Edensor Technology College

Location

Stoke-on-Trent, Staffordshire, United Kingdom

Industry Vertical

Edensor Technology College is a secondary school with the core mission of preparing technology-literate students for entry into the 21st Century workforce.

Scope

Enable greater flexibility in student use of information technology by allowing network access anywhere on school grounds rather than dedicated hard wired computer rooms. The network would support Internet access and online learning for 1000+ students.

Challenges

The new WLAN had to meet stringent requirements in three key areas: connection stability, capacity, and multi-application support. First, the WLAN needed to support two separate and concurrent authentication instances during the application session, so very stable connectivity was of primary importance. Second, timetabled periods and multiple students convening in a single classroom meant user-dense environments, which would pose capacity challenges that the system had to overcome. Finally, Edensor needed the WLAN to be flexible to support any planned future application, including VoWLAN, without impacting legacy applications running on the same network. The new applications also were expected to be added without redesign, rework, or re-optimization of the existing network.

Why Extricom ?

Edensor was attracted by the fully centralized wireless LAN architecture that is at the heart of the Extricom Channel Blanket. In this topology, all wireless clients authenticate directly to the switch, rather than the individual AP, and the switch makes all decisions regarding data transmissions on a packet-by-packet basis.

All APs transmitting on the same channel means truly seamless roaming with no AP-to-AP handoff, an important concern for implementing VoWLAN. This approach also allows APs to be deployed in any density, providing blanket coverage without capacity tradeoffs.

Channel Blanket technology also provides a rock-solid Wi-Fi connection for all clients. With the APs receiving on the same channel, a client's transmission is simultaneously heard by multiple receiving points, which intrinsically makes the connection highly resilient.

In addition, the Extricom system does not require an RF site survey, a sizeable cost component for any WLAN deployment. Further cost savings are realized from the fact that Extricom APs are powered by PoE, eliminating the need to plan 240v mains connections/wiring into a point installation.

Implementation Summary

Edensor worked with Solution House, a local VAR specializing in mobility solutions, to set up a pilot. Extensive testing of the system showed that users could maintain extended login times, fast download speeds, and overall high performance, even as the system was selectively stressed by removing APs. Impressed by the speed of setup of the Extricom WLAN and its resiliency, Edensor proceeded to a Phase I deployment of the system.

Current Status and Next Stages

Edensor regards the Extricom WLAN as a strategic element of their three-year plan for network improvement and expansion. Currently, they are researching VoWLAN solutions that will run on the existing Extricom system, improve operational flexibility and realize cost-savings.

What the Customer is Saying

"The Extricom system operates in a way that allows seamless handover and I mean seamless, it was wonderful to watch the facial expressions of the technical team as they literally plugged and unplugged access points as fast as they physically could without any degradation of connectivity performance."

Richard Pickard
Deputy Head Teacher
Edensor Technology College