

The International Institute for Product and Service Innovation (IIPSI) is the latest addition to the Warwick University campus in the UK. Pure AV won an OJEU tender to supply the latest collaboration and presentation technology and Chris Fitzsimmons went along to take a look at the results.

An inspiring enterprise



The boardroom space is glazed on three sides, necessitating the use of blinds and a high brightness projector from Epson. Sound reinforcement in the open-services ceiling required pendant style speakers from AMC.

The International Institute for Product and Service Innovation is a new building co-funded by the European regional development fund and the University of Warwick. It provides dedicated support to SMEs in the creation and testing of products and services, through the demonstration of new technology, new processes and new applications.

The media fit out of the facility was always going to be central to the task of demonstrating the methods and technologies developed at the university.

Gavin Edwards, manager of digital technology at IIPSI commented: "Part of the design strategy was to say that we want an environment that's actually exciting from the moment that people come in. It's interactive, it's easy to use, but it's got a bit of a wow factor as well."

The AV systems also needed to reflect the high standards being employed throughout the building and offer easy, centralised management of the meeting spaces and the equipment. The university

also specified wide screen, high definition audio visual facilities that provided impact, convenience, effectiveness, simplicity, visibility and audibility. In addition the brief featured a number of mobile collaboration and presentation systems including Microsoft Samsung SUR40 tables.

The remainder of this mobile collaboration capability is made up of ten trolleys with tilting screen mounts (Prestop PT-M-Smartlifts), which hold six NEC 55" multitouch displays and four NEC 46" displays. The units currently operate Windows 7 but are Windows 8 ready to take advantage of the OS's new touch capabilities. They are intended to act as multi-user collaboration tables, draughtsmen's workstations or presentation screens.

Tackling the need for a wow factor and freeing up some budget for expenditure in other areas, Pure AV elected to deploy a completely iPad-based control solution built around Crestron's Mobile Pro application and MC3 control processors.

Pure AV, under project manager Andy Truswell, put a lot of work into the interface design here developing a task based approach. Organising the interface by task rather than input or output options made the systems as easy to use as possible for the variety of new users that are expected to take advantage of the centre.

Edwards was pleased with the choice: "The iPads can be used for more than just the control interface for the AV. So, if we've got particular events running we can take them out of the secure unit they are in and do things like throw images up on the screen using AppleTV."

The media facilities are spread over four floors of the building. They encompass a reception area and plastic electronics lab on the ground floor; a boardroom, meeting and conference rooms on the first floor; a project / user observation room and user focused design area on the second floor; and finally the technology sandpit on the third floor. In addition to the dedicated spaces, digital signage displays are installed in the stairwell at each level, and room booking information is displayed outside each room using 4" Crestron TPMC wall-mounted panels. These are connected to Microsoft Outlook via Fusion RV software.

All of the content and signage in the centre is run over the same Cisco digital media solution used by the rest of the campus. Cisco DMP 4310G media players are connected to Samsung ME series LED-lit LCD displays for signage, and are also installed in all rooms as sources for the media matrix.

"The decision was taken [to deliver content over IP] because the university has already invested heavily in a Cisco network. As far as I'm aware it's one of the fastest HE networks in the country," commented Gavin Edwards.

The content is either in the form of the digital signage from a central server, or IPTV, or from the various cameras used for behaviour observation in the user experience room.

On the ground floor the reception was fitted out

Tech-Spec

Audio

- AKG radio microphone system
- AMC Pendants
- Bose MA12 Line Arrays, MB4 Bass Module, Acoustimas 15 Speakers
- BSS Blu100 Audio DSP
- Crown XLS1500 amplifiers
- Extron MPA2002, MPA1002 Amplifiers
- OHM KS3 Cabinets, CL-3T Speakers
- Revolabs Radio Microphones, Conference Microphones



with a 46" digital signage display and a pair of 55" NEC multi-touch displays on articulated mounts. One of these will show content intended to make the building's users think and act in a "greener" manner, whilst the other will show the corresponding statistics on the building's energy usage and follow the BREEAM energy monitoring requirements.

The plastic electronics laboratory also features a Samsung 55" display to demonstrate some of the processes used.

