be a collaborative approach with the IT team to come up with a plan. It's much more than them just plugging a new router into their network, it's a whole new approach where security has to be considered and taken seriously. For us it was a case of being totally open with the IT guys about what we planned to do, what we were supplying and what exactly was going to happen in a real world scenario."

Matthews agreed that thorough planning made the install perfectly straightforward, aside from the use of a pre-production Cynap unit which was supplied temporarily in order to meet university timelines, until an official product release became available.

"Neither ourselves or Pure AV had seen Cynap in the flesh before or knew exactly how it was going to connect," he said. "It was quite a steep learning curve and there was some plugging and unplugging, trying different things and updating firmware as it became available.

"One issue we ran into was that because we had a touch screen monitor for the PC we thought we could plug that directly into the Cynap to control it that way. But by doing that we lost the

functionality of the PC, so we bought an Extron USB switcher which allows the user to switch between controlling Cynap and the PC."

It was the summer holidays at the time of going to press so most lecturers hadn't actually had a chance to use the equipment, but a full Cynap production unit was installed in September. Matthews predicted that, with a system based around touch screen technology with which lecturers will already be familiar and drop-in sessions organised to cover anything more complicated, adoption would be straightforward. He said cameras that are likely to be installed for lecture capture would also assist if any troubleshooting needed to be done.

"If there are problems we can connect and see what the problem is rather than having to rely on a description of what's happening," he explained. "We're always trying to implement and improve our remote working to save time. We use the Extron global viewer server so we've got a real time view of all our control panels in the rooms and we can remotely control those panels as well."

With the Staffordshire University staff hugely excited about using their new collaborative classrooms in the forthcoming semester, Crossley said he sees huge potential for collaboration-focused AV to take off in other educational institutions.

"It's only really been in the last 12 months that universities have been seriously talking about collaboration; corporate organisations having been involved for far longer," he said. "A corporate client once said to me 'if you tell me, I'll forget it - if you show me, I'll remember - if you engage with me, I'll embrace it'.

"The 'show me' part is what AV has traditionally been involved with, but collaboration is all about engagement and if that causes people to embrace what is being discussed, this can only be a good thing." 

Tech-Spec

- Video**
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- Extron touch screen controllers and switchers
- LG displays
- Smart kapp digital writing board
- TeamMate lectern
- Wolfvision Cynap



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