Wireless @ Your Library

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Wireless? Huh?

Neal-Schuman Publishers, Inc. 100 William St. Suite 2004 St. New York, NY 10038 - Phone: 212-925-8650 - Fax: 212-219-

Wireless Networking: A How-To-Do-It Manual for Librarians
By Louise Alcorn and Maryellen Mott Allen

1-55570-478-6 . 2006 . 8 1/2 x 11 . 125 pp.
View Table of Contents

Wireless networking has arrived in libraries and is here to stay! Here is the practical guide, written specifically for librarians, to assist you in your implementation or expansion. In these pages you will find essential background information and get the facts about why and how libraries should go wireless, including standards, transfer rates, equipment options and costs, planning and implementation, technical and project management concerns, and site surveys. Common library issues such as compatibility with existing networks, marketing to your patrons, creating good policy, security options and troubleshooting are addressed. Throughout the book the authors share advice from real world librarians detailing their experiences with wireless. For your convenience, a wide variety of planning tools are included-checklists, cost tables, a glossary of terms and resources for further research.

http://www.neal-schuman.com/db/1/371.html
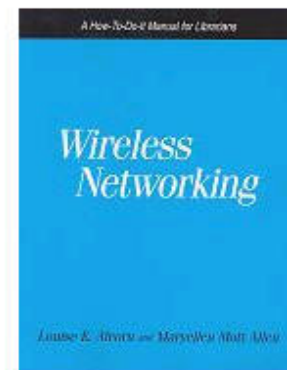
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ADD TO CART

My assumptions about you

Your library has wireless Internet access, or soon will.

You have at least a rough idea of how your wireless network is set up.

You may already be dealing with questions from patrons about how to use wireless.

You may already be sick of (questions about) wireless!

Your Fast and Furious Wireless Tour!

What We Will Be Covering

- What your staff need to know about wireless

- What your patrons need to be told

- Quick troubleshooting tips

- Some ideas about communicating the above

Feel free to ask questions!
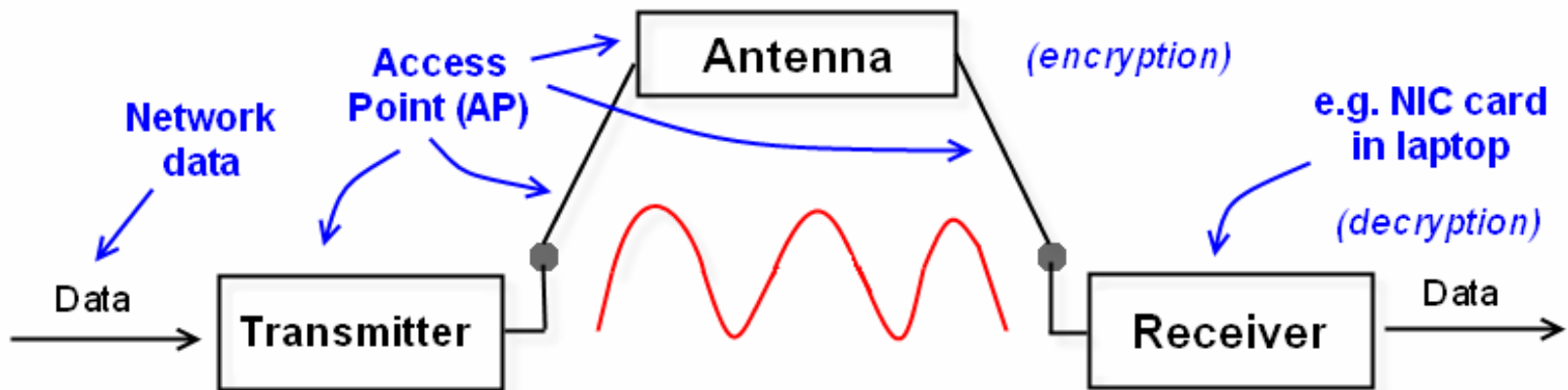
What Staff Need To Know

Basics of Wireless

- Access Points (APs)

- Wireless Network Cards (NICs) in laptops, etc.

