



Client: Aston University
Market: Further Education
Solution: Cat 6 UTP & Fibre Infrastructure

During the first half of 2001 Aston University in Birmingham drew up a plan to upgrade their network, including a proposal to replace the entire existing cabling infrastructure. The existing infrastructure was made up of cabling of different types and qualities from a number of different manufacturers, most of which had no performance warranties. Mid 2002 the University went out to competitive tender for new telephony and data systems, including cabling, and Electron, through communications solutions and services provider Damovo, were one of more than 120 companies that initially responded. Electron were heavily involved in drawing up the design of the cabling infrastructure, ultimately producing a proposal that maximised the coverage of the cabling whilst keeping costs within budget.

A Brand-Rex Cat 6 UTP cabling solution with a 25 year warranty, using SMARTPatch panels and patch cords, was selected as it is intended that the university will implement a full intelligent patching solution in the future. During the course of 2004 Electron installed more than 6,000 Cat6plus UTP outlets in 18 buildings across the university campus. A total of 55 wiring centres were linked via four network nodes by more than 25km of OM3 and OS1 fibre optic cables, creating a resilient network with multiple diverse routes. At the peak of the work Electron had around 25 engineers on site, with the work being overseen by Electron's Project Manager Simon Rhodes, in conjunction with the University's project manager Dennis Mottram.

The project presented a number of challenges, not least of which was the number of different types of area, with differing access constraints, that had to be cabled. These including lecture theatres, classrooms, computer suites, laboratories and the library and involved a number of different types of building construction. The project plan also had to accommodate a number of department relocations and new building work schedules, for example the opening of the new Aston Academy of Life Sciences. Much of the cabling work was performed during term time and was carried out over night in order to minimise the disruption to lecturers and students.

The infrastructure now supports multiple links of 4Gbps (10Gbps in the future) between the network nodes and 1Gbps to the Wiring Centres. The network that Damovo have delivered to the university is fully converged providing VOIP and IPTV as well as the LAN services. All telephone handsets are powered over the network (Power over Ethernet), which means that they are protected by the network Uninterruptible Power Supplies (UPS) that power the active devices installed in the Wiring Centres, thus ensuring continuous operation in the event of a power cut.

AstonIP is the name given to Aston University's new converged network, which is currently the largest converged ICT network in the UK Higher Education sector. AstonIP brings together data, telephony and video onto a single infrastructure, with capacity and capability to meet the growing demands of a modern University. In September 2005 the project and Dennis Mottram (the University's project manager) were presented with the Communications in Business Award for Outstanding Achievement, Best Networking Project (Corporate) and Best Converged Network Project at the Communications in Business Award ceremony, sponsored by Communications News and Cable & Wireless.

To find out more about communications cabling infrastructures call Electron on **0870 011 5456** or visit our website at www.electron.co.uk and click 'cabling'.