



## UCL ADOPTS NEXANS INFRASTRUCTURE FOR ITS NEW ENGINEERING BUILDING

University College London (UCL) has equipped its new state-of-the-art extension to the Engineering Building with an integrated Nexans copper and fibre cabling system

The network implemented by Nexans and GCL Ltd, its certified system installation partner, incorporates more than 5000 LANmark-6 outlets and around 900 fibre desk connections.

The new £19-million, 10-storey extension to the Engineering Building on UCL's main campus in Bloomsbury, London was completed at the end of 2004. Designed by the architects Grimshaw and built by Kier London it provides 9,156 m<sup>2</sup>

of space to bring the departments of Computer Science and Medical Physics and Bioengineering together with UCL's other engineering departments.

The new extension to the Engineering Building will accommodate around 1,000 staff and students as well as a number of high-technology applications, including a virtual reality suite and a real-time x-ray facility, which place major demands on network bandwidth. So in order to meet these existing requirements, as well as anticipated developments such as Gigabit ethernet, UCL decided to implement an advanced network infrastructure integrating Nexans fibre and copper cabling.

### Executive Summary

**CUSTOMER** University College London

**LOCATION** London, England

**REQUIREMENT** High network bandwidth for high-tech applications

**EQUIPMENT** LANmark-6 UTP, LANmark-OF Preterm, Voice cables

**NUMBER** of Points : 5900

### Pre-terminated fibre cables

The vertical backbone of the system is 24-core single and multi-mode Nexans LANmark-OF fibre providing two campus connections to UCL's Foster Court administration building as well as interconnecting with the existing Engineering building. Around 900 horizontal fibre outlets have also been installed to provide fibre to the desk capability. In total, some 44 km of Nexans fibre optic cabling has been installed. The majority of the fibre cables were cut to the correct length



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UCL's Network Connectivity Section Leader

## Challenges

- » Minimal disruption
- » Wide range of performance requirements
- » Complex logistics and planning

## Solutions

- » LANmark-6 cabling ergonomic and aesthetic outlets
- » LANmark-OF fibre to the desk
- » Pre-terminated fibre assemblies

## Benefits

- » High availability
- » Superior performance
- » Seamless implementation

and pre-terminated, enabling the termination procedure, which is crucial to the quality and reliability of the installed network, to be carried out under factory controlled conditions. Where cables had to be terminated on site the procedure was carried out by GCL's trained and qualified installation team.

### LANmark-6

Horizontal connections throughout the building are provided by over 171 km of Nexans LANmark-6 UTP low-smoke copper cabling which offers high Category 6/Class E performance. The LANmark-6 system features tool-less snap in jacks that simplify the installation procedure. Over 5000 network points are available throughout the building, presented either in floor boxes or dado rails, with a number also mounted just below ceiling height for the connection of security cameras and wireless access points. Nexans angled connection points have been used to provide an ergonomic and aesthetically appealing presentation with the added advantage of easily replaceable dust shutters.

Voice connection between the new Engineering Building and UCL's campus telephone system is provided by 2.4 km of Nexans CW1308 copper cabling.

Nigel Hayward, UCL's Network Connectivity Section Leader said: "With over 50,000 network outlets already on campus, our network infrastructure is of crucial importance to UCL. We had two key requirements for the new Engineering Building. Firstly, we wanted a single, fully integrated cable topology that as well as network connections would also incorporate the BMS (building management system) including security card access and cameras. Secondly, we were investing in a major asset and wanted to be sure the network infrastructure would be future-proof to meet the needs of a growing university and the demands of developing technology over the next 20 years – hence the high fibre content. Right from the outset it was clear that Nexans cabling offered the optimum technical solution. It was then a case of working with Kier to select the best installer via an open tender process. As well as being competitive on price and fully qualified, we were impressed by GCL's track record in installing Nexans systems in similar projects. The Nexans/GCL combination has proved a wise choice as the installation has been very well thought out and implemented and all the parties involved – Nexans, GCL, UCL and Kier have shown a high level of teamwork and cooperation. The end result is that the new Engineering Building is up and running with what we regard as the best network on UCL's campus." ☒

