

CASE STUDY

LONDON METROPOLITAN NETWORK



London Metropolitan Network chose THUS to build a world-class network for the next generation of students and researchers in the capital and beyond.

NEXT-GENERATION NETWORK

London Metropolitan Network Limited (LMN) is a not-for-profit organisation whose members include many of the capital's most famous educational and cultural institutions. It's one of 18 Regional Network Operators that together form part of JANET®, the UK's education and research network that connects every university, further and higher education organisation and research institute, along with many schools and colleges.

THUS has been working with LMN for more than seven years to implement and maintain a modern network infrastructure on an impressive scale. LMN provides more than 160 main connections at more than 130 sites, serving over a million users.

Thanks to this network, students can make use of online learning applications and work in collaboration with others across the country and around the world. They have fast, reliable

access to the resources of their own and other institutions, allowing them to download research data and to upload reports, projects and theses. Finally, LMN also provides connections to the Internet. The growth in the use of data networks in this sector is such that the capacity required by LMN is reckoned to be doubling every nine to 12 months.

Against this background, a contract was signed with THUS in February 2007 to deliver the transmission infrastructure for the next generation of the London Metropolitan Network, LMN3.

THE KNOWLEDGE

Having delivered 100% availability on the core network for the previous four years, THUS had a track record of performance and a relationship of trust with LMN. However, this alone would not secure the five-year contract.

IN SUMMARY

THE PROJECT

Infrastructure for LMN3, the latest phase of the London Metropolitan Network, which serves the capital's education and research institutions and forms part of the national JANET® academic network.

THE CHALLENGE

To build a reliable, high-capacity network with quick and easy scalability to accommodate future requirements.

THE SOLUTION

A resilient dedicated optical backbone connecting a ring of three PoPs.

WHY THUS?

THUS proved it understood the specific needs of the customer and the education sector, and could offer a solution to meet users' complex needs at the right price.



UNIVERSITY CHALLENGE



The London Metropolitan Network (LMN) (www.london.ja.net) was first set up in 1996 as part of a UK-wide initiative to establish Metropolitan Area Networks (MANs) to take advantage of new regional opportunities for telecommunications services. Initially, the London MAN connected 24 sites for 18 Higher Education Institutions (HEIs). It provided high-bandwidth access to JANET®, the national education and research network, at 155Mbps, and cost-effective connections between campuses at 34Mbps. Over the years, the number of connections grew to 70 sites covering 33 HEIs.

During 2000, the network started to reach capacity. Because of changes in the industry, developments in technology and the funding opportunities presented by the SuperJANET4 project, it was decided to replace the network, and a formal procurement under EU rules was launched, resulting in a new 2.5 Gbps backbone. By 2007 the network was again reaching capacity and was upgraded to 20Gbps, with the capability to reach 80Gbps in 2010. The telecommunications infrastructure was provided by THUS.

As a not-for-profit organisation, LMN is always looking for the best value for money. Malcolm Raggett, LMN Chair of Business Development, explains: "Through our innovative contract model we negotiate the optimum terms and SLAs from our commercial partners, to the benefit of LMN members."

By fully understanding the needs of LMN's officers and target markets, THUS was able to respond with a value-based proposition at a competitive market rate. Like other customers,

Officer, LMN. Working with THUS, LMN was able to assure its stakeholders that there would be minimal disruption in the transition.

CITY CONNECTIONS

For LMN3, THUS has built a world-class high-capacity infrastructure. The fully resilient core service is a dedicated managed optical backbone with a 99.995% performance SLA. It's delivered over fibre optics using Ciena 4200 optical Wave Division Multiplexing (WDM) equipment. A ring connects three LMN3 PoP

All access links are protocol transparent, not affecting the use of any IP routing protocols deployed in LMN3.

The core network is designed to allow scaling to eight 10Gbps wavelengths without interrupting existing circuits, enabling LMN the ability to deliver a 21st Century learning network that will grow as future demand dictates. Additional 10Gbps wavelengths can be turned on without downtime and at short notice.

FUTURE OPPORTUNITIES

The London higher education community receives worldwide recognition for being the best in its field for its chosen subjects, and THUS has delivered a network to match.

Professor Paul Webley, Chairman of LMN, summarises the benefits. "This powerful new network offers real opportunities for us to expand into the wider public sector arena. LMN will be able to offer high availability networking under a delivery contract that is extremely competitive. LMN3 represents an exciting future."

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LMN found that THUS was best placed to offer a world-class technical solution at the right price and with the high service levels it needed.

It was also vital to migrate the network smoothly to the new solution. Not only is the London Metropolitan Network mission-critical for its own users, it also forms an essential part of JANET®, the national network serving the entire education and research community. This means the network must remain available at all times, even during the upgrade process. "Continuity of service is critical," explains Peter White, Chief Technology

sites at Kensington, Waterloo and Russell Square, initially with two 10Gbps wavelengths installed between each LMN PoP, one using Synchronous Digital Hierarchy and optically protected against fibre break or far end transmitter failure, the other unprotected and subdivided into eight 1Gbps circuits.

Access links provide connectivity between user sites and to the LMN3 PoPs. Ranging from 1 to 10Gbps, and with optional resilience, they're available throughout the Greater London area as standard, and can also be provisioned elsewhere in the UK.