

The Viability of Municipal Wi-Fi Networks

Braden Cox
Technology Counsel
Competitive Enterprise Institute

Ownership of broadband networks by municipalities, like many other government initiatives, is framed in terms of best intentions. Proponents of municipal broadband ventures assert that a high-speed network will be a means of energizing decrepit downtown areas, breaking poverty cycles, increasing tourism, and earning a reputation as a tech-friendly city. Advocates seem to possess a euphoric “build it and they will come” mentality, hoping that fast and convenient internet access will attract businesses and workers that stimulate the tax base, and keep young tech-savvy professionals from moving elsewhere.

Local government spending projects that attempt to create a better living environment and business climate are not new and can be desirable. But is broadband infrastructure the equivalent of a performance hall, art museum or public utility?

Today’s municipal broadband considerations differ from yesterday’s need for electricity co-ops. Often, the stated rationale for a municipal broadband project is to do battle against existing broadband providers. Such cities as Lafayette, Louisiana, Philadelphia, Pennsylvania and San Francisco, California intend to invest in infrastructure that would directly compete with existing cable, satellite and telephone companies.

City officials allege that current Internet access costs are too high and that the communications market would benefit from more competition. Framed in terms of a “citizen revolt,” local officials lure their constituents with the promise of fast broadband at costs that undercut market prices.

The latest craze for local governments is the installation of wireless access points to blanket cities with wireless “clouds.” Wi-Fi, the wireless standard for short-range access to networks, is a good technology, but not a great one. Lacking forward-correction, connections fail while traveling in a bus or car. It is also highly susceptible to environmental interference and other access points, and throughput speeds degrade as more users connect.

With all the hype, it’s easy to overlook some basic questions that deserve to be answered. Does Wi-Fi possess the characteristics of a public utility that warrants governmental involvement in the marketplace? As a market participant, can the public sector compete fairly against the private sector? Finally, can a government that operates a network that transmits disparate forms of content respect free speech rights guaranteed by the First Amendment?

Government’s Role in the Technology Market – Is Wi-Fi a Public Utility?

One of the oft-heard arguments of municipal broadband proponents is that like electricity, roads, sewers, and water, broadband is just another utility that government should provide to its citizens. These arguments raise “natural monopoly” and “public good” issues.

Economic justifications for public provisioning and regulation of utilities is based on a “natural monopoly” rationale – one firm can supply the entire output demanded at a lower total cost in resources than could multiple competing firms. Natural monopoly arguments arise from the special characteristics of a particular industry under the current state of technology, although many economists would state that instances of natural monopolies are, in practice, extremely rare.

Richard Posner, in his law and economics treatise *Economic Analysis of Law*, presents three characteristics of a natural monopoly that warrant governmental involvement – monopoly pricing, inefficient entry, and difficulty of efficiently pricing the product due to high fixed costs and low per unit costs.

These natural monopoly characteristics simply are not present with Wi-Fi. Entry is easy, though in some areas a provider might need right of way access permissions from the municipality for mounting access points on telephone poles or street light fixtures. Furthermore, Wi-Fi services are characterized by low, not high, fixed startup costs. Indeed, it is the low initial costs that are attractive to municipalities. The real costs may well accrue with ongoing maintenance, upgrades, and for billing and collection of payment from users in those localities that charge a fee for access.

Furthermore, is Wi-Fi a public good? Economists define “public goods” as a class of goods that (1) cannot be withheld from one consumer without withholding from all consumers (nonexcludable), and (2) costs little or nothing for an extra individual to enjoy (nonrivalrous). Essentially, according to traditional economic analysis, if the only way that the good would be produced would be from government, then it is a public good.

Wi-Fi is not a public good. Wi-Fi service providers can exclude non-paying users from paying customers. Companies such as T-Mobile and Wayport have built business models around monthly subscription rates that allow access only for registered users. Like many network industries, the costs of adding an extra Wi-Fi customer are small compared to the overall cost of operating the network. However, this does not mean that the provision of Wi-Fi is a public good, any more than airline service is not a public good.

The reality is that many stand-alone providers of Wi-Fi service have not been able to make a profit selling access directly to consumers. Consumers have come to expect Wi-Fi service to be bundled with other goods – hotel rooms and cafes, for example. Businesses have responded by offering Wi-Fi access at no separate charge to compete for customers.

Municipality as Market Participant

As there has been no “market failure” in the market for Wi-Fi services, localities are extending beyond the traditional justification for a large governmental presence. What happens to the marketplace when government acts not as regulator, but as competitor? Or when a monopoly electricity co-op that benefits from guaranteed rates of return enters the broadband market, is it synergy or unfair cross-subsidization?