The first floor boardroom brief required the creation of a high quality presentation and video conference facility in a space which is glazed on three sides. This necessitated the installation of sun blinds and a 4,500 lumen Epson B-G5750 projector, which runs at full HD resolution. Kramer scaling and switching is used to manage the various sources. These include VGA, HDMI and audio via Extron Cubby input boxes in the boardroom table as well as the Cisco C40 HD telepresence unit. The Apple TV and Belkin ScreenCast WiDi units (which allow wireless display from Intel WiDi enabled laptops) complete the video inputs.

Audio is amplified by an Extron MPA2002, and reproduced via AMC pendant and OHM KS3 cabinet speakers. Revolabs conference mic perform voice pickup for the VC system, whilst DSP is provided by BSS Blu100 processors.

A user interface is provided by an iPad, mounted in a BouncePad Static 30, which controls the Crestron MC3 processor.

Adjacent to the boardroom and connected via a removable partition is the 3D viewing room. The client had asked for as large a screen as possible in the space, and Pure AV installed a 3.6 x 2.25 metre DNP Zenith screen. This is served by direct rear projection from a projectiondesign F35AS3D, allowed by the architect's

generous allowance of enough space to avoid the use of mirrors. Dual Link DVI signals and 120Hz refresh rates mean that this is arguably one of the best looking 3D solutions on the market today. Content for the 3D projection system is served from a dedicated PC.

Foreground audio reproduction is via Bose MA12 line arrays and an MB4 bass unit, both powered by a Crown XLS1500. AMC pendants provide some fill-in and microphone sound when the partition wall is opened up to create a larger conference space. The room also features an Ampetronic induction loop, and the 19" equipment rack holds similar equipment to the boardroom, with the addition of an AKG wireless microphone system.

The four meeting rooms each seat 10-12 and rooms one and two can be combined to a single larger space. With that exception they are all equipped identically: Kramer switching and scaling is again deployed to manage inputs from the Cisco network, Apple TV and Belkin wireless display units. In addition there is a Cisco web cam and Revolabs microphone for web communication.

Because external content is streamed via the Cisco network or provided over HDMI, Kramer FC-49 audio embedders and FC-46XL de-embedders are also installed. This allows the audio signals to be amplified separately before reproduction. The projection system is the Epson GB-5450WU WUXGA unit, which delivers 4,000 lumens.

Audio reproduction is provided by four OHM CL-3T ceiling speakers, driven by an Extron MPA1002 amplifier, and VC10+ volume control module. EQ is performed by a BSS Blu100 processor.

Control comes via the Crestron MC3 processor and Mobile Pro application running on a docked iPad.

And in the combined space, the projection systems

can be set to display the same content or different sources depending on the requirements of the meeting.

The meeting room on the second floor is similar, but offers a 60" Samsung Smart Screen as the display, and a 5.1 surround sound solution. The space doubles as an observation room to record the behaviour of the occupants. To achieve this it is fitted with a trio of Panasonic PTX cameras and three Audio-Technica boundary layer microphones.

Summarising his thoughts on the project Gavin Edwards said:

"Broadly speaking we are very happy with the outcome. There are certain restrictions within the iPad app from Crestron, and there are certain things that if it were more capable we would do. The lack of gesture-based control is a bit of a shortcoming of this version. But, I think it got close to what we wanted.

"At every price point there is some sort of compromise. I think for an HE establishment working with enterprise this is a really top end solution, and certainly in advance of anything that the businesses we work with would typically use."

He also had warm words for Pure AV's project manager Andy Truswell and his team: "They have delivered us the flagship solution which we were seeking from the outset. The staff and visitors to IIPSI have been impressed with the level of technology, and our technical team with the quality of the end-to-end solution delivered with a relatively small budget." 

The observation room allows IIPSI clients to monitor the interactions of users with products or services.

Tech-Spec

Video

Apple TV
Belkin ScreenCast WiDi receiver
Cisco C40 HD Telepresence Unit, DMP 4310G media player
Crestron TPMC-4SM, MC3, Crestron Mobile Pro, Fusion RV server
Epson EB-G5750WU, EB-G5450WU Projectors
Kramer VP425, VP730, VP434 scalers + VS1616H, VS66H, VS84H switches
NEC 6-touch interactive screens
Panasonic SC385 PTZ Cameras
Prestop PT-M-Smartliff projectiondesign F35AS3D projector
Samsung ME series LED Displays, 60" Smart Screen