



Wireless Access and WMRLS Member Libraries

Survey Conducted Week of April 17, 2006

THE FOLLOWING LIBRARIES THAT RESPONDED TO THIS SURVEY PROVIDE WIRELESS ACCESS TO THEIR USERS:

- Agawam Public Library
- Babson Library, Springfield College
- Berkshire Athenaeum, Pittsfield
- David & Joyse Milne Public, Williamstown
- Dickinson Memorial Library, Northfield
- East Longmeadow Public Library
- Emily Williston Memorial Library, Easthampton
- Forbes Library, Northampton
- Franklin Law Library
- Greenfield Public Library
- Hinsdale Public Library
- Holyoke Public Library
- Jones Library and Branches, Amherst
- Lenox Library Association
- Lenox Memorial Middle & High School
- Meekins Library, Williamsburg
- MN Spear Memorial, Shutesbury
- Monson Free Library
- New Marlborough Town Library
- North Adams Public Library
- Palmer Public Library
- Pelham Library
- Smith Vocational and Agricultural High School, Northampton
- Springfield Technical Community College Library
- Sunderland Public Library
- Taconic High School Library, Pittsfield

- W.E.B. Du Bois Library, UMass, Amherst
- Western Massachusetts Regional Library System
- Westfield Athenaeum
- Westhampton Memorial Library
- Worthington Library

42 LIBRARIES RESPONDED TO THE SURVEY:

| | | | |
|-----------|-----------|----------|----------|
| Academic: | Public: | School: | Special: |
| 4 | 32 | 4 | 2 |

DOES YOUR LIBRARY OFFER WIRELESS INTERNET ACCESS FOR PUBLIC USE?

| | | |
|-------------------------------------------------------|----------------------------------------------------------------|-----------------------------------|
| Yes, wireless service provided to the public : | Wireless service provided to patrons only; not public : | No, wireless service unavailable: |
| 24 | 7 | 11 |

WHEN WAS ACCESS OPENED TO THE PUBLIC?

| | | | |
|----------------------|-----------------------|-----------------------|------------------------|
| 2003: | 2004: | 2005: | 2006: |
| 1 response | 5 responses | 9 responses | 13 responses |

HOW HAVE YOU SETUP YOUR WIRELESS CONNECTION?

| | |
|---------------------------|------------------------------|
| With outside help: | Without outside help: |
| 17 | 14 |
| Access wide open: | Access secured: |
| 22 | 9 |

| | |
|-----------------------------------------|-------------------------------------------------------------|
| <p>Available 24/7:</p> <p>26</p> | <p>Available during library hours only:</p> <p>5</p> |
|-----------------------------------------|-------------------------------------------------------------|

Responses describing setup vary greatly:

- With the help of a volunteer, as part of a town initiative, or an internal IT department upgrade.
- Using standard 2.4Ghz wireless protocols and equipment (801.11b and 802.11g) on various channels (1 through 11).
- Coverage throughout a single building, or multiple buildings, using between 1 and 7 wireless access points.
- Configuration as simple as sharing an existing broadband connection with a wireless router; sometimes more complex, involving additional wiring and completely separate routers, firewalls, and servers.

WHICH PRODUCTS OR VENDORS DID YOU USE?

- Several products from Linksys are the most common, followed by Cisco, HP, 3Com, Netgear, and Nomadix.
- Cable and DSL broadband providers such as Adelphia, ComCast, and Verizon lead the pack, followed by local providers such as Crocker Communications, Westfield Gas & Electric, Holyoke Gas & Electric, and Richmond Networx. Satellite service from Hughes DirecWay and even dialup access are alternatives reported in use.
- In the case of outside assistance, several local and regional companies and organizations were mentioned:
 - Alternative Telecommunications, Monson
 - Angelica Bros., Holyoke
 - Ascentek, Inc., Pittsfield
 - CompuWorks, Wakefield
 - Hogan Communications, Easthampton
 - SysNet Technologies, Enfield CT
 - TechBeat, Easthampton
 - Western MA Regional Library System
- Products involved in authentication and security include those from BlueSocket, Cisco, SonicWall, SmoothWall, ChilliSpot, and other unspecified solutions.

DO YOU FILTER OR RESTRICT WHAT TYPES OF INTERNET TRAFFIC MAY BE SENT THROUGH YOUR WIRELESS NETWORK?

| | |
|--------|--------|
| YES: 5 | NO: 26 |
|--------|--------|

DO YOU OFFER PRINTING FROM THE WIRELESS CONNECTION?

| | |
|--------|--------|
| YES: 7 | NO: 24 |
|--------|--------|

Responses given for printing charges include:

- After 10 pages, it's 10 cents a page.
- \$.10 per copy.
- Through Pharos within a couple months: \$.15 black, \$.35 color.

