From Hawaii 5-0 to HiWiFi

Plans for a “Wireless Waikiki” could put Hawaii on the technology map

Landmark Networks Chief Executive Officer Tareq Hoque and Magdy Iskander, director of the University of Hawaii’s Center for Advanced Communications
Hawaii has a history of wireless innovation. In 1970, a pioneer team – headed by University of Hawaii engineering professor Norm Abramson – built ALOHA net, the Internet protocol that sends data via radio waves, rather than by wires. Today, a new team at the university, together with Hawaii technology companies, plans to transform Waikiki into the world’s first high-profile 802.11 “Hotspot” (a public place with wireless data access). This project is called “Wireless Waikiki.”

The key technologies already exist on our shores. But to make Wireless Waikiki a reality, it will take the will of our visitor industry and government working in concert with the technology industry. Proponents of Wireless Waikiki say the project would not only benefit our visitor industry by enhancing Hawaii as a business-travel destination, it also could create a model for a system that could be marketed worldwide.

Think of other cities or vacation spots, say the visionaries. Think of China’s Olympics in 2008.

Former Adtech Chief Executive Officer Tareq Hoque has signed an agreement to head Landmark Networks, a wireless LAN equipment developer that uses “PacketHop mesh technology,” licensed from the Stanford Research Institute. The federal government has spent more than $50 million to develop the technology. Ike Nassi, former senior vice president of Apple Computer Inc., founded Landmark in Silicon Valley and is now the acting chief technology officer. Nassi is well-known in technology circles as the inventor of the wireless tablet, which Cisco bought from InfoGear in 1997 for more than $300 million.

Hoque says Landmark moved to Hawaii because tax breaks under Act 221 gave it a better chance of succeeding and being funded. As of this writing, Landmark was the newest addition to local technology accelerator HiBEAM’s portfolio of companies. Hoque was in the process of raising $3 million in series A funding to begin testing and manufacturing Landmark’s plug-and-play service points for 802.11 wireless networks.

Because these wireless service points require just A/C outlets and don’t have to be installed and strung together the traditional way (by drilling holes and running cable or wire), Hoque says Landmark’s solution is about 70 percent cheaper than installing a “wired” wireless network.

Wireless Waikiki is an initiative that began as a partnership between Landmark and Vernier Networks, a California-based wireless network security and management solutions company. Vernier has some of its hardware at the University of Hawaii, where campus wireless networks are being created. The university’s Hawaii Center for Advanced Communications (HCAC) uses some of Vernier’s hardware.

As of this writing, HCAC had a number of initiatives under way, related to Wireless Waikiki. The College of Engineering and the College of Business Administration had submitted a joint proposal for a $2.9 million grant from the National Science Foundation to develop curriculum for a graduate program in communications technology and management. As part of the plan, doctoral candidates from both schools would work together on a number of projects, including Wireless Waikiki.

HCAC also has developed a number of wireless technologies. Center officials want to commercialize developments and spin off companies. One of these technologies is a wireless site design software program that can take a blueprint of a building and project the placement of wireless access points. The Department of Defense and the National Science Foundation funded the research, estimated at $600,000.

Magdy Iskander, HCAC director, says when the program was applied to a city map of Munich, Germany, the accuracy results were as good as commercial cell phone providers. “Because we have new ways of doing it, that’s better than anyone else,” says Iskander. “Forty times faster than anybody else in the world.” HCAC also has developed a multi-band antenna that Iskander would like to see commercialized.

It makes sense that the university would be involved in putting up a wireless “cloud” of connectivity over Waikiki. In July, an initiative of the University of Georgia’s New Media Institute to set up ubiquitous 802.11 access across its business district in Athens garnered a story on CNN. But the project seems to be raising the same question that hotel owners and other Waikiki businesses are raising here: How do you make money? Students from Georgia’s School of Journalism and Mass Communication are charged with finding the answer there.

Joe Durocher, senior vice president and chief information officer for Outrigger Hotels, says, “What we’ve found
from a financial point of view is that — if not all — most of the people who come to Hawaii are here for relaxation and don’t particularly want to get on the Internet or anything like that. Now that doesn’t mean that we should ignore the ones that do … but the difficulty has always been figuring out how to satisfy those guests in some economically sound method.”

