
[SAVE THIS](#) | [EMAIL THIS](#) | [Close](#)

## Muni wireless management: All hands on deck

By Vince Vittore

Jul 1, 2005 12:00 PM

At one time, in fact, the town about 50 miles northeast of Des Moines was home to a Ford factory that cranked out Model Ts.

Today, however, Marshalltown is fighting a battle that has become all too familiar. In order to attract businesses, it has to create an environment that is friendly to those willing to take the risk. But unlike many municipalities across the country, the city of 26,000, which boasts that 80% of its downtown is listed in the National Historic Register, isn't doing it simply by offering economic incentives; it's relying on broadband delivered via Wi-Fi.

"Instead of trying to lure businesses to the community through tax abatement and TIF [tax incremental finance] districts like everyone else, we decided to use broadband," said Mike Miller, vice president of Racom, which manages two-way radio networks in several states for public-safety users. More importantly, Miller is chairman of the Marshall Economic Development Impact Committee (MEDIC), which several years ago set about creating a grand plan to retain and attract business to the area.

Around the same, Opportunity Iowa, the non-profit group that is encouraging municipalities to build their own fiber-to-the-premises networks, approached Marshalltown's city government. And while the city residents will vote on whether to move forward with the project in November, MEDIC opted to launch what it claims is the state's first free Wi-Fi hot zone. Using Nortel's mesh networking gear, the group has covered its 20-square block area with seven access points — including one on the former Ford factory.

"We were sold on making ourselves distinctive," Miller said. "But instead of doing a study to see what's best we just decided to spend \$35,000 to see if it would work. Seems like most everybody is picking Wi-Fi because of the cost."

Launching in mid-June, with building owners donating rooftop access and the county courthouse providing free Internet access, the results have been given a tentative thumbs up.

During the initial week of public demonstrations, users were able to surf the Net at around 800 kb/s on the downstream side. However, to complete the goal of covering the whole city of Marshalltown by 2006, MEDIC is looking for someone else to run the network.

"The city doesn't want to be an ISP so we need to find a way to work with another entity," Miller said. It's a problem that is becoming increasingly tangled.

Behind the headlines, focusing on the legality of municipal networks, lies the question: When a customer (or in the case of free networks, a citizen) has a problem connecting, whom do they call for help? The city? A private ISP? The local telco?

In the case of Marshalltown, the answer currently is BDH Technology, a local general outfit created by three recent college grads. Longer term, MEDIC is hoping either incumbents Qwest or Mediacom, or possibly a local ISP or Iowa Network Services member Heart of Iowa will step in. In the case of larger deployments, though, the issue of supporting users becomes more complex.

Philadelphia, which has attracted the ire of Verizon Communications, is operating as its own help desk though its initial trial area is relatively small. Additionally, the city, which is using Tropos Networks' access point, has plans to bring in an operator soon. Indeed, as networks get larger most will inevitably be forced to work in partnership with a provider.

"Most municipalities are not set up to operate as a telecom operator," said Mark Whitten, vice president of wireless solutions for Nortel, which is providing its mesh network gear to cities both big and small. "Once you get to that size of deployment like Taipei, I don't think the city can operate those kinds of things."

Just who will run those networks, though, is up in the air — so to speak. In some cases, it will end up being a local telco, while in others a local ISP may step in. Among the other possible operators are vendors with large professional services groups, other carriers or third-party firms. In one instance in Vantaa, a city of 200,000 near Helsinki, Finland, the local energy company is operating a Wi-Fi network that covers about 80% of the households in the city.

Like any telecom decision, much is driven by the economics. Verizon, which has been pushing several state legislatures to pass bills banning municipal networks of any kind, will build and operate its own Wi-Fi zones, but only in limited areas. Currently, the company's Verizon Avenue unit is operating networks in several smaller markets where other broadband options were limited.

"I would never say never, but I would have to say that if we're investing in markets with DSL and EV-DO we certainly wouldn't invest to offer [municipal-wide Wi-Fi]," said Link Hoewing, assistant vice president of Internet and technology issues for Verizon. "We also try to get a sense from the local government how helpful they can be to us. Often, they'll do surveys to see how much demand is really out there. In most of these areas if

Understand the

PROMISE

and the

CHALLENGE

of the SID model

DOWNLOAD THESE 2 FREE WHITE PAPERS

Get the information that you need on the TM Forum Shared Information/Data model. [Read these two important white papers today.](#)

Sponsored by Progress Software

they have little or no broadband, they're pretty eager to talk to us."

The company also is looking much more favorably on WiMAX. Because of its significantly greater range compared to Wi-Fi, Verizon believes it may have a model that makes economic sense as a municipal deployment.

