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**Public Libraries and the Internet 2006:  
A Special Report on Wireless Access**  
**Preliminary DRAFT Report**

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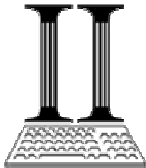
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## INTRODUCTION

The provision of wireless Internet access offers several important opportunities for public libraries. Wireless access can allow libraries to:

- Provide access to more computers by lending laptops than physical space would allow with only workstations;
- Increase Internet access by facilitating the use of patrons' own laptops in the library through a wireless network;
- Offer patrons to access the library connection when the library is closed.

Some libraries have even established Wi-Fi networks that allow Internet access beyond the walls of the library. As a result, wireless access has become an integral way many libraries provide public Internet access.

In spite of these benefits of wireless access in public libraries, the topic has not been studied extensively. Several small-scale studies have examined wireless implementation and use in academic libraries.<sup>1</sup> In the context of public libraries, the majority of the literature focuses either on best practices in implementing wireless or lessons from the experiences of a particular library.<sup>2</sup> This report offers insights into the current state of wireless access in public libraries.

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<sup>1</sup> P. Barnett-Ellis & L. Charnigo. (2005). Wireless networks in medium-sized academic libraries: A national survey. *Information Technology & Libraries*, 24(1), 13-21.

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<sup>2</sup> M. Breeding. (2005). Wireless networks. *Library Technology Reports*, 41(5), 6-42.

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**Figure 1. Public Access Wireless Internet Connectivity Availability in Public Library Outlets by Metropolitan Status and Poverty (2004).**

	Metropolitan Status			Poverty Level			Overall
	Urban	Suburban	Rural	Low	Medium	High	
<b>Provision of Public Access Wireless Internet Services</b>							
Currently available	20.3% +/- 4.0% (n=591)	17.9% +/- 3.8% (n=655)	17.2% +/- 3.8% (n=1,087)	18.6% +/- 3.9% (n=1,853)	12.4% +/- 3.3% (n=203)	32.2% +/- 4.7% (n=32)	17.9% +/- 3.8% (n=2,089)
Not currently available and no plans to make it available within the next year	52.2% +/- 5.0% (n=1,016)	54.1% +/- 4.9% (n=1,984)	67.6% +/- 4.7% (n=4,272)	60.6% +/- 4.9% (n=6,035)	65.3% +/- 4.8% (n=1,067)	46.7% +/- 5.0% (n=46)	61.2% +/- 4.9% (n=7,149)
Not currently available, but there are plans to make it available within the next year	27.5% +/- 4.5% (n=113)	28.0% +/- 4.5% (n=1,027)	15.1% +/- 3.6% (n=956)	20.8% +/- 4.1% (n=2,068)	22.3% +/- 4.2% (n=364)	21.1% +/- 4.1% (n=21)	21.0% +/- 4.1% (n=2,453)
Missing values, n=4,502							

### WIRELESS ACCESS IN PUBLIC LIBRARIES

To better understand the role of wireless networks in public libraries, the *2004 Public Libraries and the Internet* study first asked about levels of wireless Internet access.<sup>3</sup> Figure 1 summarizes the findings from the 2004 study related to wireless access.

In 2004, 17.9% of public libraries offered wireless access and a further 21.0% planned to make it available. Libraries in urban and high poverty areas were most likely to have wireless access. The majority of libraries (61.2%), however, neither had wireless access nor had plans to implement it in 2004.

The findings from the 2006 study reveal a radically different picture. As Figure 2 demonstrates, the number of public libraries offering wireless access has roughly doubled from 17.9% to 37.4% in two years. Furthermore, 23.6% of libraries that do not currently have it plan to add wireless access in the next year. Thus, if libraries follow through with their plans to add wireless access, 61.0% of public libraries in the U.S. will have it within a year.

<sup>3</sup> Bertot, J. C., McClure, C. R., & Jaeger, P. T. (2005). *Public libraries and the Internet 2004: Survey results and findings*. Tallahassee, FL: Information Institute. Available: <http://www.ii.fsu.edu/plinternet>.

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**Figure 2: Public Access Wireless Internet Connectivity Availability in Public Library Outlets by Metropolitan Status and Poverty (2006).**

