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## IT'S NOT PANNING OUT

Oct 1, 2007 12:00 PM, By Lynnette Luna

**Headlines across the country** are heralding the implosion of the municipal Wi-Fi market as EarthLink, one of the service's largest backers, significantly scaled back its initiatives and some cities scrapped their wireless access plans. Is this a sign that the muni Wi-Fi market doesn't work, or is it an indication of an industry settling into a more rational period of deployment based on solid business cases?

Either way, the situation today stands in stark contrast to just a year ago, when muni Wi-Fi was heralded by big-city politicians as the solution for bridging the digital divide and bringing Internet access to the masses (*MRT*, May 2006). Some politicians staked their reputations — and political futures — on initiatives designed to deliver Wi-Fi to constituents and city workers free of charge or at significantly reduced rates.

Today, however, big cities like San Francisco and Chicago are walking away. Last month, San Francisco formally pulled the plug on a deal to build a free muni Wi-Fi network throughout the city, an effort that already was considered over in late August when Internet service provider (ISP) EarthLink rescinded its deal with the city — which included teaming with search engine provider Google — to cover the estimated \$14 million to \$17 million that was needed to build the network.

A committee of the city's board of supervisors sounded the final death knell on the project when it declined to vote on the contract, effectively ending — at least for now — Mayor Gavin Newsom's years-long efforts to blanket the city with free Internet access.

Meanwhile, Chicago scrapped muni Wi-Fi plans after failing to come to an agreement with either EarthLink or AT&T to build the network. Chicago balked at the idea of committing to be an anchor tenant. The city also cited the declining costs of Internet access and the advancement of other technologies as a reason for the deal going sour.

**SOME ISPs** built business models around giving a muni Wi-Fi network to cities for free in exchange for selling Internet access to their constituents. As it turns out, usage has been much less than expected, diminishing the revenues needed to pay for the infrastructure. Vendors and ISPs such as MetroFi and EarthLink have now changed their tune, saying they no longer will offer free public Wi-Fi in cities that won't commit to minimum municipal service purchases. In other words, they want cities to share the cost and risks.

"The whole idea of providing free service is a myth," said Roberta Wiggins, research fellow for The Yankee Group. "Service providers couldn't support this model, and they had to come back to the cities and ask them for upfront payments. ... The cities weren't expecting that."

EarthLink has Wi-Fi operations in about a half-dozen cities and contracts for another half-dozen. According to the company's latest filing with the Securities and Exchange Commission, EarthLink manages 150 square miles of Wi-Fi networks across all of its markets, covering 600,000 households. So far EarthLink has not disclosed usage statistics for any of its Wi-Fi operations.

Last month, EarthLink, which has pumped a significant amount of money into its muni Wi-Fi initiative as a way to prop up slumping revenues from its dying dial-up ISP business, eliminated 900 jobs and closed offices in Orlando, Fla.; Knoxville, Tenn.; and San Francisco. The company not only bailed out of the highly publicized San Francisco free muni Wi-Fi initiative, but also a similar deal in Houston, and earlier this year revealed it would pull back on muni Wi-Fi for the rest of 2007.

During the company's second-quarter conference call, EarthLink CEO Rolla Huff acknowledged that his company's approach to the muni Wi-Fi market was not working.

"We will not devote any new capital to the old muni Wi-Fi model that has us taking all of the risk by fronting all of the capital, then paying to buy our customers one by one," Huff said. "In my judgment, that model is simply unworkable."

To ensure the company sees a return on its investment, he wants "municipal government to step up and become a meaningful anchor tenant on completion of a build."

Meanwhile, MetroFi has said evolving business models have forced it to seek changes in pending municipal agreements. Consequently, some cities are balking. Anchorage, Alaska, and Corona, Calif., have discontinued their municipal wireless projects after MetroFi said it could not offer free

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service without a commitment from each municipality to be an anchor tenant on the system. In both Anchorage and Corona — in return for exclusive access to light poles, city buildings and other city-owned rights-of-way — the company had originally hoped to deliver a tier of free wireless broadband access supported by advertising, plus a premium ad-free tier at \$19.95 a month. Based on a re-evaluation of the costs, MetroFi asked the city of Anchorage to commit to purchasing \$3000 worth of wireless access services per month. In Corona, MetroFi sought a commitment of \$90,000 a year for five years. Both cities rejected the plan.

"Politicians put their egos on the line because they promised free access, and now they are accusing the vendors of bait and switch. But the promises came when everyone was drinking the Kool-Aid. Now it's sunrise, and it hurts," noted Craig Settles, president of Successful.com and author of *The Economic Development Impact of Municipal Wireless*, a report for the International Economic Development Council that challenges some of the expected benefits of muni Wi-Fi networks.

**ONE OF THE BIGGEST** problems afflicting a business case that relies on consumer usage is simple physics. The relatively low power of Wi-Fi devices built into laptops and PCs, combined with comparatively weak Wi-Fi signals, creates difficulty in terms of penetrating buildings — where most people access the Internet.

"There was some naïveté in terms of what cities have asked the wireless ISPs to provide," said Anthony Morris, vice president of business development with InMotion, a provider of vehicle-area networks for public-safety organizations. "Asking them to provide 99.99% coverage at 1 Mb speeds is not a business case. Then you have to put in access points that don't generate traffic and revenue to provide a blanket network for the whole city."

That leaves the best access points outdoors. But consumer use of public Wi-Fi networks at parks or other outdoor spaces remains very low at 5%, according to a Forrester Research report.

"It's just tough to make Wi-Fi a replacement for DSL," said Ron Sege, president of Tropos, a leading mesh network vendor that has built networks for EarthLink. "It's early to make a business out of this."

