

## Cisco Aironet Wireless technologies driving today's **Education**

**The Cisco Aironet-based Anytime Anywhere Learning project at the King Edward VII School in Melton Mowbray has again proved that to the young, there is no such thing as technology.**

**The deployment of Aironet wireless technology across a campus consisting of a former hospital, modern buildings and mobile classrooms posed particular challenges, but once the Aironet network was deployed, 2,000 students and 200 staff quickly reaped the benefits.**

### **The Organisation**

Four years ago, King Edward VII School in Melton Mowbray recognised that the impact of the web on education would be seismic and that ICT would play an increasingly important role.

It decided that it wanted to be at the vanguard of ICT adoption within the UK state education sector.

While the benefits are obvious, as a secondary school serving Melton Mowbray since 1910, and one of the largest in England serving the 11 to 18 age range, it was a big challenge.

To deliver the benefits meant overcoming physical and technological obstacles. Dragging classes from classrooms to computer rooms was recognised as hugely disruptive, and on a campus the size of King Edward VII, not practical. Besides, cabling the entire school would have caused even greater disruption.

Since King Edward VII's successful application for Technology College status, the challenge has been to deliver total IT access to everyone in the school.

In 2001 a major step to meeting that challenge was taken. A mobile solution with total access to Intranet, Internet, file and print servers had been found.





## The Challenge

King Edward VII turned to Cisco Aironet technologies.

Three years ago, the school invested in a broadband leased line. This led to a pilot scheme that equipped five staff and 18 students with laptop computers accessing a fixed network based Intranet.

Within one year this number was expanded to 40 students and further rapid expansion meant the school's Intranet was not being exploited to the full because of the limitations of the fixed network.

The seeds of the Cisco Aironet project were sown as the number of students and staff equipped with laptop PCs grew and each faculty increased its reliance on IT.

In September 2000, in partnership with the E-Learning foundation, a charity set up to supply technology to King Edward VII and surrounding schools, the school provided a further 100 Laptops PCs.

It became increasingly obvious the existing hard-wired intranet was not going to cope with the increased demand. However because of the eclectic nature of the buildings on the school campus, and the prohibitive costs associated with cabling, it soon became apparent that an innovative solution was the only way forward.

Leader of Information and Communication Technology (ICT) Development Paul Hynes explains: "We did several evaluations but the only wireless networking infrastructure that was robust enough to satisfy our needs was Cisco's Aironet 340 series. We saw it as a medium to create 'anytime, anywhere learning' with students able to access worksheets and Internet links from home, in the evening and at weekends."

## The Solution

Today, an Aironet 340 series based wireless network covers the entire site and the intranet has become an extranet.

The IT team surveyed the site over a two day period and sketched out a plan for the installation points for 80 access points. The physical installation took a further four weeks and although it was a steep learning curve for the in-house technicians, the system was soon up and running.

All Aironet 340 series adapters feature antennas that provide the range and reliability required for data transmission and reception across wide areas.

Mobile users can move from building to building as the

internal dual diversity antennas of the PC adapter automatically toggle to select the antenna receiving the strongest signal. The fixed, integrated antenna is rugged enough to withstand the rigors of mobile computing and compact enough to stay out of the way, extending only an inch outside the PC Card slot. Aironet AP342 management features include a full-featured Web interface to simplify the navigation of the network, and the variety of antenna options perfectly fitted the environment. Aironet 342 client adapters and access points delivered the mobility, performance, security and reliability needed.

The high speed and throughput of the Aironet 342 Access Points enables wireless transfer of bandwidth-intensive data such as video conferencing and use of IT is now totally integrated into the running of the school.

## The Rewards

As the only secondary school serving the area it was rarely short of intake, but it is now heavily subscribed especially at sixth form level which had an intake of 300 students this term.

As a school, it is in the students it produces and in the feedback, enthusiasm for and popularity of the system among the students that the rewards of the Aironet solution are best measured.

Among the main benefits to the school administrators and teachers are electronic registration, easy access to statistics such as pupil lateness, easier access to existing resources and greater communication between teachers.

In school time, the Aironet solution means that where students bring up subjects, or have questions, the answers can be sought on the web and informed discussion can be accommodated easily. Out of school, students have access to a vast repository of information and communications access to the school.

Paul Hynes, says 'We have purchased a roving PC room for most faculties. The system is very low maintenance, coverage is fine, and the technicians learned a lot from the installation.'

While it is too early to measure results statistically in terms of higher pass rates, students will leave the school with the skill set and confidence bred of familiarisation with new technology.

They now use IT to approach many different problems. They have an understanding of wireless connectivity, and for

example can use and configure video conferencing equipment. They will leave with an understanding of the benefits of IT and are far better qualified to enter IT supported environments whether in higher education or in business.

### The Future

The school is recognised as a centre of excellence and has become something of a reference site for staff from other educational establishments seeking to invest in wireless technology and who are eager to learn of its experiences.

Ken Walsh, Head teacher at King Edward VII, says 'The most interesting development this summer has been the installation of a wireless network throughout the school site. This keeps King Edward VII at the forefront in the development of ICT for learning.'

Walsh is currently working on a report the National College for School Leadership on how schools nationally are adapting their teaching and learning by making best use of information communication technology.

Hynes says 'We have this vision of an entire electronic learning hub with remote access. We are not quite there yet, but we look forward to developing our relationship with Cisco to support and assist us. Further development of web based resources, greater use of databases to reduce teachers' bureaucratic burden and the development of resources for different ability levels are our goals.'

### Conclusion

The school has exploited wireless networking in a manner that should be the envy of many businesses.

Aironet's inherent low maintenance, robust architecture and reliable access means time has been spent building a web site that contains an encyclopedic depth of links, developing applications such as email, and delivering database access and support. The return on investment started on day one.

Global education can only be wireless.



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