

Students at New York's Farmingdale State College Get High-Speed Wireless Access With Meru 802.11n WLAN

Technology-oriented Campus Sought Latest in Wireless Technology, Chose 11n Virtual Cell WLAN for Improved Speed and Coverage

SUNNYVALE, Calif., Mar. 11, 2009 – Students at New York's Farmingdale State College now have access to high-speed wireless Internet access in their dormitories, library and classrooms using a campus-wide IEEE 802.11n draft 2.0 wireless LAN from Meru Networks.

During 2008 Farmingdale State College upgraded its existing Meru WLAN from the 802.11a/b/g standards to 802.11n, letting users access the Internet and share files at speeds up to five times greater than those supported by the earlier standards. The WLAN's 200 access points are installed in approximately 20 buildings on the 380-acre Long Island campus.

"We're the largest college of technology in the SUNY system, and we wanted to give our students the latest technology," said Jeff Borah, Farmingdale State College's assistant systems manager. "We first installed a Meru 802.11a/b/g WLAN several years ago, and Meru's single-channel virtual-cell technology allowed students to move around campus as if they were on one big access point, without suffering disconnections."

"We upgraded to Meru's 11n technology for both broader coverage and higher throughput. For several years, about half of our 6,500 students have been bringing a laptop computer or some other mobile device to campus. Not only are they doing more rich web browsing and viewing streaming videos, they're also doing online research and coursework – in fact, every course now has at least an online presence, and some are conducted completely online. And with the frequent high-density use of laptops in classrooms, it would be impractical and costly to wire every desktop on campus."

Meru WLAN Eliminates Channel Interference, Lost Connections While Roaming

Farmingdale State College first deployed a Meru 802.11a/b/g network in 2003 to replace a problem-plagued legacy WLAN. "We'd been experiencing high levels of channel interference between access points, with users continually reassociating to another AP and getting disconnected," Borah said. "We wanted something enterprise-level and easy to centrally manage. Like every controller-based Wi-Fi technology at the time, Meru's was new. But we liked the company's unique virtual cell approach. Once we installed Meru, the disconnect problem ended. So when we decided in late 2007 to upgrade to 11n, we knew we wanted to stay with Meru."

Meru's 11n Technology Meets Challenge of Wireless-unfriendly Construction

Though largely a commuter school, Farmingdale State College has several on-campus residence halls. The largest, Orchard Hall, houses 450 students and had presented a major challenge for wireless networks, which Meru's 802.11n WLAN solved.

"Orchard Hall's construction materials – cinderblock with aluminum – don't lend themselves to propagating wireless signals," said Brett Southard, network associate. "Students were finding it difficult to get a signal, and bouncing in and out of coverage. Meru's 11n MIMO [multiple input-multiple output] antenna technology allows the access point to have a larger 'footprint' and gives us increased coverage without dead spots. We can use fewer APs than with older technology, and they easily handle the high density of student wireless use in the building."

Meru's integration with Farmingdale State College's Bradford Networks Campus Manager network access control product allows the college to implement identical security policies across its wired and wireless networks. If a student brings a laptop on campus, or a guest uses a mobile device at a conference or athletic event, he or she logs in through the Bradford system and is immediately connected to the Meru WLAN.

Farmingdale State College's 802.11n WLAN uses Meru's AP320 dual-radio 802.11a/b/g/n access points, which support creation of two full layers of wireless coverage network-wide; and MC3000 series controllers, which provide the centralized intelligence to easily deploy and manage large-scale wireless WLANs. "With the dual-radio configuration we can use one radio at 2.4 GHz to give us more coverage distance, and the other at 5.0 GHz for better speeds. Blending them, we were able to get better signal strength and speed over longer distances," Southard said. Future plans call for Farmingdale State College to extend the Meru 802.11n WLAN to outdoor campus spaces, enabling students to maintain their high-speed wireless connections while walking between buildings, in plazas where they congregate and at sporting events.

In Meru's virtualized WLAN architecture, a single channel is selected for use by all access points enterprise-wide, and a dedicated "virtual port" is assigned to each client device to maximize performance, reliability, and enterprise control over wireless resources. Additional channels can be layered as more capacity is required. In contrast, legacy WLAN systems from other vendors use a "micro cell" approach, which assigns different radio channels to many small adjacent AP cells to ensure that no two APs use the same channel in the same place. This requires precise and time-consuming channel planning and AP power adjustments to work well, making it difficult to load-balance in dense environments, and limiting future network expansion.

About Meru Networks

Meru Networks develops and markets wireless infrastructure solutions that enable the All-Wireless Enterprise. Its industry-leading innovations deliver pervasive, wireless service fidelity for business-critical applications to major Fortune 500 enterprises, universities, healthcare organizations and local, state and federal government agencies. Meru's award-winning Air Traffic Control technology brings the benefits of the cellular world to the wireless LAN environment, and its WLAN System is the only solution on

the market that delivers predictable bandwidth and over-the-air quality of service with the reliability, scalability and security necessary to deliver converged voice and data services over a single WLAN infrastructure. Founded in 2002, Meru is based in Sunnyvale, Calif. For more information, visit www.merunetworks.com or call (408) 215-5300.