

Final Report and Recommendations

Introduction

Some local governments across the USA have commissioned their own high-speed Internet networks, and many other counties and cities are considering it. They believe “municipal broadband” will help make the Internet more available and affordable. But some Internet providers have questioned whether governments have the expertise to ensure these networks are economically viable and do not compete unfairly with existing private broadband service. And it is not always clear how municipal broadband will reach underserved groups that are least likely to have Internet access now.

Between September 30 and October 15, Santa Clara University’s Center for Science, Technology and Society and the Broadband Institute of California held a consensus conference on municipal broadband in Silicon Valley, which will soon be blanketed by a municipal network that could reach over 40 cities and 2.4 million residents. The conference was funded by the Community Technology Foundation of California and the California Consumer Protection Foundation.



The Community Panel

Consensus conferences have been used worldwide to engage the public in making well-informed judgments about complex technical issues. This conference involved assembling a diverse community panel of Silicon Valley residents from underserved groups. On the first weekend, community panelists learned about the issues by reading and discussing background briefing papers and defined their questions about municipal broadband. On the second



weekend, the organizers convened a public hearing, where policy experts from government, industry, and community organizations offered a range of perspectives in response to the public panel's questions. On the third weekend, the community panelists reached consensus on policy recommendations for local governments. An advisory panel of stakeholders in the public, private, and nonprofit sectors oversaw the fairness and comprehensiveness of the criteria for choosing the community panel, the briefing materials, and the presenters at the hearing.

These are the community panel's questions, evaluations of the issues, and recommendations.

1. Should Cities Be Involved in Municipal Broadband?

Evaluation

The panel believes that government involvement in broadband networks, including wireless broadband networks, provides significant benefits to people that currently use the Internet and people that do not currently use the Internet. New networks can provide greater mobile access, lower broadband costs, improved access to content, including government information and services, and more provider choices for consumers.

While some argue that governments are too inefficient to provide service, or that government involvement in broadband represents unfair competition with private companies, the panel believes these concerns are outweighed by the benefits of government involvement.

While private companies will focus on their economic interests, governments are more likely to consider a broader range of issues such as such as maximizing public benefits, digital inclusion, access for disabled consumers and non-English language speakers, privacy and security, rural access, training and education, and public involvement and outreach.

Recommendation

- a) The panel believes municipal governments should be involved in commissioning broadband networks, in particular to ensure service to the underserved (i.e., low-income, rural, physically challenged, non-English language speakers, seniors).

2. How should municipal broadband networks be paid for and run to maximize public benefits, especially to underserved communities?

Evaluation

Broadband is important infrastructure. The panel believes that unless governments are involved in the deployment of broadband networks, underserved communities will not be served by these networks.

Municipal governments have knowledge of underserved communities and a history of serving them. Municipal government involvement is also likely to lead to more local employment. However, local governments can be less efficient than private companies in operating networks.

Municipal governments can require that private companies operate the networks in ways that maximize public benefits. Since public resources are being used by private companies, including utility poles and public rights-of-way, the panel believes municipal governments have an ongoing stake in how the networks are managed.

Because of its extraordinary technological and economic resources, Silicon Valley should set the standard for the rest of the nation.

Recommendations

- a) Municipal governments should be involved in developing and controlling broadband networks and should require private companies to operate the networks in ways that provide public benefits.
- b) Municipal governments involved in commissioning networks should use the competitive bidding process as a way to maximize public benefits. For example, competitive bids should be evaluated on their plans to provide digital inclusion programs.
- c) Both public and private entities should be involved in network oversight. For example, a broadband oversight committee could be established with equal representation of public, private and municipal interests. Ongoing public input should inform decisions about these networks. However, private companies should build and operate the networks.
- d) Public funding, private funding or a combination of the two could be used to finance networks.
- e) Municipal governments should set reasonable tiers of service that cover basic needs, including privacy and security.
 - Free access should be provided at some locations, such as schools, libraries, employment offices, shelters (for the homeless, battered women, etc.), emergency service providers and government and non-profit agencies that serve underserved communities.
 - Privacy and security protections should be made available equally across all tiers of service.
 - Regardless of pricing structure, a free or discounted tier available to low-income users should offer the same speed and other features available to households that pay full cost.