The city of North Kansas City, Missouri, is one of many examples of actual or proposed municipal entry into the market for communications services. The city has already installed connections between municipal buildings. The city wants to extend this network to provide its own telecommunications services to residents and businesses. This expansion reflects the desire possessed by many government agencies to broaden their services and generate more revenue. Government agencies may be under-funded to meet their public responsibilities. And it is a natural aspiration of motivated persons to want to grow the “business” – be it a government entity or private company.

But, governments compete unfairly with private enterprise in the following ways:

- Taxes. Private sector companies incur costs that governments do not in the form of income taxes, franchise fees, sales taxes and taxes on real estate and personal property;

- Cost of Capital. Governments' cost of capital is less than private firms, risking public funds while private enterprise raises and risks its own funds. Municipalities may also receive federal government underwriting, subsidization or grants;
- Rights of Way. Governments enjoy free right-of-way access;
- Insurance. Government agencies do not need the same level of liability insurance as they are usually accorded protection from lawsuits by sovereign immunity;
- Accountability. Government accounting standards are lax, accountability is limited, and municipal utilities' pricing is artificially low because they often fail to account for long-term costs such as infrastructure maintenance; and
- Profit. Governments do not need to make a profit and thus do not face the same kind of competitive pressures that affect private enterprise.

Proponents of municipal broadband do not address the above issues. Instead, they attempt to dismiss the claim of unfair competition by focusing on the subsidies that the private sector receives. Many state governments have created tax incentives for telecom companies to expand their broadband networks. Other than highlighting the duplicative, wasteful efforts involved in the use of taxpayer money to subsidize a government entity to compete against a subsidized private company, this rebuttal does not address the inherent incentive structure differences that exist between the public and private sector.

When a private-sector company is failing, it is forced to respond to changing market conditions to become more efficient and responsive to consumers. New products and services are born and efficiency and innovation occurs. Quite the reverse happens in government. The mindset in government is one of reluctance. When a service is not paying for itself, bureaucrats seek additional tax dollars to prop up their operations. Governments, unlike companies, are not able to fail, and thus there is no competitive "check" on mismanagement or waste.

Therefore, private firms must act in the best interests of the community or, at the margin, they lose business to rivals that are more savvy. In this way profits tend to be aligned with serving the community's interest, even if it is the result of the firm's own self-interest.

When foreign governments subsidize companies that sell their goods in American markets, a federal case is made about how it is "unfair" competition. But when a municipal government subsidizes an entity to compete against private sector companies, politicians attempt to categorize this as "free enterprise."

First Amendment Considerations

Municipal ownership of networks has free speech implications. Governmental control over infrastructure might act as the entry point for regulating the content that flows over it. This is already happening at public libraries.

The Children's Internet Protection Act (CIPA) ties receipt of federal universal service "E-rate" discounts to the filtering of Internet content. A recent survey published in Library Journal's Annual Budget Report found that 65% of public libraries filter at least some Internet terminals. CIPA may also extend to wireless access within libraries requiring the filtering of patrons' laptops using internet connections funded by E-rate. Some municipalities, such as Allegany County, Maryland, have stated that they plan to receive E-rate funding to cover the costs of building out its municipal network.

Broadcast television also serves as an apt analogy for the potential for government censorship of Wi-Fi content. The problems with government involvement in providing or regulating goods have been

well-documented by the public choice literature. Wireless Internet access may run into the same sort of indecency regulation that affects broadcast television. Both use the “public’s airwaves” – a phrase that permeates our communications law even though its scarcity rationale has been rendered obsolete by technological advancements. Will local governments provide credible commitments for not blocking and filtering content, even in the presence of determined parent or religious groups active in the community?

Conclusion

Wi-Fi service does not possess the characteristics of a public utility that warrant government involvement. Still, many governments have considered the provisioning of Wi-Fi, if not a public good, then a public necessity. But as a market participant, the public-sector does not compete fairly against the private sector. Public sector competitors have a form of “home field advantage” that discourages entry from private firms. In addition, a government-owned network may have issues respecting First Amendment free speech rights.

Governments can take steps to ensure that the private sector performs as desired. Municipalities should focus on ways to make it easier for private companies to provide service. State legislatures should ensure that they make right-of-way access available on terms that are fair, administratively efficient, nondiscriminatory, and pro-competitive. Federal telecommunications law requires reform and spectrum needs to be better managed.

Removing restrictive regulations would provide a boost to the widespread deployment of broadband service and allow for the natural order of things, i.e., governments in the business of governing and private sector firms in the business of competing.