Taking Arts Education into 21st Century

Customer Case Study

University of the Arts London enables anytime, anyplace learning across multi-campus environment

EXECUTIVE SUMMARY

Customer Name: University of the Arts London

Industry: Education

Location: United Kingdom

Number of Employees: 4000 staff and 19,300 students

Challenge

- Create mobility vision for improving academic excellence and introducing new ways of learning
- Help ensure wireless platform is open and secure for students bringing own devices

Solution

- Cisco Borderless Network with CleanAir technology enabling anytime, anywhere access to people, tools, and information

Results

- Increased access to Internet, education resources, and learning tools over any device
- Greater student flexibility and control over studies
- Full visibility of network usage by user and device with ID-based access policies

Challenge

Formed in 2004, University of the Arts London is an amalgamation of six internationally-known institutions: Camberwell College of Arts, Central Saint Martin's College of Arts and Design, Chelsea College of Art and Design, London College of Communication, London College of Fashion, and Wimbledon College of Art. Together, they constitute Europe's largest provider of higher education in creative studies, offering hands-on courses in art, design, fashion, communications, and performance.

Providing individual sites with local IT presence and support, University of the Arts London has a single, centrally-managed IT team to run network services across all campuses from a shared, state-of-the-art data center. To help further unite this highly-dispersed learning environment, the University wanted to develop a mobility strategy.

Until 2011, wireless had played quite a minor role in the University's communications and was only restricted to a number of hotspots. However, recent explosive growth in mobility, coupled with mounting demand from students to connect quickly and easily over their own devices, demanded a reconsideration of the issue.

Competition to attract talented students was also increasing, driven largely by U.K. funding reforms. These wide-ranging changes propose a shift in England's higher education system, away from one largely funded by the taxpayer to one that is mainly financed privately by graduates from their future earnings. It is anticipated that that move will further increase student expectations.

At University of the Arts London, another factor came into play. With Central Saint Martin's College of Arts and Design due to relocate to purpose-built premises near London's King's Cross station, the University wanted communications and education services in the new building, and across all sites, to be aligned to the same vision of future-compatible wireless services.

Solution

University of the Arts London turned to its networking partner, Cisco Systems. The institution had over 10-years' experience of Cisco expertise. As well as implementing Cisco foundation technologies (routing, switching, and security), the University had also deployed next-generation Cisco Nexus® switches, which enable extensive data center virtualization for greater cost and power reduction.

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Adam Duffill
Network Services Manager
University of the Arts London

Yet the IT team wanted to be sure that it had investigated all available options before making a final choice. "I'd inherited a project to replace the existing wireless system, which was set up as a series of independent Wi-Fi hotspots at each site," says Adam Duffill, network services manager. "With mobility on the rise, we felt we needed a more holistic architectural approach that would provide ubiquitous access, rather than a basic technology refresh."

Adam Duffill had also noticed that student demand for bring-your-own-device (BYOD) capability was changing. The most common personal computer on campus had been the Apple Mac, often favored by arts students. These, however, came without Ethernet as standard. Now iPads and other tablet devices were everywhere, but were harder to secure because they lacked wired interfaces, as did the proliferation of smartphone variants carried by students.

The University chose a Cisco solution. One of the key benefits that swung the IT team's decision was Cisco CleanAir® spectrum-analyzing technology. A key component of the Cisco® Borderless Network architecture, CleanAir provides continual, system-wide discovery—accurately identifying the source, location, and scope of any interference—without affecting network performance. With inbuilt self-healing capability, CleanAir takes automatic action to avoid current and future disruption, and offers full reporting and detailed analytics to IT managers.

With such a large and diverse student population, the solution was also designed to meet the specific challenges of BYOD. Cisco Wireless Controllers enable simplified central management of over 450 access points across 14 sites.

The IT team also benefits from the Cisco Identity Services Engine (ISE), a context-aware platform that gathers real-time information from the network, users, and their devices, and applies the information for proactive governance decisions by enforcing network policies. Cisco ISE adds the ability to set access permissions according to the person's status, and allows the IT team to create an inventory of users and their device types for enhanced control.

The new wireless infrastructure builds on and complements the University's core IP networking foundation of Cisco Nexus and Catalyst® switches. Management across both fixed and wireless domains has been unified with the addition of Cisco Prime Network Control System (NCS), which provides visibility of users, devices, and security policy compliance for wired and wireless users. "NCS also takes the guesswork out of managing and deploying network services, which in turn speeds up trouble-shooting and time to resolution," says Adam Duffill.

Results

Using the Cisco wireless platform, the University can deliver ubiquitous Internet access. Adam Duffill says: "Since the wireless solution went in, it's opened up new possibilities for students to have wider access to learning resources and virtual environments."

User experience has improved. Upon detecting potential interference problems, caused typically by metal, glass, or large user populations, Cisco CleanAir automatically switches wireless users to an alternative channel. Wireless security across the campus has also been strengthened. "Guests can log in or out as they like. Being able to see what people are doing, where they're going, and what apps they're using allows us to provide a secure network that's as open and safe as it can possibly be," says Adam Duffill.

Additionally, an architectural decision to install new Cisco 3750X Series Switches has helped triple the density of access points for greater coverage. The University now has the potential to stream video to wireless devices using the power and support for multicast provided by the Cisco 3750X Series Switches.

Students have greater flexibility and control over their own studies. They can access the Internet at high speed from anywhere within University of the Arts London to assist their studies. There is also a significant time saving because, unlike a wired connection, local IT support teams no longer have to patch a port into a switch. It is easier for students to get online within the University to upload and download information and materials, and access social media platforms to interact with each other.

"Our Cisco wireless network is helping students discover new ways to develop and enhance their creative thinking and support their hands-on projects, while giving lecturers a powerful set of tools to aid new ways of teaching."

Stephen Reid
Deputy Vice-Chancellor, Strategic Development
University of the Arts London

Stephen Reid, deputy vice-chancellor, strategic development, says: "People at our colleges are driven to seek out the new, test the limits, and find fresh avenues of creative expression. Our Cisco wireless network is helping students discover new ways to develop and enhance their creative thinking and support their hands-on projects, while giving lecturers a powerful set of tools to aid new ways of teaching."

For More Information

To learn more about Cisco wireless solutions, CleanAir technology, and Identity Services Engine, please click these links:

Clean Air technology:
www.cisco.com/en/US/netsol/ns1070/index.html

Identity Services Engine:
www.cisco.com/en/US/products/ps11640/index.html

Access Points:
www.cisco.com/en/US/prod/collateral/wireless/ps5678/ps11983/data_sheet_c78-686782.html

Wireless Controller:
www.cisco.com/en/US/prod/collateral/wireless/ps6302/ps8322/ps10315/data_sheet_c78-521631.html

Product List

Routing and Switching

- Cisco Catalyst 6500 and 3750 Series Switches

Data Center

- Cisco Nexus 5000 Series Switches

Network Management

- Cisco Wireless Control System
- Cisco 5500 Series Wireless Controllers
- Cisco Prime Network Control System

Wireless

- Cisco Aironet® 3500 Series Wireless Access Points with CleanAir technology

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