3. What “digital inclusion” efforts, if any, should be part of municipal broadband networks?

Evaluation

When some members of a community do not have access to broadband because of their economic circumstances, they miss out on basic social, economic, and political opportunities. Digital inclusion efforts are an important way for municipalities to invest in their residents and to



create true equality of opportunity. While digital inclusion will increase the cost of municipal networks, such costs are offset by increased economic opportunities for those with the greatest needs.

The community panel worries about potential “disconnects” between the underserved and other stakeholders in broadband networks. Those who plan such networks need to reach out actively to underserved communities and strive to see the digital world from the perspective of those who have the least. Making claims about "broadband for all" without understanding the needs of the underserved could create a false – and ultimately disappointing – level of expectations.

Most fundamentally, digital inclusion efforts are necessary because the finest broadband network in the world will be of little aid to those who do not have the hardware and software to access it.

Recommendations

- a) Because digital inclusion should be a core goal of municipal broadband networks, a Task Force on Digital Inclusion should be established. The task force should:
 - Include representatives from underserved populations.
 - Contribute at every stage of the process with all relevant stakeholders.
- b) Because hardware and basic software is essential to accessing the Internet, the community panel recommends that providing such equipment to low-income households be part of any municipal broadband network.
- c) Digital inclusion means bringing the outdoor network indoors. Many members of underserved communities (the elderly, for example) are not likely to use an outdoor network. For them, equal access to broadband means a secure connection inside their homes. The panel recommends that hardware provided to low-income households should include a wireless bridge or modem to bring the network indoors.
- d) The cost of digital inclusion programs should be addressed at the beginning of the process.
 - Digital inclusion should be included in the request for proposals (RFP) process, with competitive bidding.
 - Municipalities and network providers should create a digital inclusion fund from one or more of the following sources:
 - Money upfront plus a percentage of annual revenues from service providers.
 - Philanthropic contributions and federal or state grants.
 - Taxes and public financing.
 - Seeking discounts from hardware and software providers.
- e) Digital inclusion efforts should include education of underserved communities, who need to understand why the Internet is important to them.
 - Such efforts might include a traveling "Techmobile" (similar to the library's bookmobile), which would work with schools and community-based organizations to give underserved communities a chance to try the Internet, to understand

better why it is useful for them, to sign up for more education and training, and to offer feedback about how broadband networks could serve them.

- f) Digital inclusion efforts should be tailored to the needs of each community. Those who plan and create broadband networks need to be on the ground, in the places where the underserved live to find out what is needed most.

4. How should municipal broadband networks be made accessible to people with disabilities and Non-English language speakers?

Evaluation

Broadband can significantly enhance participation in the workforce and society for people with disabilities. But because people with disabilities are also disproportionately low income, they face a double barrier to broadband access: lack of accessible technologies for using the Internet and the high cost of service. Internet hardware, software, and content are not always designed to be compatible with assistive technologies adapted to the needs of people with limited vision, hearing, dexterity or mobility, such as screen reader programs for the blind. People who rely on assistive technologies are often limited to using the Internet in places where it is available, which may not include public libraries, schools, or others' homes. The disabled, a majority of whom are unemployed, are less likely to have workplace Internet access.

Accessibility to municipal broadband networks for the disabled needs to be considered at three levels: the network hardware, software and content provided by the network operator and the municipality, and users' hardware and software. At each level, municipalities should observe the spirit of the Americans with Disabilities Act Guidelines for Accessible Design.

In addition, language barriers keep many from using the Internet. The Internet is an increasingly important medium for informing Non-English language speakers about current events and government in the USA and their countries of origin, culture and entertainment, and how to become involved in their local communities. Content offered in languages other than English can also benefit English speakers by helping them learn additional languages and exposing them to additional viewpoints on public issues.

Recommendations

- a) Municipal broadband networks must be compatible with widely used assistive technologies. Any software and content offered by network providers and municipalities should interact seamlessly with these technologies.
- For example, online customer support and security protection programs provided by the network operator should be compatible with major screen reader programs for the blind.
- b) In addition, digital inclusion programs should make assistive technologies available to users of the network.

- c) Digital inclusion training programs for people with disabilities should consult and partner with existing adaptive technology departments of local colleges, nonprofit agencies, and computer training programs.
 - Outreach about training should be provided through agencies that already serve the disabled (by offering rehabilitation services, paratransit, etc.)
- d) Municipalities and network providers should strive to offer technical support and home pages in multiple languages most commonly used in the community, in a cost-effective manner, using community agencies, volunteers or professional translators whenever possible.
- e) English language content provided by municipalities and network providers should be in simple language illustrated with images for ease of reading and translation by Non-English language speakers.

5. What is the role of privacy and security on the network? How do we protect privacy and security?

Evaluation

As more new users receive broadband service, issues of privacy and security become more important. Users need to understand the risks and security issues involved in accessing the Internet, such as identity theft. Otherwise they will be unable protect their personal information, their financial security, their privacy, their identities and their families.

Users are often unsure how the information they provide to the broadband provider will be used. And there are questions regarding whether providers or customers own user information, such as registration information and lists of websites users visit. Users have a right to keep their personal information personal. If they do not feel their information is secure they will be less likely to use the network.

While the panel believes that users are responsible for protecting their privacy and security online, it believes also that providers and governments should take steps to protect users.

Recommendations

- a) Local governments should affirm that users own their personal information. Registration information and information about users' online behavior is owned by users and not proprietary information owned by the broadband provider or municipal governments.
- b) Broadband providers should be responsible for ethical and legal standards in how user data is handled. Providers should not track or sell personally identifiable information to third parties. Providers should be able to use information in aggregate as long as it does not reveal personally identifiable information. Providers should not provide information to government entities without a court order.

- c) Internet service providers should provide easily accessible information about security and privacy risks.
- Users should be clearly notified by the service provider about what security or privacy levels and what protections they have.
 - Security and privacy information should be provided in easy-to-understand, non-technical language.
 - FAQs and support information should be provided.
 - When possible, information should be provided in multiple languages, based on the demographics of the community.

6. How can the public become involved meaningfully in planning, implementing, and operating the network?

Evaluation

The needs and perspectives of *all* community members, including the underserved, need to be included in every stage of broadband network planning, implementation, and operation. Municipalities should encourage public participation processes that involve the entire community. The general public can bring important insights to the table that providers may not be aware of; sometimes the most basic concerns escape the attention of “experts.” Public involvement ensures that user concerns and issues will not be overlooked or become a mere afterthought.

Because the public has a valuable contribution to make, genuine public participation, including active outreach to underserved communities, needs to start early in the process, well before the equipment starts going up. Outreach efforts need to include more than simply consulting elected representatives. The public interest can best be discovered by consulting the public directly. The public needs to become aware of the issues and contribute to the process before the critical decisions are made. This is also the most cost-effective approach to public participation.

Some may worry that many community residents, and especially members of underserved communities, are not capable of understanding complicated technical issues or that public involvement will unnecessarily slow the process of broadband network deployment. The community panel feels strongly, though, that high levels of technical expertise are not necessary to offer valuable ideas about how the network will affect the end user. Involving the public, especially the disadvantaged, will likely mean active outreach and offering incentives to participate.

Recommendations

- a) Public involvement should begin at the earliest stages of the process and continue after the network is up and running. A broadly representative public advisory board which includes members of underserved communities should be involved at every stage.
- At the earliest stages, the public advisory board should contribute to the development of the RFP and to the partnership(s) formed to respond to the RFP.

Later in the process, the advisory board should work to ensure that network providers follow through on their promises to users.

- b) Public forums and hearings should be held in a variety of venues at all stages of the process. Municipalities should also consider new and creative means for involving the public. Such opportunities should allow for greater levels of deliberation among community residents and frequent two-way communication between residents and other stakeholders.
 - Aggressive recruiting and incentives for public involvement are critical, especially since the underserved may be the most reluctant or least able to participate.
- c) As municipalities or regions consider building networks, pilot projects can be designed to encourage immediate public involvement, test recommendations, and evaluate different models.

