

Wireless LANs Hit Critical Mass

CRN -

By [Charlotte Dunlap](#)

Falling prices and maturing products are sure signs that a technology is getting ready to make the jump from niche to mainstream.

And, to some, that certainly seems to be the case today with the wireless LAN. That is one reason why some solution providers are taking a second look at the opportunity in wireless LANs, as well as more exotic projects accompanying a buildout of the wireless infrastructure for anytime, anywhere access.

The wireless LAN, a technology that has been stuck in the niche category for years, could finally be getting ready to come out of the warehouse, say analysts and integrators.

Proponents point to two events in particular that have propelled the market forward. The first was the IEEE's finalizing of the 802.11b standard for wireless LANs in 1999. The second was networking powerhouse Cisco Systems' purchase of Aironet last year.

Now two leading vendors, Cisco and Lucent, are coming to market with viable products, and the cost of building a wireless LAN has dropped by more than half.

Cahners In-Stat Group is predicting the wireless LAN market worldwide could jump to \$2.9 billion in 2002 from \$1.3 billion last year.

"Once it was determined that wireless was the way to go and Cisco purchased Aironet, economies of scale started to set in and prices dropped by more than half," says solution provider Jim Bradfield, president of Network Access Solutions, Dublin, Calif.

Solution providers say they now have a marketable technology to take to small and large customers. Integrators have been using wireless networks for difficult locations, such as manufacturing floors, and for mobile personnel, such as medical workers. But with the new price points, wireless is becoming a good choice for other applications as well.

Bradfield says his company uses wireless technology between buildings on campuses and as a backup to T1 and T3 networks. "Before, it cost \$250 a port to wire a network and \$650 a port to do it wirelessly. Now they're equivalent [in cost]," he says. Further, he can now set up remote users with wireless technology for the same cost as DSL and cable.

Simply put, solution providers are building the equivalent of a wired LAN with wireless products, which not only benefits roaming users but can cut on-site support costs. For just that reason, Centerbeam, the utility-based computing services company, is using wireless LANs for all its SMB clients to reduce the need for on-site support.

Wireless LANs can also be integrated into wired networks by using hubs, called access points, as a bridge between the two. A pivotal skill that solution providers moving into wireless technology need to master is the art of placing access points to get maximum coverage with minimal hardware, solution providers say.

"Imagine [an access point] as a large balloon that occupies 120 feet that can go through walls, and the next balloon picks up where the first one ends. A seasoned engineer knows how to design it," says Gary Berzack, CEO



and CTO of Tribeca Technologies, New York. He says an inexperienced engineer could spend \$10,000 to \$20,000 more than someone who is knowledgeable.

Tribeca is currently using wireless technology to build smart buildings in the Northeast. Wireless LANs solve the problem of trying to figure out how to install Ethernet in old buildings with thick walls and asbestos, Ber-zack says. The company is also adding more functionality to traditional LANs with value-added services such as voice capabilities.

For such reasons, Cahners In-Stat projects that vendors will ship 7.9 million units of wireless network interface cards, access points and bridges this year, worth about \$2 billion in sales.

Cisco anticipates that sales to SMBs will help drive that market expansion. "SPs have had to turn away lots of small business where it's economically unattractive. The effort and investment for smaller-sized companies doesn't always justify the return. Wireless lets them revisit that business model," says Michael Francini, director of marketing at Cisco's wireless network business unit.

Building out the wireless network for anytime, anywhere computing could also become a big business for knowledgeable wireless integrators. Berzack notes Starbucks plans to install wireless access points at all its coffeehouses, and this is the type of new project that is attractive to Tribeca.

Concourse Communications Group, Springfield, Mass., recently won a contract with the New York Port Authority to build wireless hubs on top of towers and other above-ground real estate at its three airports.

Concourse CTO Philip Deck calls wireless technology "instant gratification." Travelers will not only be able to connect anytime, anywhere, but also connect at 11 Mbytes per second, which is faster than cable or DSL.



It took Concourse three-and-a-half years to get the Port Authority contract, but Deck considers it worth the investment. Wireless technology is here to stay, he says.

Wireless Solutions A SAVING GRACE

Along the edge of Silicon Valley in Fremont, Calif., is a convent. Its charming gardens with olive trees, an antiquated cemetery and rustic, castle-like buildings make the community appear to be a place out of time.

But look closer and you'll see a Cisco wireless hub in the church's bell tower and nuns walking the grounds with laptops, staying connected to the Internet.

"This is definitely cutting-edge technology, as we have had it for two years and others are just beginning to use it and advertise it," says Sister Deborah Marie Butcher, OP, Dominican Sisters of Mission San Jose.

Sister Butcher is the woman behind the technology. A few years ago, the Diocesan telecommunications department informed her that the convent's widespread campus and 4-foot-thick building walls made wiring it for a network impossible.

The community includes a health-care center, a library, a kindergarten and preschool, living quarters, and a college where the novices study to become nuns. The sisters also run an olive oil business, producing premier oil on-site.



Jim Bradfield solves a wiring dilemma.

The convent buildings do not have conduits for wiring so any network wires would be exposed. And if the sisters wanted to move something, they would have to tear up the wiring and redo it. In fact, the walls of the mission are so thick the buildings do not have air-conditioning or heating.

But never say never to Sister Butcher. She sought the assistance

of Jim Bradfield, president of Network Access Solutions (NAS), Dublin, Calif. After Sister Butcher and Bradfield's first meeting, wireless technology was deemed to be the saving grace, and the two set out to work.

"You couldn't put a line in there to save your life," Bradfield says. "So rather than drill through walls, we had to put in wireless."

NAS strategically placed Cisco Aironet 340 Access Point products all over the campus, including the library, bell tower and hospital. Cisco wireless network interface cards were placed in the workstations, and wireless PCMCIA cards were used for the laptops. The project also included a server and an e-mail program with addresses for all the sisters.

The integrator completed the initial network in three to four days and has since helped with additional phases of the project. The wireless network now includes three access ports for campuswide roaming, a slew of laptops and six workstations.

Last month, the sisters began looking at vendor demos of videoconferencing products to add to the network.

The sisters use the wireless technology primarily to access the Internet and communicate with others in their order, including their European counterparts, as many of the sisters are from Europe.

"With wireless technology, now you can serve a whole group of totally under-served people," Bradfield says.