DrayTek

Case Study

Powering Desborough College to Outstanding Ofsted

DESBOROUGH COLLEGE est 1894

Client:
Desborough College

MLODEIT

Partner:
mLODE IT Solutions

About the company:
Situated in Maidenhead, the college was founded over a hundred years ago and is now a rapidly expanding 11-18 boys' school offering GCSE and A-Level courses. Proudly offering education for over 600 boys, it sees every student as an individual and encourages them to feel positive about their particular strengths and works with them so that they become confident, inspired young men fully prepared to embrace their next challenge in life.

Desborough College is a highly successful school having attained academy status with "The Education Fellowship" and achieving "Good" in the last Ofsted report in September 2014. Constantly striving for improvement the school is committed to achieving an "Outstanding" in the next Ofsted inspection.

The Overview

Desborough College upgraded its IT infrastructure to improve learning and operations post an Ofsted "Good" rating. They implemented Wi-Fi in key areas like the Geography block, Library, Canteen, and Admin block, ensuring security and centralised control with DrayTek's solution. The initiative streamlined operations and enriched learning experiences. They plan to expand Wi-Fi campus-wide for further enhancement, aiming for an "Outstanding" Ofsted rating.

Paul Frazer, the school principal explains:

"We were disappointed with the Ofsted "Good" judgement last year and are actively laying down the foundations to receive the highest appraisal in the next inspection. Our IT infrastructure as it relates to learning was identified as one of the key areas where improvement was required and this was one of the main drivers for seeking a Wi-Fi network throughout the school."

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The Requirement

Desborough College clearly identified that a school-wide Wi-Fi infrastructure was something highly desirable, but initially focused on the areas of the school where there was the greatest need. These areas were as follows:

- The Geography block – this department was identified as one where usage of tablet computing could best assist learning. A pool of wireless, tablet devices were made available for students with constant access to online resources.
- The Library – Students doing their study required access to the Internet on existing laptops or their own personal mobile devices.
- The Canteen – The school has introduced cashless payments for students, staff and visitors using the school canteen. A biometric sensor and a traditional card slot PDQ chip and pin device have been made available, both of which require reliable network access to the cloud for authorisation.
- Design and Technology – also identifi ed as a key area where on line access will aid learning. The main ICT rooms and IT staff offi ces are also located in this building and wireless is used extensively by staff.
- Admin block – allowing mobile access for administration staff and teachers to internal systems such as SIMS. There are also Internet connected laptops available for parents who may not have such facilities at home.

From a technical standpoint security was one of the prime considerations. Individual users are required to use a password to access the network, web content filtering is implemented to ensure unsuitable content is blocked and both the “staff” and “student” networks needed to be kept completely separate.

Looking forward it is intended to extend mobile device access via WiFi to all areas of the school including the sports field. With the increasing usage of tablets, smart phones and laptops as an aid to learning, the school envisages a future where every student may need controlled online access throughout the campus and is keen to implement a solution that allows for constant growth.

Gordon Cock, the lead technician for the wireless project, explains some of the strategic challenges:

“One of our first considerations with a new Wi-Fi network is how to manage the multiple access points dotted across the campus and the various user types. We initially considered a solution with management control residing in the cloud but very quickly rejected this when we realised that any Internet downtime would result in 100% loss of local control and prevent us from making critical changes at key times.”

Products:

Vigor 2925

VigorAP 900

The Solution

Having rejected the cloud management option the school focused on identifying a solution where the management controller physically resides within the campus, thus maximising uptime and control.

With assistance from their local trusted IT provider mLODE IT Solutions, they identified DrayTek as the vendor that could provide the central management controller, the access points and all the security and management capabilities they sought.

The solution set consisted of a Vigor 2925 Wireless Management Controller and 5 x AP-900 access points for each of the areas requiring Wi-Fi.

As Gordon Cock goes on to say:

"We really liked the topology of a locally sited wireless controller managing the 5 access points and were especially impressed with the simplicity of setting it all up. I haven't had to use the manual once and have found it all easily configurable."

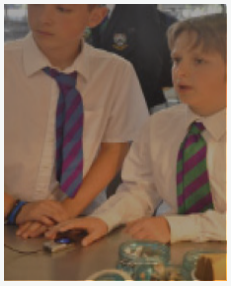
The management controller can be used to set up a standard confi guration that needs to be applied to each access point (node). This would include the SSIDs, password management and other settings specifi c to the site. Once created the configuration can be automatically uploaded (provisioned) to each access point on the network thus reducing installation time and increasing accuracy. Further tweaking of the profiles can be done from a single management interface. Each building is uniquely identified with a specific password and two SSIDs were confi gured, one for the school's internal systems, known as "Staff" and one for students requiring on line access known as "Students".

VLANs were also implemented for added security – by assigning each SSID to a separate VLAN they are able to isolate the student's network traffic from the schools admin network. They will also be adding an additional VLAN and SSID to cater for a totally isolated, Guest Internet access for any visitors who may require it.