	Metropolitan Status			Poverty Level			Overall
	Urban	Suburban	Rural	Low	Medium	High	
<b>Provision of Public Access Wireless Internet Services</b>							
Currently available	42.9% +/- 4.9% (n=1,211)	42.5% +/- 4.9% (n=2,240)	30.7% +/- 4.6% (n=2,492)	38.0% +/- 4.8% (n=5,165)	28.1% +/- 4.5% (n=679)	53.8% +/- 5.0% (n=99)	36.7% +/- 4.8% (n=5,943)
Not currently available and no plans to make it available within the next year	23.1% +/- 4.2% (n=651)	29.7% +/- 4.6% (n=1,562)	49.2% +/- 5.0% (n=3,988)	37.4% +/- 4.8% (n=5,091)	44.4% +/- 4.9% (n=1,072)	21.0% +/- 4.1% (n=39)	38.3% +/- 4.9% (n=6,201)
Not currently available, but there are plans to make it available within the next year	30.6% +/- 4.6% (n=864)	26.0% +/- 4.4% (n=1,369)	18.6% +/- 3.9% (n=1,509)	22.5% +/- 4.2% (n=3,063)	26.2% +/- 4.4% (n=633)	25.3% +/- 4.4% (n=46)	23.1% +/- 4.2% (n=3,742)

In 2006, wireless access was most likely to be available in urban, suburban, and high poverty libraries. Urban libraries are also the most likely to have plans to add wireless access in the next year. The libraries that are least likely to have wireless access or plans to add it are rural libraries and medium poverty libraries.

### Impact of Wireless Access on Libraries and their Communities

Along with the increases in wireless Internet access, public libraries have developed a wide variety of uses for these wireless networks in libraries. The qualitative data from the 2006 study offers insights into how wireless access is enhancing existing library services and allowing libraries to provide new services to patrons and to the surrounding communities.

#### *Expanding Service and Meeting Demand*

For many libraries, the addition of wireless access has positively affected the use of the library by bringing new patrons to the library or by encouraging further use by current patrons. Various libraries stated that the wireless access “attracts people to the library” and “has greatly enhanced our ability to meet patron demand” and “has been a great impact.” Libraries that wrote about wireless access viewed it as a major service for patrons and/or a positive contribution that the library is making to the community.

Several libraries indicated that the wireless access has increased overall visits to the library. One Kentucky library stated, “Wireless users use our site constantly.” In one Louisiana library, “More users at this facility use the wireless and the Internet access PCs than check out materials.”

In many libraries, the addition of a wireless network has been necessary to meet demands for Internet access. As one Pennsylvania library noted:

“We added a wireless connection in 2004 and that has greatly enhanced our ability to meet patron demand. Not only are we able now to supplement our existing 6 internet stations with laptops, but patrons are encouraged to bring in their own laptop, which more and more people are doing.”

In most of these libraries, many patrons now bring their own laptops to the libraries. The libraries noted benefits to all users, such as the ability to “have a family computer to work on” or to “not have to wait for a library computer to be free.” Some libraries have created Wi-fi networks that extend the wireless access beyond the walls of the library to provide access in nearby community areas or to allow for access to the wireless network “24 hours a day even if the library is not open.”

#### *Serving the Community in Times of Need*

In a few communities, the wireless network in the library has come to support wider community infrastructure or meet emergency needs in the community. For example, the wireless network in one Kansas library was designed so that it also would support wireless Internet access in the nearby town police station. A more dramatic example of this benefit of wireless access was described by a number of libraries along the Gulf Coast in relation to the aftermath of hurricanes. In these libraries, the wireless networks allowed residents to bring in personal computers to add to the capacity of the library to meet communication and recovery needs. In some of these libraries, the rescue and relief workers relied on the public libraries because the wireless network was the only means for them to access the Internet.

#### *A New Perception of the Library*

In some communities, the addition of wireless access has been so significant that it has changed the perception of the library in the community. One library in Virginia asserted, “Offering wireless has made the library more of a destination point for citizens.” A Massachusetts library wrote:

“The promise of free internet and wireless access to the community is one of the major reasons we had the support of the community to build a new library in 2005. The new library is hugely successful and has become the most popular site for the entire community.”

#### *Wide Range of Users*

The range of different kinds of patrons regularly using the wireless is noteworthy. Libraries noted that high school students, college students, and graduate students rely on the wireless access to help them with their schoolwork, while teachers and tutors in some libraries also rely on the wireless access for creating and grading assignments. “The wireless network definitely brings in a lot of college and grad school students who need a quiet place to work.”

More surprising, perhaps, is the fact that a number of libraries noted the importance of the wireless access for local business owners. Libraries from Florida to New York to Wisconsin

to Montana discussed the wireless access in terms of local business. A typical explanation was, "Several small business owners use the wireless service for business purposes." A further specific group that libraries see benefiting from wireless access is tourists who are traveling with their own computer.

### **CONCLUDING COMMENTS**

As this brief report indicates, public libraries that offer wireless access positively impact the communities that they serve in several key ways. Wireless access enables public libraries to:

- Expand the overall public access Internet services that they provide;
- Extend their public access services without significant impact on their technology infrastructure;
- Reach new users within the communities; and
- Serve as critical access points to the Internet for a wide range of purposes, including emergency services in times of disaster.

Thus, the community benefits that wireless access by public libraries offers are significant.