Indeed, Sege believes that given enough time, EarthLink would have succeeded, but it would have taken much longer than anyone expected. A company like EarthLink, whose primary business isn't wireless access, feels pressure from investors to stem losses. Plus, it was EarthLink's former CEO Gary Betty who had the original passion and vision to see the new business through, but he died in January.

For other companies seeking to be Wi-Fi service providers to municipalities, it's an even tougher road, according to Michael Dillon, vice president of business development with mesh network vendor Firetide.

"In the municipal wireless market, most of the service providers are new, and unlike telcos, the new muni-wireless service providers are up against the business model of [venture capital] organizations. This is a challenge. Most of these folks aren't holding sufficient funds and have to seek financing and structured debt," he said.

Still, despite the heavy negative publicity and failure of some rather large muni Wi-Fi projects, this isn't the end of the market. Success stories do exist, and new business models appear to be emerging.

"I call it Muni 2.0," Dillon said. "Cities have to put aside open access — not do away with it, but instead make sure their business models are balanced. Use the government network as a component, and make sure it is monetized first."

The successful deployments to date revolve around wirelessly enabling government applications that will generate revenue — or at least reduce costs — for municipalities and/or improve life for constituents, according to industry executives and analysts.

"We're going to have to see a lot more thinking about how we leverage technology and not just hope Wi-Fi will bridge the digital divide," Morris said. "People have to look at the right applications and the potential cost savings. Look at how you can use technology to monitor buses, read parking meters, provide better services for public safety and generally improve the quality of government services. Making streets safer and making sure buses run on time would probably make the public just as happy as free Wi-Fi access."

**INDEED**, a muni Wi-Fi network serving public-safety needs quickly is emerging as a solid business case. The muni Wi-Fi network in Minneapolis, for instance, has provided a proving ground for its worth. The network was used to aid rescue workers following the collapse of the I-35 bridge as first responders used it for data transmission and voice-over-IP calls.

That access became important when the cellular network was overwhelmed almost immediately by the volume of calls. The ISP U.S. Internet deployed additional access points and wireless video cameras to aid the rescue efforts.

"Not only was the city able to provide a communications vehicle, but first responders could move massive amounts of data, such as GIS mapping data, that you can't do over a cellular network," Settles said.

One key aspect of AT&T's first deployment of muni Wi-Fi in Riverside, Calif., includes providing a municipal public-safety network to the city as an anchor tenant on the 4.9 GHz band, as well as commercial Internet access on the 2.4 GHz band. The commercial service includes ad-supported free access at 512 kb/s and 1 Mb/s access for \$7.99 per day or \$15.99 a week.

The city will use its wireless public safety network for high-speed communications, including

video transmission to police cars for the real-time monitoring of road traffic and areas where graffiti, illegal dumping or other activity are suspected.

Greene County, N.C., has used muni Wi-Fi to bolster the county's economy, which was devastated by the dramatic decline of the tobacco industry.

"Our county was dependent on tobacco, and when Congress talked about bailing out tobacco four-and-a-half years ago, we knew there were going to be a lot of people without jobs. Growing tobacco was all people knew how to do," said Misty Chase, director of the county's Beyond Tobacco initiative. "We started thinking about how we could educate people and how we could connect our small community to the rest of the U.S. We saw that the Internet was the way to do that."

The county teamed with ISP Wavelength and received a federal grant to build out a Wi-Fi network, which is run by Wavelength and owned by the county. Apple Inc. subsequently partnered with the county's school district to provide laptop computers to middle-school and high-school students, while computer labs have popped up throughout the county. The increased access to computers has made a difference. Five years ago, only 26% of high school seniors in the county moved on to college. In 2006, that figure was 87%, Chase said.

Wavelength offers service for \$24 per month, and the network now covers 90% of the county.

"The response from the community has been overwhelming," Chase said. "Three years ago we probably didn't have five businesses that had a Web site. Now it is blossoming. We're helping our people get started with Web sites, and new businesses are moving here because the cost of property is still reasonable. The Internet allows them to make sales and ship their products out of here."

Smart Play USA, which imprints tennis balls, is now based in Greene County, while a new sweet potato processing plant will open for business soon. Existing businesses are creating their own Web sites to expand their customer base beyond Greene County. A new state-of-the-art golf community is moving in, along with high-priced homes.

"If we as a county had not looked at doing something, we can't imagine what it would be like," Chase said. "We were on the verge of several businesses closing. We would have had to split four ways [and been absorbed by surrounding counties]. Now those counties around us are envious."

## THE WRONG WAY

### CHICAGO

Balked at the idea of committing to be an anchor tenant. The city also cited the declining costs of Internet access and the advancement of other technologies as a reason for the deal going sour.

### SAN FRANCISCO

EarthLink rescinded its deal with the city, which included a partnership with Google, to cover the estimated \$14 million to \$17 million that was projected to build the network.

### ANCHORAGE, ALASKA

MetroFi, the industry partner, said it could not offer free service without a commitment from the municipality to be an anchor tenant on the system.

## THE RIGHT WAY

### CORPUS CHRISTI, TEXAS

What began as an effort to make the city-owned gas utility more efficient has turned into a model for how to use wireless technology to boost productivity. The city provides an automated meter-reading application that uses Wi-Fi access to collect information at a central point.

### PHILADELPHIA


The underlying purpose of the network is to promote Digital Inclusion. This program has so far provided more than 300 low-income households with wireless Internet bundles — including a refurbished laptop, one year of wireless internet access through EarthLink, and technical support and training — and has funding in place to serve hundreds more in the coming weeks.

### GREENE COUNTY, N.C.

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### RIVERSIDE CALIF.

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