The cashless payment systems in the canteen connect to a tablet device that in turn requires Wi-Fi access via the DrayTek network for payment authorisation. This has proved to be highly reliable and makes a huge difference in reducing the size of the dinner queue as well as providing a much easier way to purchase food and beverage.

Customers have the option of using a biometric device that detects unique characteristics of the finger that in turn is associated with a specific student's canteen account or traditional chip and pin with a card reader.


Biometric device




Wi-Fi cashless payments

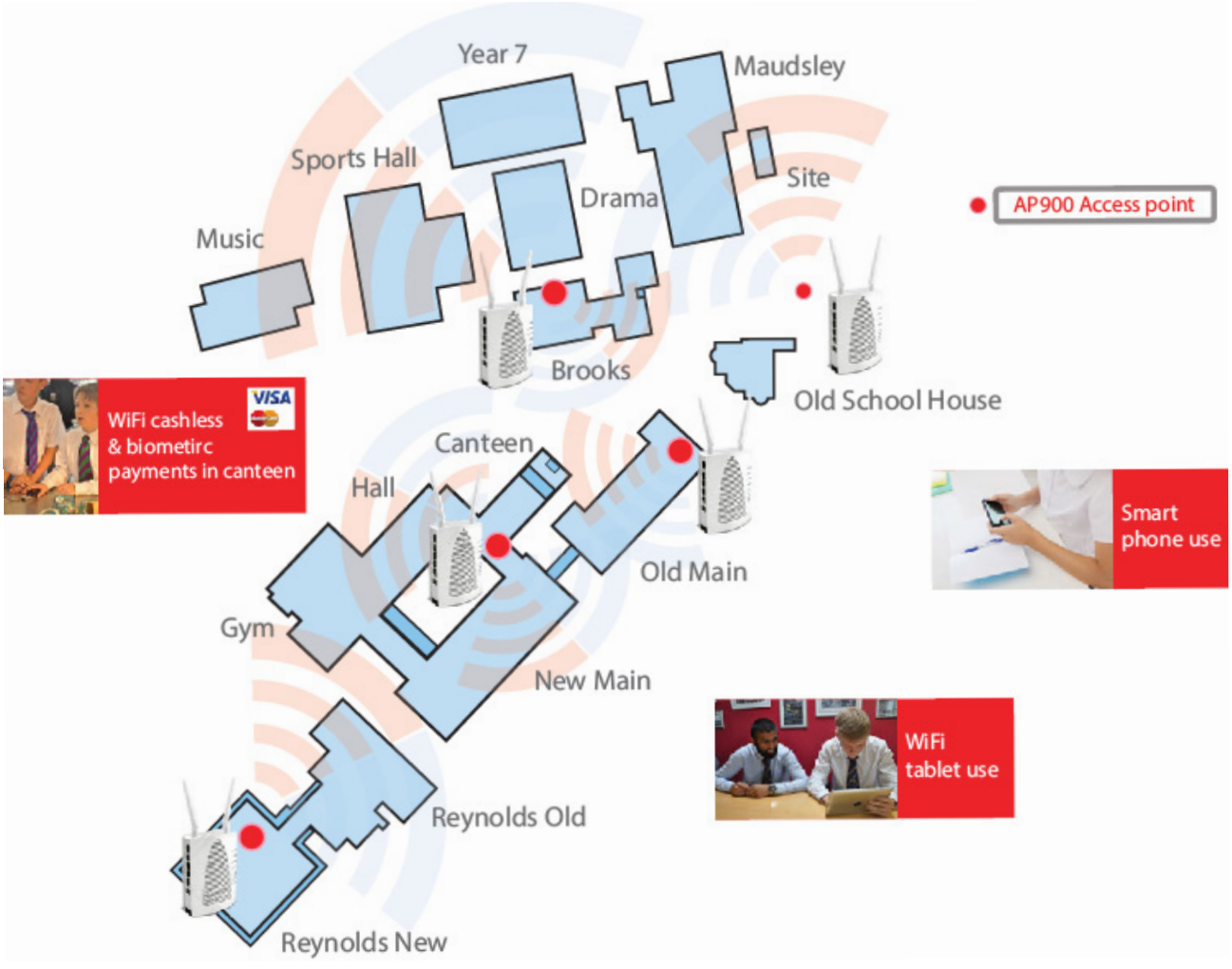
The Conclusion

The network was set up during the Easter break and very quickly the school was embracing and taking full advantage of new Wi-Fi network. Geography lessons have a new dimension, checkouts in the school canteen are quicker and staff have access to SIMS and other teacher specific applications in all areas with Wi-Fi.

Looking forward, the intention is to increase the number of access points for campus wide coverage and extend the use to embrace VoIP for Softphones and other IP Telephony devices. The built-in load balancing capabilities are also very attractive features as the coverage and usage of the wireless infrastructure increases.