Show them what you're talking about:

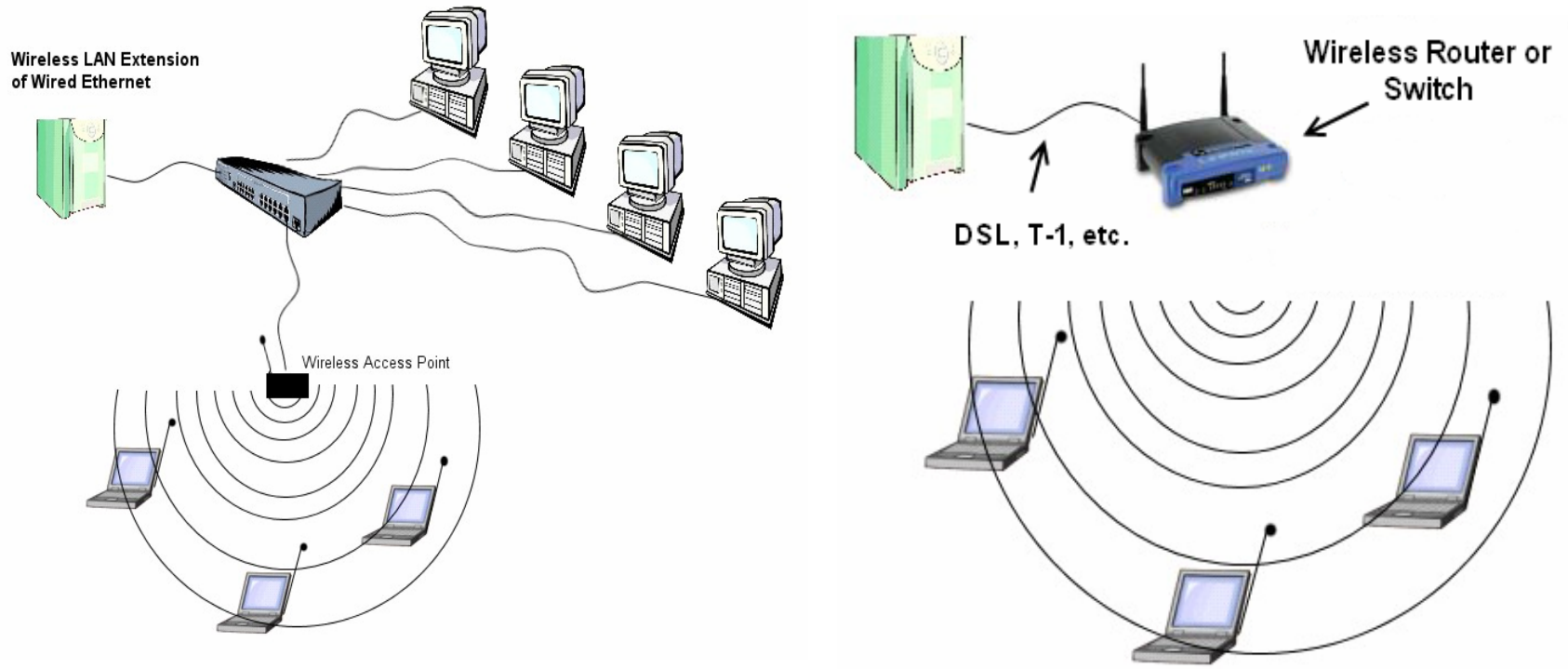# Idea: Use Visuals

How wireless works (visual)

Adapted with permission from: *Wireless Networking: A How-To-Do-It Manual for Librarians* by Louise Alcorn and Maryellen Mott Allen. New York: Neal-Schuman Publishers, 2006.

What Staff Need To Know

Basics of Wireless

- – Access Points (APs)
- – Wireless Network Cards (NICs) in laptops, etc.
- – Transmission and Interference Issues
    "Two Tin Cans and a String…Without the String"
- – Only the very basics are needed
- – Show them how it works!

Idea: Show Staff How It Works

Wireless LAN Extension of Wired Ethernet

Wireless Access Point

Wireless Router or Switch

DSL, T-1, etc.