Peter Schall, managing director for Hilton Hotels and Resorts in Hawaii, declined comment for this story, saying through a spokeswoman that it was too early to discuss Wireless Waikiki. Hilton’s Waikiki property, however, already offers 802.11 access in some common areas and plans to offer it in-room.

Barry Weinman, HiBEAM president and managing director of Allegis Capital, says, “You could look at it and say they could compete with the other hotels on a small set of business conferences and meetings and they could all fight to see which one gets it by having a better wireless setup as one of the features — but people don’t come just for that — or you can grow the pie. If you made HiWiFi (Wireless Waikiki) something that people recognized as not just a hotel, not just a convention center, but a whole area, then all of sudden, you could attract bigger conventions, because they’re not just stuck with staying in one place. And if you grow the pie, (hotels) can share revenue.”

Hawaii company Pacific DirectConnect (PDC) has finished wiring the Turtle Bay Resort with high-speed wireless access in July and was awarded a contract in September to provide high-speed Internet access to more than 1,800 guest rooms at the Hilton Hawaiian Village. PDC has also created four wireless hotspots at Honolulu Coffee Co. at Tamarind Park, Paradise Café on Merchant Street, Cove Bar at the Ala Moana Center and Panini Grill at Kahala Mall. Right now, access at these hot-spots is free as PDC collects data to drive its next big thing: Wireless Waikiki.

Mike Browning, PDC president and chief operating officer, says, “Our plan is we’ll continue to launch these small locations, onesies, twosies here and there. We’ll continue to promote to the hotels that wireless is a way to bring your guests to the Internet. … We’re going to use our integration expertise, installation and services and take (Hoque’s Landmark Networks) product and be first users of it and be his sales team. If you will, to promote

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He and Hoque both speak of free wireless access from the airport to the convention center to Waikiki and beyond. Hoque says, “We see it as an extension of the Internet model. It’s just a communal effort to let people have broadband access to the Internet and the cost for not doing it ... is that your property is not going to be wired up and as a result you are going to be left behind. A good analogy is electricity. At some point, you have to install electricity in your restaurant if you want to be part of the 20th century.” An estimated 95 percent of new laptops will have Wi-Fi or an 802.11 card already built in by the end of 2003, he adds.

Browning envisions the equivalent of cellular roaming, where one clearinghouse organization does all the billing and manipulation between carriers. “Ultimately what we’re doing is we’re providing a seamless access solution, hooking wireless providers in. Tying them in with our billing solution and basically generating a small portion,” Browning says.

That small portion is dependent upon building volume or “eyeballs” and selling advertising that would appear dynamically within the cloud, depending on the user’s geographic location. As of this writing, PDC had placed a bid to provide Internet access for the Hawaii Convention Center. Selection of that vendor was scheduled for late November.

HiBEAM’s Weinman says discussion about Wireless Waikiki escalated after Intel recently chose Orlando, Fla., for a major conference. Says Weinman: “Now, Intel in Santa Clara, Calif., to Orlando, Fla., is a hell of a lot longer than to come to Hawaii, but there was no good infrastructure. They all need their laptops, they all need their e-mail, they all need Internet access, and Orlando has in the hotel that they picked, because it’s a very modern wireless facility. When they studied Hawaii, they didn’t see that. So it was kind of saying, ‘Why should Intel go there and not here?’ The more we thought about it we said, ‘Okay, we could wire all the hotels, but that would be very expensive or we could use mesh networks, which is very cheap and kind of avant-garde.’ Then we attract business travelers here, fill up the convention center, fill up the hotels by offering this as some kind of Hawaii’s unfair advantage.”

HCAC’s Iskander adds, “Having that is important for the hospitality industry, because people now look for wireless networks, because of mobility and so forth. Everybody travels now with a laptop and with all the cell phones and whole wide variety of devices that they have. Therefore, having Hawaii equipped with this is important to the hospitality industry to begin with. If they don’t have it here, they will go somewhere else.”