

# SYSTIMAX®

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## SOLUTIONS

## Killester College Extends its Reach with Wireless LAN

### Europe's first SYSTIMAX® AirSPEED™ installation gives students and staff at Dublin College easy, cost effective access to learning resources

In September 2000 Killester College of Further Education in north east Dublin, Ireland, had just over 300 day and evening course students. By early 2005, that number had grown to over 1700. Over this time, the college also adopted new technologies, including Europe's first SYSTIMAX® AirSPEED™ wireless LAN installation, to implement inclusive learning techniques blended to students' needs.

The college provides full and part-time courses on subjects ranging from drama to data networking. Many of these are now supported by e-learning courseware developed by the college and held on servers in its Learning Resource Center. Most of this learning material is accessible via the Internet, so students can continue learning at home or wherever they can use a PC with a Web connection.

To make learning material easily available throughout its building, Killester College needed a LAN to serve both teaching staff and students. The College management considered a number of approaches. College Principal, Rory O'Sullivan soon saw that the SYSTIMAX AirSPEED wireless solution had the ability to meet all the network flexibility and mobility requirements of the college and its users.

"The college has evolved quickly to meet changing educational needs and priorities - and it must be ready to meet new challenges in the future," he said. "This made the idea of a wireless network very attractive. It could connect PCs to our Resource Center from anywhere in the building and support



Rory O'Sullivan, Principal, Killester College (on left) and Willie O'Connell, Solutions Director, Kedington Group.

the growing use of computers. The implementation of this technology was made possible by a grant from the Irish Government's eInclusion Fund."

Having decided that a wireless LAN was best, the College put its requirement out to tender. The winning bid came from the Kedington Group, a SYSTIMAX BusinessPartner with offices in Dublin, Cork and Limerick. Kedington's proposal was based on the new SYSTIMAX AirSPEED Solution, which meets the latest IEEE 802.11g standard for connections at 54 Mb/s and is backward compatible with the earlier 802.11b wireless LAN standard. The devices also support the 802.11a standard which is important for advanced applications such as Voice over Wi-Fi and wireless multi-media. Compatibility with these standards was an important feature for the Killester College application.

“ We make intensive use of our facilities and resources at Killester College to create a positive learning environment for our students where the learning is provided at a time, in a place and in a manner that best meets the needs of our students. The SYSTIMAX AirSPEED Solution is well suited to this ‘blended learning’ approach and Kedington responded well to the challenge of getting it up and running without disrupting our classes. ”

*Mr Rory O’Sullivan, Principal , Killester College*

The Solution's dual-band, tri-mode capability gives the College flexibility in the types of PC LAN cards that can be used to connect with its network. Laptops, desktop computers, and other wireless devices that are equipped with 802.11a, 802.11b and 802.11g wireless cards are all supported by the new wireless infrastructure at the school.

Of great importance to the College, the SYSTIMAX AirSPEED Solution supports a range of advanced security protocols including Wi-Fi Protected Access™ (WPA) and the newly ratified 802.11i standard, offering AES, the latest in encryption technology. To limit network access to authorized users, the College has implemented WPA™ security which includes IEEE 802.1x user authentication and dynamic, per-user, per-session rotating keys.

The network's main distribution frame and power units for the SYSTIMAX AirSPEED access points were installed in the Learning Resource Center alongside the Colleges' central servers. This distribution frame is linked to a satellite frame installed, together with more power units, in a closet at the other end of the College. From here, access points more than 100 meters away from the Resource Center are connected to the network. To make the backbone connection between the two distribution frames, Kedington used SYSTIMAX GigaSPEED® XL cabling, which has performance well above Category 6 specifications.

The network, completed in January 2005, now supports applications including web-based training programs, internet gateways and administrative systems. It also connects four computer labs and a server running the College's innovative virtual learning environment, "Blackboard". This provides an online environment to complement and supplement the traditional classroom, and blended learning programs.

Leveraging the wired network infrastructure through the use of Power over Ethernet (PoE) was a big attraction of the SYSTIMAX AirSPEED Solution, which means its access points do not need separate electrical connections. Power is supplied via the data cable, cutting the cost and complexity of the College's new network. This feature also helped Kedington complete the project to tight time scales and reduce the disruption caused by installing new electrical cabling.

"We make intensive use of our facilities and resources at Killester College to create a positive learning environment for our students where the learning is provided at a time, in a place and in a manner that best meets the needs of our students," said Rory O'Sullivan. "The SYSTIMAX AirSPEED Solution is well suited to this 'blended learning' approach and Kedington responded well to the challenge of getting it up and running without disrupting our classes."

Commenting on this, Wally Blennerhasset, Sales Director at SYSTIMAX® Solutions in Ireland, said "The SYSTIMAX AirSPEED Solution has the combination of cost effectiveness and performance needed to support imaginative new educational approaches - such as those at Killester College. It allows them freedom to deliver computer-based learning resources wherever they are needed, and gives the maximum number of students and staff access to those resources."

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