



Enabling the Business of Education: WLAN at Ashford University

Mention “Wi-Fi” and “University” together, and it conjures up an image of students with laptops accessing the internet from anywhere on campus, participating in online classes, or using the kind of unconventional learning methods that only a wireless local area network (WLAN) can enable. While there’s nothing wrong with this image, it leaves out an important benefit that WLANs bring to higher education, namely simplified and more flexible back-office administration.



The reality is that the administration of a university is a business, and has many of the same issues that large enterprises in other industries do: the need to meet institutional IT goals while ensuring security and performance standards are achieved. When Ashford University decided to expand their San Diego-based administration facilities, they looked for a WLAN solution that would offer them deployment simplicity and the ability to achieve stated business requirements. The Extricom WLAN was their choice.

The Business of Running a University

On the surface, an institution of higher education is a place of intellectual exploration where students and faculty can focus on research and learning. Behind the scenes, the reality is quite different; a university is a world of budgets, administrative staff, and strategic goals. And it is essential that this world operate like any other business, because as one prominent IT journalist recently stated, “Find me a university that isn't run the same way as a business, with almost all the same needs, and I'll show you one that's struggling to pay its bills.”

Technology has played a key role in enabling higher educational institutions to optimize and streamline their operations. Paper forms are being replaced by online applications that allow students to register directly for classes, and administrative staff to track tuition billing, student health issues, and the many other factors critical to the University's educational mission. This trend has also allowed universities to stay within tight budgets, even as they offer technologically sophisticated services to students, faculty, and administrators.

WLAN as a Business Asset... or Challenge

All of this has placed heavier demands on university networks and infrastructure. In response, WLANs are playing a significant role in new deployments or in technology refreshes

of existing infrastructure, thanks to their ability to quickly extend network access to a wide variety of users. For administrative back-offices, WLAN offers much the same advantages as it does to other businesses, namely cost-reduced deployments, operational flexibility, and the increase in employee productivity and collaboration that comes from a mobile workforce.

At the same time, however, WLAN deployment and maintenance has brought its own set of challenges. Security must be paramount, since highly confidential information about students is being passed over the network. Cost-reduction, an oft-cited advantage to deploying a WLAN, cannot be taken for granted, since such network cost-savings will not materialize if the WLAN is difficult to deploy and requires specialized expertise to administer, and long-term expenses can swallow up any cost advantages in other areas. Finally, the user-dense environment of a university demands that the WLAN be able to guarantee performance both in terms of coverage and capacity; after all, a WLAN that does not allow users to access the sophisticated applications that are commonplace in university administration is essentially useless.

Looking to Scale Up

The administration of Ashford University, both in terms of the physical campus and numerous



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Director of Information Technology
Ashford University

Project Scope

Implement WLAN network at administrative facilities of university to enable optimized access to critical back-office applications. System had to overcome “noisy” environment with many sources of interference.

Solution

- Extricom WLAN System, consisting of EXSW-2400 WLAN switches, connecting multiple dual-radio 802.11a/b/g UltraThin™ Access Points.
- Build-in the capacity and flexibility for future roll-out of Voice-over-WLAN.

Results

- Quick, problem-free deployment enables guaranteed data transfer rates everywhere in facility.
- University able to meet business goal of enabling employee mobility while maintaining strict security standards.

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online programs, was confronted with all of these issues when considering standardizing network access for their offices in San Diego, California. Like many enterprises, they had a legacy WLAN system consisting largely of consumer grade access points (APs) which had been deployed in a “hotspot” manner to meet specific needs. But consumer systems can have problems scaling to meet a growing organization’s requirements, and can even limit access to critical applications. As Dan Stoneman, Ashford’s Director of Information Technology, stated, “We were looking for an alternative that would meet all our objectives.”

Ashford wanted a pervasive Wi-Fi network that would guarantee connection speed and bandwidth for a multiple-user workforce scattered over six floors. They also needed a system that would provide comprehensive coverage in a very “noisy” wireless environment characterized by many potential sources of interference from inside and outside the building. In this scenario, implementing a conventional WLAN based on cell-planning and channelization had the potential to become a labor-intensive nightmare of adjusting and readjusting the configuration of multiple individual APs.

Coverage and Simplicity

In search of a solution that would provide the needed coverage and capacity without any performance tradeoffs, Stoneman reached out to a trusted telecommunications solutions provider, Teldata. Tim Wagner, a Teldata IT Consultant, immediately recommended the Extricom WLAN: “Nobody else in the market can duplicate the coverage the Extricom channel blanket provides from multiple APs. The architecture really overcomes all the pains that IT has felt with this class of technology. In terms of deployment, it’s just about as easy as installing a home wireless system. And all this while strictly meeting organizational security standards.”

Working with Teldata, Ashford initiated a pilot implementation on a single floor and were able to do a simple configuration of the system in about 20 minutes. The pilot easily proved its value and the roll-out proceeded to cover their whole facility.

A Simple and Robust System

What impressed Ashford about the Extricom technology was its combination of simplicity and robustness. As David Loysen, Ashford’s IT Support Engineer, attested, “Extricom is

essentially plug-and-play once the equipment is physically mounted in place. And the channel blanket allows us to put APs wherever we want to instantly tailor coverage and capacity as the situation warrants.”

Once the system was placed into production, the change was immediately noticed. When 15 to 20 people were online in the crowded environment of a conference room (precisely the sort of scenario that is a challenge to cell-planned networks), every user was able to access the network at the high data rates needed to ensure maximum productivity. Without the roaming issues that had plague other solutions, Ashford employees were able move from floor to floor within their facility while securely accessing critical applications, such as the student information system that serves as a central repository for all information related to student processing, enrollment, and financial aid.

Performing as Advertised

Given the success of the deployment, Ashford is now eager to look into other applications, such as voice over WLAN, which the Extricom channel blanket architecture intrinsically supports much better than other WLAN solutions. But the most important thing for the University is that the system performed exactly as advertised in meeting the specific business need. As Stoneman put it, “Our fundamental business requirement was for a stable WLAN that enabled uninterrupted access to core applications. The Extricom WLAN has achieved this, without question.”