"This is still in the trial stage, but you could do this with just a box in the house," Hoewing said. "We could send a wireless router and not have to do a truck roll, and that changes the economics."

Eliminating that installation certainly will help the numbers. Ideally, though, operators involved with municipal wireless networks, regardless of the technology, must try to purge all help calls, said Scott Zumbahlen, vice president of marketing for Nomadix.

"Even if you're charging for the service, it's hard to have an economic model that supports a bunch of trouble calls," he said.

Nomadix in June signed an agreement to provide Cheetah Wireless with mesh equipment for Cheetah's expanding Las Vegas deployment. Like all of Nomadix's deployments, the Vegas system will allow public users to hop on the network. Having started its business by deploying public hot spots in hotels, the company sees a number of potential business models with varying degrees of support.

In networks where the access is free, user expectation is fairly low. However, there is a cost to providing even minimal help and getting municipalities to understand that is one of Zumbahlen's priorities.

"Once you get the capex done, it's not the tip of the iceberg, but it's not the whole story," he said. "No city wants to burden the tax payer with that bill. It also doesn't do the city any good to force the user to sign up with a single service provider."

Beyond some small towns such as Marshalltown, where public Wi-Fi is viewed as an economic development tool, many networks are migrating to fee systems where user expectations will be higher. At the same time, Verizon is finding that users in smaller markets where broadband hasn't been available tend to give the service provider a little more leeway.

"In a smaller community things are bit more manageable," Hoewing said. "You're not going have a lot of infrastructure and people's expectations aren't going to be quite the same as if they're in Dallas."

Likewise as users begin to connect to other devices on the network besides laptops, they will have a different set of parameters to measure service.

"Right now the average user is interested in Web browsing and e-mail access," Zumbahlen said. "Those are forgiving. What happens if we see a lot of voice-over-Wi-Fi phones and the expectation is that my voice over Wi-Fi is going to work like other applications over the Internet?"

The mass-market introduction of such products isn't expected to hit any time soon, but some vendors already are talking in detail to service providers about how to manage it. One of the biggest issues will be deciding on a network protocol, said Dave Fraser, CEO of Devicescape Software, which provides platforms to wireless devices.

"The reality is just about any device is leveraging the network connection in some way," he said. "Today people think of their digital cameras as an unconnected device, but it makes tremendous sense to make a camera a Wi-Fi device."

The technologies currently used to manage devices, literally, are all over the map. In an enterprise network management system, for instance, simple network management protocol has been around for many years, but may not be appropriate for consumer devices. That's not to say that telco management protocols will be any better suited.

"We got our first traction in enterprise networks, Fraser said. "In the last year, there's been a completely amazing change in our business. Now we're seeing all manner of office equipment and consumer devices adopt Wi-Fi. We're seeing projectors and copiers and the consumer variants of that. There's a tremendous amount of confusion as to who is going to manage these things. One thing that's certain is that it's beyond the realm of the consumer."

It's also not likely to fall to small businesses that stand to be among the biggest beneficiaries of public Wi-Fi, according to Carlos Olivarvia, GM of fixed wireless for Progress, which is managing a couple of Wi-Fi deployments in Florida.

"You're really looking at a completely different mindset," he said. "For the owner of a small business to go into the wireless carrier world, it's tough to marry the two."

## **Webcasts   White Papers   Ask the Experts**

### **REGISTER FOR OUR NEW INSIDE TELECOM LIVE WEBCAST**

#### **Mobile TV: Watch On Demand!**

- Telephony's Kevin Fitchard interviews Peter Jarich from Current Analysis
- Learn about business models and consumer trends driving mobile TV deployment and adoption  
[Watch Webcast](#)

#### **Telephony's Service-Oriented Architecture Webcast**

- *Telephony's* Carol Wilson speaks with Forrester Research and IBM to uncover SOA adoption trends
- Find out how SOA relates to IMS, and how SOA can help service providers address core business challenges  
[Watch Webcast](#)

## :: Renew / Subscribe to Telephony ::



**DON'T MISS AN ISSUE!**

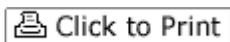
*Telephony* is the leading publication for all communications service providers: new and incumbent, wireline and wireless.

- [Renew](#) your subscription
- [Subscribe](#) to the magazine--now available in digital format!
- [Sign up](#) for email newsletters
- **Subscribe** to newsfeeds:



### Find this article at:

[http://www.telephonyonline.com/wireless/news/wireless\\_muni\\_wireless\\_management/index.html](http://www.telephonyonline.com/wireless/news/wireless_muni_wireless_management/index.html)



[SAVE THIS](#) | [EMAIL THIS](#) | [Close](#)

Check the box to include the list of links referenced in the article.

© 2007 Penton Media, Inc. All rights reserved.

Advertisement: