



By Khali Henderson

A FUNNY THING HAPPENED TO ME on the way to writing this article. I traveled to Orlando for the Association of Communications Enterprises (ASCENT) fall conference, where PHONE+ publishes a daily newspaper; only to find that my room was not equipped with an Ethernet connection, which I needed so I could send large graphic files to our production director back in Phoenix. News editor Josh Long and I were annoyed with our MIS manager; he had assured us that he'd called ahead to make sure they had what we needed. We were panicked. We wanted to talk to him. We couldn't track him down. So, we called the front desk.

businesses have been tapping into the network for some time, but now it is making its way to public places — like hotels, airports and cafes through local ISPs. They typically stick a deal with a landlord to deploy the necessary access point and pay the landlord a commission.

The emergence of platform providers that enable the billing, security and roaming functions on a resale or revenue-sharing basis make it even easier for these so-called microcarriers or wireless ISPs to deploy service. It's an attractive proposition, earning 10 percent to 40 percent margins depending on the loca-

Hot Spots

Wi-Fi Resellers Heat Up Public Broadband Access

"There must be some mistake." The clerk says there is a data port in every phone. True, but they're RJ-11s, not RJ-45s. Should she send the maintenance manager? Yes, please. We were not hopeful. What could he really do or say but confirm what we already knew — the plug was not going to fit in the jack.

Minutes later he arrived. He said there was no jack suitable for our cable in the room. He said we could not get high-speed access ... unless we were willing to switch rooms. Turns out rooms in a new building on the property did have Ethernet connections. So at 11 p.m. we were schlepping our stuff across the grounds to smaller quarters with the elusive high-speed connection.

While everything worked out fine, this story could have had a very different plot. One in which I got to stay in the roomy vacationers' suite on the older property and transfer text files and jpeg files to our production director from the spacious porch overlooking the pool. Heck, since it's my story ... how about Josh and I just work poolside.

This isn't the fantasy of an overworked editor, but the reality of Wi-Fi.

Wi-Fi, short for wireless fidelity, is unwired high-speed Internet access based on free bandwidth set up by the Federal Communications Commission (FCC). Using the IEEE's (802.11b) Wi-Fi standard, anyone within 1,000 feet of a node — also called a hotspot — can connect enabled computers and peripherals to the Internet. Savvy consumers and

tion and the reseller's sales and marketing efforts. Public access rates vary, but are beginning to settle to around \$10 per day — depending on the property type and geographic location.

By the end of 2002, Wi-Fi will link more than 15 million devices, according to research publication



InfoTech Trends. It also forecasts the market to grow from \$1.2 billion in 2001 to \$4.1 billion in 2005.

While some would argue that large carrier participation like that of T-Mobile USA Inc. is what will ultimately push Wi-Fi into mainstream consciousness, resellers' local distribution channels also will play a vital role in moving the technology to Main Street.

Channel Opportunities

Wi-Fi is essentially free to the consumer or enterprise once it has been purchased and access points have been installed on the customer's

property, but it has become clear it should not remain free to users outside those private signals.

Securing such public networks and figuring out how to bill for the service has been the pre-occupation of a number of firms, including Pronto Networks Inc.

Pronto has developed the Hotspot Networking System, which consists of a hotspot controller, provisioning and OSS. The system provides everything required to set up and manage a hotspot, except for the high-speed bandwidth (T1 or DSL) from the Internet to the hotspot location. The controller, which costs

\$799, taps into the wireline data source and then controls the wireless access points dispersed in a building. In addition, the company offers a managed service option: Pronto provides all the equipment and back-office operations for the service, including credit card processing, billing and roaming, while the customer determines pricing, network policies and branding. Pronto's managed service model is based on a revenue-share model where 75 percent of end user revenue goes to the hotspot network opera-

tor to be shared with the property owner as desired. The remaining 25 percent goes to Pronto for operating the data center and performing all the billing, revenue settlement, network monitoring and customer service.

Pronto offers its system solution primarily to services providers with extensive customer bases and existing network operational expertise, such as DSL/cable providers and mobile carriers. The managed service is designed for small and medium-sized wireless ISPs as well as mobile virtual network operators (MVNOs).

DeepBlueWireless Inc. is one of Pronto's managed service partners. CEO Alan Gale says DeepBlueWireless has been working with Pronto since August, but had worked with Wi-Fi for more than a year through another provider that went out of business. The company operates 20 hotspots in the Bay Area and in Southern California and has aggressive plans to install 300 in the United States and Europe by the end of next year. In three to six months, DeepBlueWireless will be adding third-party services that ride over the network, such as voice over IP, video streaming, driverless printing and electronic fax, Gale says.