7. What services should be provided to rural areas?

Evaluation

Broadband could provide important benefits to rural areas. Small businesses and farms can access information that can make them more efficient and able to develop new markets for their goods. New residents can be attracted if telecommuting to work is available. Distance learning can offer more educational opportunities in areas with few schools and libraries. Government services are more accessible online. Local broadband could help boost social interaction and community involvement in isolated rural areas.

However, private broadband providers are less willing to build networks in rural areas because it is not as profitable as serving densely populated areas. Residents may be less aware of the benefits of broadband. Telecommunications infrastructure is often harder to maintain than in more populated areas and providers tend to repair it more slowly.

To provide equal opportunity for all, government often must become involved in initiating rural broadband networks, with priority to low-income areas.

Recommendations

- a) Municipal broadband networks that serve rural areas, or a mix of urban and rural communities, should be required to make service available to all rural residents or assist them to set up their own community networks.
 - Such service may be paid for by a combination of federal subsidies, private grants, donations from corporations and community businesses, and advertising on the network.

b) Nonprofit-government partnerships could:

- Coordinate nonprofit computer refurbishers to supply equipment to residents.
- Coordinate technical support and network repairs, perhaps via volunteer networks (like rural fire departments).
- Provide social networking software and community content on home pages of rural networks.
- Urge government policies that expand the reach of wireless broadband in rural areas, such as WiMax or other advanced technologies.

8. How should users be trained and educated to protect their interests online?

Evaluation

Many people lack basic knowledge about computers and the Internet. A broadband network serves the community best when all residents understand the *necessity* of computer literacy in today's society as well as the many ways in which broadband access will open the door to increased opportunity.

Basic education and training is needed because despite all its advantages, the Internet can be an overwhelming and potentially dangerous place, especially to new users. Community residents need to know and use basic safe practices.

Education is especially important for parents, whose children may be more comfortable with Internet use than their parents. Parents should learn about the uses and abuses of the Internet and about the activities their children are engaging in online. Parents and children need to learn to communicate effectively about Internet use.

The community panel recognizes that education and training efforts will involve increased costs for the broadband network, but the panel also believes that training programs can themselves generate economic opportunities and growth.

Recommendations

- a) Whenever possible, training programs should emphasize small group instruction and peer-to-peer teaching methods.
- Municipalities should identify existing government and nonprofit agencies that are prepared and/or willing to provide training, such as senior centers, youth centers, schools/adult education facilities, and libraries.
 - Education and training programs should take full advantage of an area's technology resources and incorporate volunteers whenever possible.
 - Municipal-business partnerships should bring those with computer expertise, including technology companies, technology entrepreneurs, and students, into neighborhoods, schools, and community organizations where they can educate and assist underserved communities.

- b) Municipalities should explore the possibility of seeking federal, state and corporate grants to fund training programs. Because such grants are not likely to cover the entire cost, partnerships between municipalities, community organizations, and area businesses should be encouraged.
- c) Training programs should include education in basic security and the potential dangers of Internet use – “Security 101.” Users need to know how to protect themselves, and they need to know what security measures network providers are – and are not – taking. Training classes should emphasize that people need to be proactive in taking personal responsibility for avoiding identity theft and fraud.
- d) Training should also include basic skills, such as how to set up and use an email account; how to protect one’s passwords; and how to access critical sites, such as social services. Users should know how to evaluate a website for legitimacy and security.
- e) Training opportunities should be designed to reach as many community residents as possible.
 - Training opportunities should be publicized widely, targeting media and locations that reach underserved communities.
 - Training should be available in different languages, based on the demographics of the community.
 - Training and education programs should be designed for all age groups and for people with physical challenges.
- f) Education and training efforts should make use of content or portal sites like OneEconomy’s “Beehive” – a central place to connect to government services, as well as educational and job opportunities. Content on such portal sites should be tailored to each community.

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The ***California Consumer Protection Foundation*** administers consumer trust funds and distributes grants in the public interest.