Paul Frazer concludes by saying ...

"Shooting for an Ofsted "Outstanding" award is of course multi-faceted and requires effort from all parts of the school. We are delighted with what we have achieved so far and feel sure that the new IT infrastructure is one of the solid foundation stones we will need to achieve the ultimate award"



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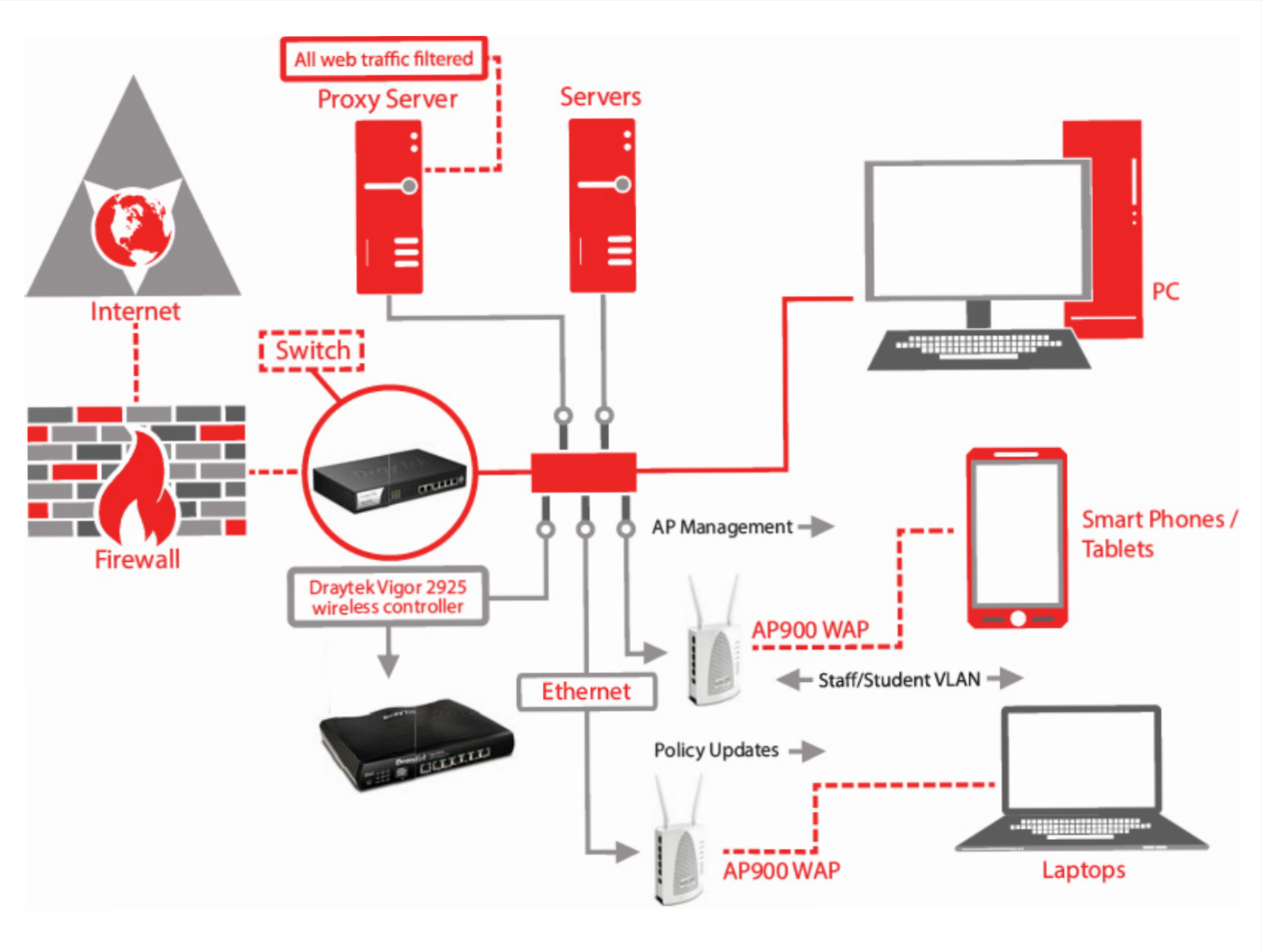

DrayTek Corp. was established in 1997 with a mission to design and build premium networking products to help business make their most of the online connectivity. DrayTek's product lines range from enterprise-level firewall Security, VPN facilities for teleworking and branch-linking, versatile xDSL CPE, Switching, Voice-over-IP and wireless solutions:

- Complete range of WAN Security/Routing products
- Headquarters, Taipei, Taiwan, ROC
- Specialising in innovative networking products Worldwide Distribution and offices
- Listed on Taiwanese Stock Exchange 2004
- 180 employees worldwide, 45% R&D
- ISO 9001 Certified

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