



# The British School of Brussels

Wireless Foundation provides hands-on high tech learning experience for students

## Challenges

- Replace ad hoc Wi-Fi network with advanced managed WLAN, to enable controlled broadband access for teachers, primary and secondary school pupils and guests across the school campus.
- A Wi-Fi network with the performance and functionality to support a large iPad rollout for classroom use.
- To optimise ICT resources managing and maintaining a fast evolving installed base of fixed and mobile devices across BSB's 10-hectare site.
- Allow staff, pupils and visitors secure custom access profiles covering personal, education and corporate-owned devices.

## Results

- Provided the foundation for the rollout of 275 iPads for classroom use, with more to come.
- Controller-less architecture provides intuitive, reliable experience for users, substantially reduces maintenance time and costs for small, dedicated ICT team.
- Ease of use to create different profiles for staff and guests, personal and corporate-owned devices, enabling effortless roaming from one school location to another.
- HiveManager Online enables ICT team to manage and monitor entire WLAN from any device and any location within the campus at any time.

## About British School of Brussels

The British School of Brussels (BSB), founded in 1969, is an international school for students aged 3 to 18 years. There are currently 1,250 students on roll, representing more than 60 nationalities. Students follow a British-based Curriculum up to age 16.

As part of a commitment to giving every student a modern education, BSB has a policy of integrating Information and Communications Technology (ICT) into the broader curriculum, as well as teaching dedicated ICT skills as a discrete subject. Students are encouraged to use their ICT skills wherever possible. As a result, BSB understands the importance in delivering the right ICT facilities for students.

## The Challenge

The emergence of the iPad and smart devices offers unprecedented opportunities for a school with a modern, progressive approach to

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**— Edward Marshall**

Senior Technician, British School of Brussels

education. BSB rapidly concluded that this exciting new technology could be readily integrated into the classroom to enhance and accelerate the learning experience through the use of robust Wi-Fi network technology.

Prior to adopting Aerohive, the functionality of the existing Wi-Fi network limited BSB's ICT team and its plans to use these sophisticated devices. Senior Technician Edward Marshall explains that at that time network functionality was restricted; six or seven Wi-Fi hot spots without a management platform stretched IT resources with the substantial maintenance resulting from changing Access Point (AP) configurations:

"We had a good idea of what was needed, realising that a robust, scalable, managed platform was the only way forward. Wireless technology was moving from a convenience service to a necessity as Wi-Fi was increasingly adopted. Access Point bottlenecks were no longer acceptable."

After consulting several solution alternatives, the options were reduced to a controller-based network from a major telecommunications vendor, or a new generation, cloud managed Wi-Fi architecture offered by Aerohive Networks through local distributor SAIT Zenitel.

For BSB, low operating costs were a top priority. The ICT team saw that the Aerohive WLAN eliminated the need for expensive controllers,

offering substantial savings in material and manpower while ensuring a full enterprise network availability, security and scalability.

"We liked the concept of Aerohive's Cloud-Managed wireless platform and were impressed with the results this obtained in the University Hospital of Antwerp following a visit. University Hospital of Antwerp was an early adopter of this Aerohive technology in Belgium," said Marshall.

Early in 2011, BSB opted for Aerohive's WLAN solution because of its innovative approach to connectivity, much appreciated by educational institutions running on limited IT support budgets.

### The Solution

That year, BSB began an extensive rollout programme following its acquisition of 275 iPads for classroom use. The new Aerohive infrastructure implementation proceeded smoothly according to Marshall: "We actually got half the campus up and running at the end of the summer, in time for the start of the new term in September. Then we continued rolling out the rest of the Access Points over the following year."

Aerohive's WLAN is the essential infrastructure for a unique technology-based learning platform across BSB's primary and secondary schools. As part of this, each student is equipped with a personal tablet as a work device for classroom sessions.

The teacher allocates the class a subject, from a choice of 349 educational applications downloaded from the App Store. As the lesson advances, students study on their personal device, at their own pace. During the course, the teacher can request that a student to stream his results to the entire class from his iPad, through Apple TV linking the video projector and screen in every classroom.

This hands-on high tech learning experience is proving highly popular with teachers and students, and the IT team are currently looking to the Aerohive Bonjour Gateway to extend this facility, allowing the school to broadcast Apple services, like Airplay, across VLANs.

The Aerohive solution has ample capacity to support active online group learning. Together with the classroom mobile device clusters, Aerohive supports BSB's ambitious school network of 600 computers, 75 laptops, 12 dedicated PC suites and eight Apple Macs for creative work, such as musical composition, graphic design and filmmaking.

The scale and rapid expansion of this innovative network demonstrates BSB's commitment of integrating ICT into the broader curriculum, encouraging students to build ICT skills into everyday life.

### The Benefits

One of the major benefits to the ICT staff is ease of management via the Aerohive HiveManager Online Network Management System. This cloud-based system not only brings greater network management flexibility but also has substantially kept operational time and costs in check, especially when compared to the previous system.

A single, centralised, interface provides intuitive administrative and remedial functions, enabling BSB technical personnel to access and maintain the WLAN from any location and any device across the campus.

BSB is currently in expansion mode by adding 200 iPad Minis to the campus network. Even with these substantial additions, the Aerohive network reduces the cost and complexity of the school network by helping the ICT team speed up rollouts, integrate the additional devices and perform software updates with relative ease.

"With our small ICT team in BSB, Aerohive is the only way to handle any additional roll-outs," said Marshall. "This latest batch of iPad Minis will allow personalisation of each device for 100 students to take home as part of homework studies.

'In a world in which environmental effects on the young are keenly regulated, a specific advantage of the Aerohive solution is its ability to effortlessly control the live activity level of Access Points, which can be matched to an 'as needed' teaching timetable."

This provides the reassurance of keeping well inside international RF health guidelines for educational institutions. BSB's reference is The World Health Organisation which says that 'On the basis of current scientific information, exposure from Wi-Fi satisfies international guidelines. There is no consistent evidence of health effects from RF exposure below guideline levels and no reason why schools and others should not use Wi-Fi equipment'.

With a proven, secure and scalable Wi-Fi network in place, adding value to the learning process, The British School of Brussels has ambitious plans for new projects with Aerohive such as additional work on Private, Corporate and Guest networks.

The ability to create multiple access and security profiles per user and per device will facilitate this task. Marshall concluded, "We plan to have a personalised captive Web Portal for the guest network so that anyone who has an account can log in."

The IT team is also currently considering another benefit of the Aerohive WLAN; its capability of integrating a broad selection of peripheral devices such as non-Airplay printers into the network through the use of Aerohive Bonjour Gateway, helping to further amortise equipment investments across a larger user base.

Marshall, explained, "Looking back over the last two years we are pleased that we made the right decision for Aerohive at a time when the opportunities from new mobile device technology promised exceptional advantages. Our Aerohive network is expanding in line with our progressive school environment and budget considerations".



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