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What if They Built an Urban Wireless Network and Hardly Anyone Used It?

By [KEN BELSON](#)

TAIPEI, [Taiwan](#) — Peter Shyu, an engineer, spends most of his day out of the office, and when he needs an Internet connection he often pops into one of the many coffee shops in this city that offer free wireless access.

He could use WiFly, the extensive wireless network commissioned by the city government that is the cornerstone of Taipei's ambitious plan to turn itself into an international technology hub. But that would cost him \$12.50 a month.

"I'm here because it's free, and if it's free elsewhere, I'll go there too," said Mr. Shyu, hunched over his [L.B.M.](#) laptop in an outlet of the Doutor coffee chain. "It's very easy to find free wireless connections."

Despite WiFly's ubiquity — with 4,100 hot spot access points reaching 90 percent of the population — just 40,000 of Taipei's 2.6 million residents have agreed to pay for the service since January. Q-Ware, the local Internet provider that built and runs the network, once expected to have 250,000 subscribers by the end of the year, but it has lowered that target to 200,000.

That such a vast and reasonably priced wireless network has attracted so few users in an otherwise tech-hungry metropolis should give pause to civic leaders in Chicago, Philadelphia and dozens of other American cities that are building wireless networks of their own.

Like Taipei, these cities hope to use their new networks to help less affluent people get online and to make their cities more business-friendly. Yet as Taipei has found out, just building a citywide network does not guarantee that people will use it. Most people already have plenty of access to the Internet in their offices and at home, while wireless data services let them get online anywhere using phones, laptops and P.D.A.'s.

Like Q-Ware, operators in the United States, Europe and other parts of Asia are eager to build municipal networks. But they are grappling with the high expectations politicians are placing on them. On June 9, MobilePro backed out of plans to develop a wireless network in Sacramento because it said the city wanted it to offer free access and recoup its investment with advertising, not subscriptions, a model that other cities are hoping to adopt. Elsewhere, incumbent carriers have challenged cities' rights to requisition new networks. And many services have had difficulty attracting customers.

"There is a lot of hype about public access," said Craig J. Settles, a technology consultant in Oakland, Calif., and author of "Fighting the Good Fight for Municipal Wireless." "What's missing from a lot of these discussions is what people are willing to pay for."

Q-Ware's relationship with Taipei has been less contentious, partly because the WiFly network is just one piece of a far broader and highly regarded plan to incorporate the Internet into everything the government does.

The brainchild of Taipei's mayor, Ma Ying-jeou, the CyberCity project was first conceived in 1998 as a way to catapult past Seoul, Hong Kong and other Asian capitals that were recasting themselves as cities of the future. Many government agencies now communicate almost exclusively online, saving millions of dollars, and citizens have been given hundreds of thousands of free e-mail accounts and computer lessons.

WiFly plays a role, too, by allowing policemen to submit traffic tickets wirelessly, for instance. But making it appeal to the average citizen is another story. Q-Ware, which is part of a conglomerate that, among other things, operates 7-Eleven franchises in Taiwan, has found that consumers will pay subscription fees only if there are original offerings to pull them in.

"Content is really key," said Darrell M. West, a professor of public policy at [Brown University](#) who conducted a survey of how well governments use the Internet. "It's not enough just to have the infrastructure. You have to give people a reason to use the technology."

To that end, Q-Ware has developed P-Walker, a service that will let subscribers with [Sony](#) PSP portable game machines log on to WiFly to play online games and download songs and other material.

The company has also developed a low-priced Internet phone service. The handsets cost about \$200 and allow users to call other mobile phones for just over a penny a minute; calling a traditional phone costs less than half a penny. Ultimately, Q-Ware expects its network to communicate with more devices, including MP3 players and digital cameras.

"In the beginning, you have to do something to attract people to the service," said Sheng Chang, vice president of Q-Ware's wireless business group. "We're a wireless city, so if we can't make it here, it can't be made."

Mr. Chang added that Q-Ware lowered its target for attracting subscribers after several new product introductions were delayed, including the Internet phone service that he now expects to offer starting as early as August.

Q-Ware began building the network in 2003, working with [Nortel Networks](#) to install enough hot spots to reach nearly everyone living in this densely packed city.

Like municipal governments in many American cities, Taipei gave Q-Ware access to streetlight poles and other public property to install antennas and cables. Q-Ware has spent about \$30 million putting together the network, which also reaches every subway station, hospital and public building. Streetlights did not have the electrical outlets needed to power the antennas, so outdoor hot spots cost about three times more than the indoor access points.

Initially, Q-Ware gave away subscriptions and about 60,000 people signed up. But once Q-Ware started charging for its service in January, only a few thousand subscribers remained.

"The problem is not the technology, but the business model," Mayor Ma said in an interview. "If they charge too much, people won't sign up. But Q-Ware needs to recoup their investment."

With so many options for getting online indoors, WiFly's main selling points are that its hot spots are in hard-to-reach spots like subway stations, and they link to unique services. But Amos Tsai, an office worker making his way through City

Hall Station, said he rarely used his laptop or P.D.A. on trains and or in stations because they were too crowded — and because he also didn't want to pay. "Now that they started charging for WiFly, I stopped using it," he said.

For now, Q-Ware's most pressing problem is how to get people like Mr. Tsai to buy subscriptions. Q-Ware has been advertising its service on the radio, in computer magazines and on the Web, including [Yahoo's](#) local site. The company will also take out ads in newspapers and on television, and it has designed an interactive "survival" game called WiFly Hunter that offers cash rewards. It is teaming up with broadband providers so customers can get a D.S.L. line at home and WiFly access at a discount.

But even if Q-Ware meets its target this year, the company will need 500,000 users in a given month to break even, a target it is not expected to hit for several more years, according to Chou Yun-tsai, the chairwoman of Taipei's Research, Development and Evaluation Commission, which oversees the WiFly project. "It's a huge task," Ms. Chou said.