Networking for the Stars

In the year the University of Cambridge celebrates its 800th Anniversary as one of the worlds leading universities, a new state of the art building was unveiled to accommodate the recently established Kavli Institute for Cosmology.

The 1000m^2 facility saw work commence in June 2008 and was completed, ready for occupation in July 2009. In this specially designed building the Kavli Institute will bring together expertise in cosmology from three participating departments in the University of Cambridge; Institute of Astronomy (IoA), Cavendish Laboratory (Department of Physics) and Department of Applied Mathematics and Theoretical Physics (DAMTP).

Cosmology strives to answer some of the most difficult and fundamental questions known to humankind:

- What is the Universe? What is it made of?
- How did it form and how will it end?
- Why are there stars and galaxies? Is our Universe unique?

State-Of-The-Art Infrastructure

The University of Cambridge approach to a new building specification, particularly where network infrastructure is concerned, is to specify the latest and best performing products available. In this project the specification was the HellermannTyton Cat6A offering, Deca[10]. At the time of specification, the Cat6A standard had recently been ratified and therefore offered the best performing copper solution, with the capability of delivering 10 gigabit bandwidth.

NetX were the company chosen to carry out the network installation at the new Kavli Institute building. Roger Moore, Managing Director of NetX comments "We have 13 years experience of servicing the education sector and are an approved System Installer for HellermannTyton. We've worked on a number of projects for different University departments and colleges."

NetX are a Cambridge based cabling specialist with 20 employees. Their portfolio of projects spans a wide range of different projects from commercial office buildings to educational institutions including a large number of schools and universities. Roger Moore adds "NetX have been installing copper and fibre optic cabling for the University for over 13 years and we have the skill and capacity to install the highest performing structured cabling systems. For the Kavli Institute, HellermanTyton's Cat6A Deca10 system was the specified system and being an authorised System Installer, we are also able to offer the 25 year system warranty."

All Systems Go

The installation was a 300 point, comms room to the desk installation for a cutting edge research and theoretical study facility. The requirement was a Cat6A infrastructure with fibre connectivity back to the university network.

HellermannTyton's Cat6A Deca^{10} field terminated system comprises three main components; the shielded keystone jack, S-Foil shielded cable and patch panel. The Deca^{10} system provides complete shielding, eliminating alien crosstalk and guaranteeing superior 10G performance and connectivity.

The keystone is terminated to the cable using HellermannTyton's specially designed tool. The tool has been designed to give the user an ergonomic, easy to use tool that ensures a quality termination by trimming and terminating all cores 8 cores in one single, smooth action.

The 'S' foil cable has been designed to use less foil compared to a standard Pimf (Pair in metal foil) style cable that is constructed with 4 separate shields. The 'S' foil insulates the pairs from each other using only 2 foils. This makes the cable easier to work with as the foil can be removed much quicker and therefore improving termination time.

With a keystone terminated to the end of each cable, at the comms room the keystone snaps easily into the Deca^{10} patch panel, designed with 24 individual springs to ensure the continuation of the shielded system. At the desk the keystone snaps into the HellermannTyton angled module, presenting an RJ45 outlet for access to the university network.

Performing at the Highest Level

The University of Cambridge specified a Cat6A system as it was the latest and highest ratified standard available. Andrew Batey, Computer Officer at the Institute of Astronomy comments “Opting for a Cat6A system was primarily about investing in and installing the best available product, therefore future proofing the building and secondarily to provide a robust network infrastructure that could provide enough bandwidth that allows a large user base to download and move large files without compromising on performance and speed”.

Ewan Wilson, Managing Director of HellermannTyton comments “The field terminated Deca[10] project was a milestone for us and to see it installed without issue for such a demanding and prestigious end user as the University of Cambridge was another step forward for HellermannTyton’s commitment to innovation and development”.

Case Study Classification	
System	Field Terminated
Performance Standard	Cat6A
Segment	Education

About HellermannTyton

Founded in 1988, HellermannTyton Data Ltd is an established leader in the design, development and manufacture of innovative network infrastructure solutions for both LAN and WAN environments. The company offers a broad range of quality, high performance structured cabling products including Deca[10]; the unique pre-terminated, 'plug & play' RapidNet™ system; iD intelligent infrastructure management; and a full range of market leading closures for Broadband applications incorporating the patented Cablelok™ mechanical seal. Based in Northampton, the company is part of the global HellermannTyton group with operations in 34 countries worldwide.

For more information visit **www.htdata.co.uk**

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