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## Wi-Fi highway is uncertain route for several cities

Phila. ponders potential tax burdens, lack of demand, and the economic digital divide.

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The city of Tempe, Ariz., population 160,000, hopes to have a wireless network for Internet access up and running citywide in a few months.

Anaheim, Calif., just signed a wireless deal. Portland, Ore.; Minneapolis; Sacramento, Calif.; and San Francisco are reviewing proposals. Other cities are soliciting bids.

Most are taking approaches similar to the one adopted last month by Wireless Philadelphia, the city-affiliated nonprofit group that is coordinating the drive to have a network in place here by the end of 2006.

Each city has hired or will hire a private contractor - EarthLink Inc., in Philadelphia and Anaheim - to build and operate a network at no up-front cost to taxpayers. Which means that Philadelphia is not alone in the path it has chosen.

But a number of questions, including the big one of whether municipal wireless is a good idea, remain unanswered here and elsewhere.

As EarthLink and Wireless Philadelphia work out the details of their contract, there are at least a few elements on which there is broad agreement among experts and advocates.

Hiring a private Internet service provider to build, finance and run a municipal wireless system is better than having the city put up the money - the option Philadelphia debated for most of the year. Even those who oppose the whole enterprise acknowledge that.

Being among the first cities to pursue municipal wireless already has given Philadelphia an image boost. A wireless system, once in place, figures to help guarantee relatively high-speed and high-quality Internet access at competitive prices.

"You're making a basic, affordable service available to everyone," said Harold Feld of the Washington-based Media Access Project. "The analogy is mass transit. You're not preventing anyone from using cabs, Amtrak or their own cars."

But the network will require frequent upgrading. There may be difficulties, even with 4,000 signal boxes spread across 135 square miles, in providing a true blanket of coverage.

In addition, a system designed to attract low-income users may have trouble with bill collection. And if EarthLink encounters financial difficulties, it might ask City Hall for help.

More worrisome, some analysts say, is the possibility that the city will at some point feel compelled to protect its network against the next great advance in communications, whatever that might be.

"City government is the one entity that can actually stop the next level of innovation, not just slow it down, stop it," said professor Gerald Faulhaber of the Wharton School of the University of Pennsylvania, a specialist in telecommunications issues.

Comcast and Verizon, the leading providers of Internet access in the region, are not enamored with the Wireless Philadelphia initiative; they have called the government-sponsored network redundant and unnecessary.

Here are some of the major questions surrounding the project, posed from a taxpayer/consumer point of view:

### Will taxpayers be subsidizing the network's operations?

Not at the outset or later either, according to the city's chief information officer, Dianah L. Neff. But skeptics say they won't believe it until they see the fine print of the contract. And there isn't a contract yet.

"I always get nervous when somebody tells us it's not going to cost us anything," said Frank Rizzo who, as a member of City Council, will have to pass judgment on the deal.

### Is there sufficient demand to support a municipal wireless network?

Wi-Fi isn't as secure a method of Internet access as cable connections or DSL over telephone lines. While generally faster than DSL, it can't match the speed of cable.

So large businesses won't be using wireless. Neither will high-end personal users. Depending on price, a lot of DSL users

may stay put, as well.

Donald B. Berryman, president of municipal networks for EarthLink, said that he expects his customer base to consist of people upgrading from dial-up service, first-time users, people living in areas with no other broadband access, visitors and business travelers, colleges and universities, wholesale customers who want to offer their own Internet service; and the city itself, which plans to use it for inspectors working in the field.

#### **Will the initiative help reduce the digital divide?**

Getting more low-income people online is one of the primary objectives behind what Philadelphia is doing. According to Neff, about 42 percent of the city's population now has no Internet access.

In the effort to get the number down to 20 percent in five years, EarthLink is expected to offer rates of \$10 a month for low-income users ("low-income" has yet to be defined), as opposed to a standard rate of \$20. That rate already is offered in about one-third of the city by Closed Networks Inc., a local company.

Those prices are lower than cable, comparable to dial-up and some DSL rates. (In San Francisco, Google has proposed providing free citywide wireless for everyone.)

But the current cost of Internet service - and its unavailability in some pockets of the city - may not be the biggest obstacles to expanding access; 36 percent of Philadelphians don't have computers.

Wireless Philadelphia plans to use revenues from EarthLink and other sources to help bring computers and computer-training to the poor.

"If the prime focus here was really broadband access for impoverished residents, there are other, simpler ways to go about it," said Ellen Daley, an analyst for Forrester Research, an independent, Massachusetts-based company that studies the business of technology. "You might target subsidies to the poor through the existing providers."

#### **Is the plan realistic, economically and technically?**

Berryman says that he's confident that EarthLink will be able to make money. But Michael J. Balhoff, a Maryland-based consultant whose research has been financed by established Internet service providers, says the numbers don't add up.

He and other experts say that EarthLink also is underestimating the difficulties of covering a vast, urban area and the cost of operating and maintaining the system. The vast majority of signal boxes will be on utility poles, exposed to weather and vandals.

#### **Should government be doing any of this?**

Ultimately, that's a philosophical question. In most places, the electric utility is a privately owned company; in others, it's a municipal department.

City Councilman Michael Nutter said that Internet access is "best left to private-sector entrepreneurs who know what they're doing. This is not our business."

But in the view of Neff and Mayor Street, who has been pushing the initiative for more than a year, the city is stepping in, quite appropriately, to help the private sector provide a vital service that the free market has failed to provide.

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