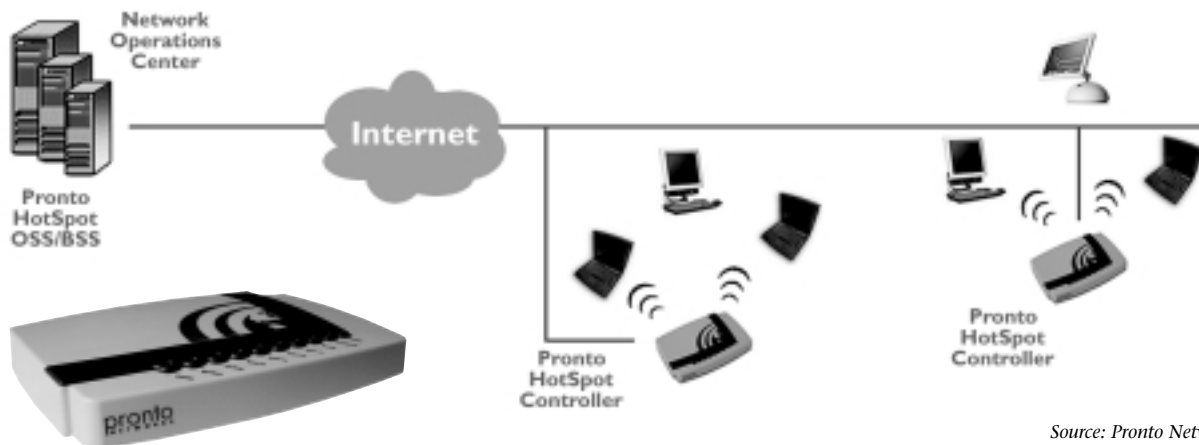
The iPASS log-on interface screens.



Source: iPASS Inc.



Hotspot Networking System



Source: Pronto Networks Inc.



Gale justifies these plans by pointing to his company's experience with the technology and its ability to integrate a multivendor solution into a single platform much more quickly than larger carriers; those big players are just now are looking at Wi-Fi as a serious endeavor.

Another company that is taking on resellers is NetNearU Corp. One of its resellers is North Atlantic Inc., a longtime distributor of payphone hardware to independent payphone service providers. While North Atlantic buys and marks up the equipment, it receives a commission from NetNearU, which it splits with its customer. NetNearU handles all the back-office functions.

North Atlantic's COO Kevin Austin says his company has been investigating Wi-Fi intensely since March and has decided to offer it as another product for its core customers, whose existing clients - hotels, airports, convention centers, etc. — fit the profile for public access Wi-Fi. He says a dozen customers are interested in it already, and he expects 20 to 30 access points will be deployed in first quarter.

Austin says his pitch is simple: "If you are already stopping by, why not mine the location."

The location is the channel, says Josh Friedman, president of eleven wireless, which sources its own equipment and provides its own back-office functions. Locations have incentive to market Wi-Fi because it offers incremental revenue and attracts additional customers.

Operator Gale agrees, but adds the proposition can be more compelling to smaller properties, like boutique hotels or cafes, where the service commission might not be very large, but Wi-Fi helped secure a reservation or led to core product sales. One of DeepBlueWireless' café accounts makes a few hundred dollars a month in commission, but easily exceeds that in food and beverage orders.

Ubiquity Challenges

The proliferation of Wi-Fi is not without its challenges — the chief of which is ubiquity. It's the classic chicken-and-egg dilemma: Users require networks but would-be network providers require users. Since users already have shown a willingness to embrace the technology on their own, some providers are making a leap of faith in deploying public access networks.

NetNearU reseller Austin says that the risk assessment has to include the success of cellular phones, which took a similar path, he says. "Not too many people had cell phone 12 years ago, but once the antennas went up, now everyone has them," he reminds us.

The cellular analogy extends even further when you consider that the only way to achieve ubiquity is through roaming

agreements with other providers. Already, three companies — iPass Inc., Boingo Wireless Inc. and GRIC Communications Inc. — have emerged as Wi-Fi aggregators. They essentially sign up Wi-Fi operators to be part of their networks, allowing their users to roam onto hundreds of smaller networks using a single interface and billing mechanism.

Both iPass and GRIC are longtime dial-up aggregators, and Boingo is backed by investors like Earthlink Inc. and Sprint PCS. While agreements bring additional traffic to a hotspot operator, they do not allow the operator to extend its own network. The aggregators usually make their services available for resale, however. Boingo, as an example, signed a deal in October to co-brand its service for AIR2LAN Inc. In another example, systems integrator Aventail Corp. resells iPass service to its "global 2,000" customer base as part of its secure virtual private network (VPN) offering.

“Locations have incentive to market Wi-Fi because it offers incremental revenue and attracts additional customers.”

Meanwhile, hotspot operators are left to create their own agreements or join up with a grass-roots effort called Pass-One. Created in April 2002, Pass-One is a nonprofit association of companies attempting to facilitate multilateral roaming. Its members are ISPs, cellular carriers and wireline telcos with public wireless LAN (WLAN) offerings. In general Pass-One's main task will be specifying the rules for authentication (SIM and browser-based), authorization and profile transfer; access management (including service barring), accounting and billing, tariff planning, settlement and overall service delivery.

While the merits of roaming are clear, it may not be the critical hump over which Wi-Fi must pass. Gale notes that most local users require only access to one or two locations, and even business travelers can access most networks by paying with a credit card for a specified time period.

One company, Vesta Corp., is hoping to add prepaid cards to the payment functionality. Vesta, which has experience in stored value cards, is developing a common back-end authentication and billing system to knit together disparate coverage areas. To expand its prepaid services to Wi-Fi, Vesta is addressing two hurdles — authentication of users and devices and decrementing over the Internet with links to account management functions that alert users to account levels. A pilot project conducted with eleven wireless and the Hotel Lucia in Portland, Ore., is testing these capabilities. Vesta also is considering how to manage the roaming component by establishing its own agreements with carriers that already are its customers or by reselling an aggregator's network.

