



Innovations Works Out the Solution for Isaac Newton Institute

The Isaac Newton Institute, part of Cambridge University, is an international visitor research centre where mathematicians and scientists from around the world come together to apply their respective specialisms to problems like climate science modelling, DNA function and computing. Around 1500 visitors, including people like Stephen Hawking, come to the Institute each year and a great deal of groundbreaking research has come out of the centre since it opened 20 years ago.

The atmosphere and facilities at the centre must be conducive to fostering breakthroughs in mathematical and scientific thinking and Audio Visual is one of the tools that visitors need at their fingertips. The smooth running of the IT and AV facility is the responsibility of Mustapha Amrani, the Computer Systems Manager at the Institute. There are two seminar rooms available, the largest of these seats 107 at tables and is equipped with an integrated AV system that used to run on an AMX control system. When Mustapha needed to upgrade the equipment in this room, he contacted Peterborough based, Innovations alongside other suppliers for proposals. He chose Innovations because “they could do everything we asked for at a competitive price.”

Client:
Cambridge University Isaac Newton Institute

Requirements: To allow visitors from all around the world to connect to AV systems regardless of device compatibility without cables. Audio system required upgrade due to interference and poor sound quality. AMX system needed replacing as it had become too cumbersome and difficult to manage.

Solution: Innovations installed a connection device to enable almost any device to connect to the main boardroom control system. A new Crestron control system was installed and programmed to replace the AMX system. Major upgrades to the sound system were undertaken using new radio frequency shielded microphones and a complete reconfiguration of the sound processor.

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As part of the brief, Innovations were faced with the challenge of finding a fool proof way for people to connect from the stage to the boardroom system from any number of digital and analogue devices including i-Pads to Mac and laptops. Since the stage is about 30 metres from the Control System rack, it was too far to trail cables. The solution that Innovations came up with was the Kramer Sid X1 connection box which allows most devices to be plugged into it and then re-routed to run over a CAT 6 cable to the main control system. This means that the visitors that come from all over the world are able to use their devices without compatibility issues, something that has proved extremely valuable.

The quality of the output has been vastly improved with the installation of a large Epson EB-Z8000 digital projector which has innovative dual lamp and 3LCD technology to provide high brightness and true to life colour. Using a prism, the three colour images are combined to form a full colour image consisting of millions of colours. Mounted high up on the ceiling, the projector is tough, reliable and energy efficient. An electric retractable screen was also installed with all of the cabling situated at the rear of the screen, hidden out of sight. This comes down automatically when the Crestron system is operated.

Another problem on site was interference with the microphones from mobile phones and feedback from speakers. This is more of an issue at Isaac Newton Centre than it would be elsewhere because seminars are recorded and uploaded to the internet for global viewing.

Innovations specified new radio frequency shielded microphones to minimise interference. Whilst doing this, they discovered that the audio sound processor needed to be reconfigured. The result is that there is no interference at all and the client has an audio system that "is the best it's ever been".

A new Crestron control system was installed to replace the existing AMX system which was becoming cumbersome and Mustapha was finding it increasingly difficult to find programmers for it. Much of the Crestron programming was done by Innovations' engineers off-site, thus minimising impact on the day to day running of the centre. Everything in the room except the video conferencing is now operated from one Crestron control panel that sits in its own docking station.

The existing videoconferencing system needed replacing too and a new Lifesize Team videoconferencing system was specified. This product gives full HD video quality that allows for natural realistic interactions and is extremely easy to set up and operate.

Commenting on the service provided by Innovations, Mustapha said:

"They are excellent. I gave them a brief, they were very competitive and did exactly what I wanted and more. I can't praise them enough and I would definitely recommend them to others."

Andy Russell, Director at Innovations said:

"We are delighted to work with Mustapha and the team at the Isaac Newton Institute. It's a truly inspirational place where some very big thinking takes place and it is a privilege to be supporting that in some small way. AV is something that facilitates interaction and should work seamlessly in the background, after all when inspirations strikes, you don't want to be worrying about problems with a projector!"