



Campus-wide Wireless LAN Coverage for Continuous Mobility and Seamless Management

Other than the Internet, no aspect of technology will have more impact on higher-learning environments than the wireless LAN. It truly is transformational technology that facilitates collaborative and open learning environments but for many educational facilities, tighter budgets and already stretched IT resource can make implementation or upgrading seem almost impossible.

Challenged to provide better speeds, more reliability, strong security and seamless mobility, colleges and universities also represent one of the most densely populated environments subjected to the market explosion of smart phones, iPads, iPods, tablets and other communication devices being used as learning and teaching tools. This in turn has led to both students and faculty expecting wireless availability not only in the classroom but also at every corner of the campus – communal spaces, cafeterias, campus retail outlets, libraries, on-campus living accommodation and also temporary or mobile study areas for example.

Together with the fact that more and more institutions are wanting to expand the kinds of applications and services it can offer and benefit from – significant amounts of video in the form of lectures, guest speaker sessions and podcasts, distance learning courses, video surveillance, guest services, mobile access control and valuable asset tracking for example, a robust and reliable wireless LAN with guaranteed performance is now becoming an essential part of the further learning mix.

In an era of intensive wireless usage Extricom enables the all-wireless communication environment today, with voice, data, video, and location services delivered with an always-on, robust and mobile Wi-Fi connection. Powered by its award-winning Channel Blanket™ technology, the Extricom Interference-Free™ WLAN is purpose-built to slash wireless complexity and future-proof any network for tomorrow's multi-service demands.

The result is a completely different experience for the user: significantly greater bandwidth and coverage than traditional WLANs, seamless mobility with no AP-to-AP handoffs, the elimination of RF cell planning and co-channel interference, and the ability to offer a performance guarantee for both connection rate and bandwidth. This is the best of the wired and wireless worlds – the simplicity, flexibility, and performance of wired networks, together with the mobility and ubiquity of WLANs. All this, with the lowest total cost of ownership in the industry.

Tracking expensive assets and resources is a critical requirement in a college environment. The Extricom solution can be leveraged to automatically track critical assets. For example, leased equipment, say laptops, can be tagged with an active RFID tag to alarm if it has left a predefined boundary. Shared resources such as projector equipment can also be easily located using the wi-fi network.

Another critical requirement in a campus environment is the fact that the network needs to be 'wide-open' at the same time as being very closed and secure – depending on the user base. Security compliance is essential and it is usual to need a corporate environment, an academic environment and a residential environment to co-exist seamlessly.

With Extricom's Channel Blanket architecture this conundrum that often challenges traditional cell-based systems is easily overcome, allowing administrators to configure the system to specifically meet their demands. Without losing performance and throughput, separate Channel Blankets can be deployed on the bands required, with separate ESSID's for each user group being mapped to their blanket. For example Students can be mapped to b/g/n channel blanket on radio 1 (5GHz), Staff mapped to 802.11n channel blanket on radio 2, Guests to 802.11 b/g channel blanket on radio 3 (2.4GHz).

Deploying WLAN across the campus can bring enormous benefits, but there are some distinct technological challenges to this environment:

- Small IT departments are called upon to support large numbers of concurrent users, so the WLAN solution cannot require time-intensive configuration and administration.
- Wireless coverage issues are created by the typical sprawling layout of the campus and the need to provide connectivity to multiple users in the confined area of a classroom.
- Security compliance regulations require separation of student and faculty networks.
- Uncertain budget processes require that the deployed WLAN ensure costs are kept low, leverage existing infrastructure, and offer advantages in terms of scale and price.



Higher Education Core Requirements

Administrative Simplicity

Overstretched IT Administrators operate in a tactical mode to resolve day-to-day operational issues. With so many competing demands on limited personnel, any WLAN must feature easy deployment and administration.

Comprehensive Communications

High standards of reliability are mandatory. Connectivity issues will directly impact student and faculty productivity.

Cost-Effectiveness

Budgets demand a WLAN infrastructure capable of handling change transparently. This demands a cost-effective wireless lifecycle – planning, installation and maintenance that will future-proof your network.

User Security

Privacy of student information, even testing integrity, is of paramount importance.

High-Density Environment

In the typical school, large numbers of users need concurrent access to the WLAN, so high capacity without coverage or mobility trade-offs is critical.

Extricom's Unique Value

Ease of Deployment and Administration

The Extricom WLAN solution can be set up by anyone with basic knowledge of wireless and can be put into production within a matter of days (or even hours). Administration is simple and performed from a centralized location using a web-based portal.

Guaranteed Service

The Extricom Channel Blanket architecture provides the capability of separating students and staff on both the 2.4 GHz and 5GHz bands, and also provides load-balancing, to enable QoS differentiation and optimization on a per user-group basis.

It is the only WLAN technology that can deliver a guaranteed and consistent level of connectivity to all users, everywhere on the campus.

The Lowest Cost of Ownership

Extricom's solution eliminates the cost of RF cell planning and RF staff expertise, seamlessly extends your existing wired network and is deployed and maintained with plug-and-play simplicity. The result is the lowest TCO in the industry.

A Secure Wi-Fi Environment

Extricom embeds the strongest security available, without sacrificing mobility or performance.

Each channel deployed is permitted 16 levels of role-based security.

Easily Scalable Infrastructure

The Extricom Channel Blanket maximizes capacity and coverage with APs deployed in any density. Also, its ability to segregate 802.11n and 802.11a/b/g users on both the 2.4 GHz and 5 GHz bands can provide 7x to 10x more throughput than mixed 802.11a/b/g/n deployments.

The Future of Wi-Fi

Ask us how schools, colleges and universities across the globe, as well as clients in the healthcare, hospitality, logistics, manufacturing and enterprise arenas have succeeded with Extricom. Extricom's wireless LAN is specifically designed to answer the challenges posed by pervasive Wi-Fi, providing the high-performance, resilient and future-proof infrastructure required by the higher-education environment.