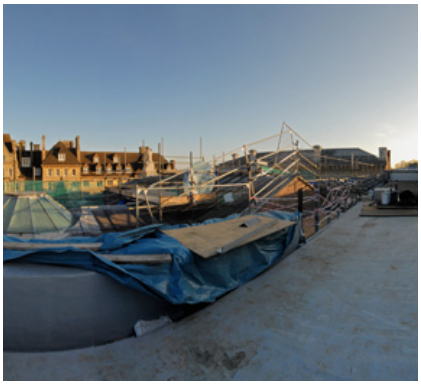
Case Study ›

PROJECT OVERVIEW

- Powercat 5E UTP solution
- 4 Core OM3 Fibre backbone
- 14 remote cabinet locations
- 867 points
- 6 story modern extension to a 17th Century museum building

A 21st Century makeover for Ashmolean Museum, Oxford



In December 2009 Oxford's Ashmolean Museum was officially re-opened by Her Majesty the Queen following a £61 million redevelopment programme to double its display area and create 39 new galleries, an education centre, art conservation studios and Oxford's first rooftop restaurant overlooking the dreaming spires. The new six story extension sits to the north of the original 17th Century museum, so as not to detract from its original neo-classical splendour. A Molex Premise Networks fibre backbone was used to support the new infrastructure, installed by Certified Installer partner, Able Data.

Overview

The Ashmolean Museum first opened it's doors in 1683, and has since become one of the country's most significant museums displaying unique collections and producing research and publications as a department of the University of Oxford. Attracting over 360 thousand visitors annually and housing many important collections, it was high time that the Museum looked to secure its position as one of the most important and oldest national museums. With funding assistance from the Heritage Lottery Fund, they turned to the award winning Rick Mather Architects to provide an architecturally sympathetic six-storey extension to expand and renovate not only its display areas but also to provide room for education and conservation. Network reliability, running efficiencies, security services, telephones and exhibition presentational equipment were highly important aspects for the museum to consider, for the effective day to day operations of the museum. Museum Director Christopher Brown said: "From the outset, our ambition has been to create not just an improved and expanded version of Britain's oldest public museum, but something significantly different in kind: A new way of showcasing the Ashmolean's remarkable collections, for the benefit of the widest possible audience."

The Partnership

Pleased with the performance and reliability of their existing Molex infrastructure and given the high profile nature of this installation, Molex Premise Networks was a natural choice when the museum was faced with the task of creating a fibre backbone for its new extension plans.

As a Certified Installer with Molex Premise Networks for several years, Able Data and Molex have enjoyed a successful working partnership that has resulted in a number of complex installations. "Molex provides a reliable product and is always very flexible in resolving any issues or last minute requirements which may occur," says Simon Pollock of Able Data.

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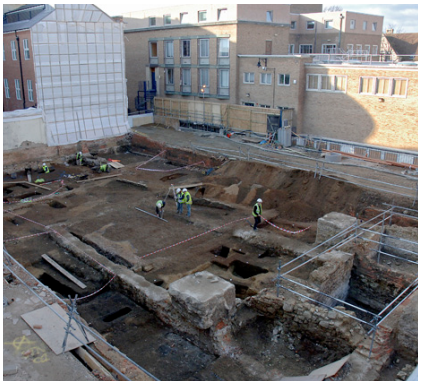

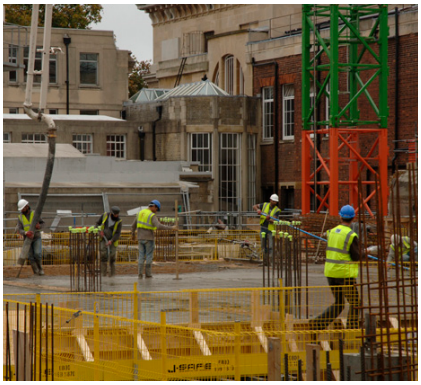

The Solution

As the Museum is a department of the University of Oxford, following the guidelines set by the University's Computing Service was a given. When the original network was installed in 1994, the network was 10BaseT over Cat5e, but in order to future-proof it was decided to install fibre from the Museum's central MDX Room to a number of strategic locations which were then patched into hubs from which cat5e spread out to the various locations. Subsequently, the University's network progressed to a 1Gbit network, and the Museum followed suit. Consequently, in the new building, the network infrastructure followed the same structured cabling strategy, with fibre running from the central MDX Room to strategic locations around the new building and Cat5e running from these to floor, wall and ceiling sockets. Fibre was the system of choice for two reasons; speed and future proofing. According to Dr Jonathan Moffett, Head of ICT 'fibre had to be the system of choice. Future-proofing was a must; in the world of IT, you never know what's around the corner". To complement the strategy and guidelines, a 4 core OM3 fibre backbone was chosen to connect 867 points and reach to 14 remote cabinet locations. Applications running over the fibre network include Internet access, both outward and inward (to support several web servers), E-mail, general file "serving", a Collections Management system, for documenting and curating the collections, and also various internal booking systems for events and educational activities. The Voice system uses one of the pairs of fibre to run the VOIP system in the new building.

The new Ashmolean is a complex architectural design, combining double and single-height gallery spaces connected by a series of walkways and staircases, and strategically placed lightwells to naturally light the gallery. With aesthetics paramount to the buildings integrity, Able Data was charged with ensuring all cabling was completely hidden through a variety of complex cabling routes. With some of the outlets located in low floors boxes, others for high gallery points (overhead projectors etc) were mounted at eight metres high, the solution therefore resulted in housing cable in miscellaneous containment along the various routes. Outlets were then presented in wall boxes, floor boxes and at high level within ceiling points running back to 14 different comms cabinet locations.

Able Data overcame a series of challenges presented by the project, including delaying outlet termination and testing until exhibition cabinets were fully installed, and providing a flexible working schedule to accommodate building delays and late specification changes. According to Simon Pollock, "our experience on builds such as this ensures we have planning and contingency practices in place to help ease the schedule dependencies and challenges for other on-site contractors".

Adhering to the adopted efficiency philosophy, the building also employs a low energy displacement ventilation system, with high-efficiency air handling units and heat-recovery and a load-shedding system monitoring and controlling electricity

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consumption. Three iterative rounds of computer daylight modelling were also conducted to optimise window openings to achieve the best lighting and thermal performance.

Conclusion

With site construction originally commencing in 2006, the full renovation of the Ashmolean Museum extension site encompassing a total floor a floor area of 10,000m² (107,640ft2), 4000m² (43,056ft2) of which provides 100 per cent more display space, was completed late 2009. During the opening weekend, the museum welcomed 20,000 visitors throughout its doors. Jonathan Moffett, stated that “the new network infrastructure plays an integral part in the Ashmolean museum. The efficiencies and stability that the fibre backbone brings means we now offer a more cohesive and advanced service to both our staff and visitors”. The Museum also achieved the royal seal of approval when Her Majesty the Queen opened the museum in December 2009.

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