DO YOU HAVE A WIRELESS POLICY?

| | |
|---------|--------|
| YES: 16 | NO: 15 |
|---------|--------|

*All of the policies that are listed below are also featured within the "Internet Use Policies" section of the **Massachusetts Regional Library Systems Policy Collection**: <http://www.cmrls.org/policies/index.html>*

- Forbes Library, Northampton: Wireless Access Policy
[URL is <http://www.forbeslibrary.org/policies/wireless.shtml>]
- Greenfield Public Library: Greenfield Library Internet Safety Policy
[URL is <http://greenfieldpubliclibrary.org/internet.html>]
- UMass Amherst: Wireless Airspace Policy
[URL is <http://www.oit.umass.edu/policies/wireless.html>]
- North Adams Public Library Policies: Internet Use Policy
[URL is <http://www.naplibrary.com/INTERNET.html>]
- Amherst, Massachusetts: Information Technology

DO YOU AUTHENTICATE PATRONS?

| | |
|--------|--------|
| Yes: 9 | No: 22 |
|--------|--------|

Solutions given in this category are often technical, such as:

- Use of a BlueSocket, by which users are forced to a VLAN (restricted part of the network). Here they must authenticate (using the NetID/UMAccess password pair or otherwise a temporary BlueSocket account).
- Use of a ChilliSpot hotspot gateway, integrated with a SmoothWall firewall and radius server. Similar to a BlueSocket, without the high cost (or warranty).
- Related to authentication, other restrictions, such as a 50MB download limit, or 384K speed limit, or simultaneous user limit are mentioned. If a single password is used, this may be changed regularly and obtained by visiting the circulation desk.

Some solutions given are based on the honor system, and may lack technical enforcement:

- Patrons sign in at the desk with their library number.
- Patrons asked to submit a valid email address.
- Patrons required to have an Acceptable Use Policy on file.

DO YOU SEPARATE YOUR WIRELESS NETWORK FROM YOUR WIRED NETWORK?

| | | |
|----------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------|
| Yes; fully separate from other staff and public networks: 18 | Partially; separate from other staff-only networks: 11 | No: 2 |
|----------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------|

Descriptions given in this category include:

- Wireless and wired networks share a DSL connection, but are separated by NAT firewalls.
- Wireless is for Internet access only.
- Wireless network on totally different system; not at all connected.
- Wireless is separate from the C/WMARS network, but the public wireless network is not separate from the public internet network.
- Complex town-wide VLAN for public wired and public wireless systems.

WHAT PROBLEMS HAVE YOU ENCOUNTERED?

Equipment or Signal Related:

- Buggy wireless drivers with older operating systems.
- Not every computer is able to easily log on to our wireless network.
- Configuring different laptop models.
- Connection quality varies depending on the quality/age of the users NIC.
- Unreliable equipment router (Sonic Wall?).
- Recently, Linksys jumping to another (weaker) signal in the area.
- Classrooms at the end of the wireless loop have intermittent service. I personally think that the age of the building and the kind of buildings we have make for "too many dead zones" for wireless to be really effective.

- Some patrons don't have built-in wireless and have to borrow a bridge, which doesn't always work well.

Sign-on and Security Related:

- Tried to restrict entire system with WEP and/or WPA at one point, but this caused problems and delays for guest equipment.
- Initially some patrons were having trouble logging on to the wireless network.
- There have been a few people who could not connect, but we couldn't help with that.

Printing Related:

- Printing and not paid for or picked up
- Some patrons would like to print from their wireless laptop.

Advertising:

- Advertising has been an ongoing issue in that people don't realize we have it even though there was a story in the paper and a sign outside the library.

Usage Tracking:

- Tracking users has been the biggest issue. Right now we are doing the best we can with a visual scan, but we know our usage stats are not accurate.

HOW DID YOU RESOLVE THE PROBLEMS THAT YOU HAVE ENCOUNTERED?

Equipment or setup issues:

- Upgrades to Windows XP Professional.
- Ordered new router from Linksys.
- Problems with the bridges are resolved by IT.
- Turned off WEP and MAC authentication; replaced with Chillispot authentication gateway.

User Support:

- Clear instructions have enabled staff to help patrons log onto the wireless network. Problems logging on seem to have decreased.
- Our volunteer is very generous with his time. He will meet with folks having a hard time logging on and they work together to fix the problem.
- Frequently, the problem is due to a lack of knowledge by the patron as to how their wireless operates.
- We do not service or advise on their equipment.
- Users must move around in the building until they get a signal.

Printing:

- Patrons can save the documents they want printed to a disk, and print from our

computer labs. We are looking into the possibility of setting up a printer that would handle only wireless print jobs.

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