Adapted with permission from: *Wireless Networking: A How-To-Do-It Manual for Librarians* by Louise Alcorn and Maryellen Mott Allen. New York: Neal-Schuman Publishers, 2006.

What Staff Need To Know

Be sure you show them the following basics:
Finding the Wi-Fi symbol in the system tray

Wireless card on or off? Fn-F2 key or similar.

Finding the library's Wi-Fi signal (SSID) in wireless networks list – Connect/Disconnect button

Settings for different operating systems – Windows vs. Mac (if you can)

Basics: Finding the Wi-Fi Symbol

Be sure you show them the following basics:

Finding the Wi-Fi symbol in the system tray

Basics: Wireless Card Not On

Do you see the wireless icon in system tray?

If not, look for the wireless symbol on their <u>keyboard</u> – it may be **Function (Fn) – F2 key** or a similar combination to turn it on.
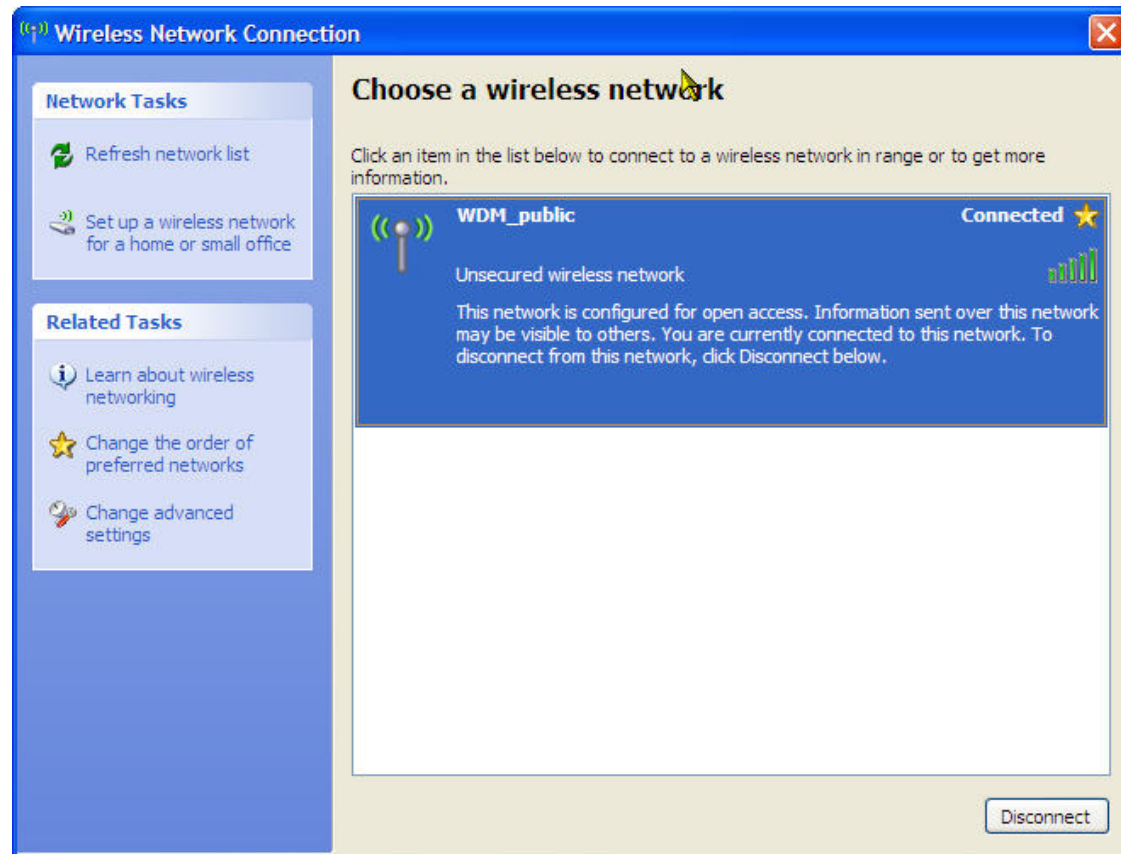
Once on, wireless icon should show in system tray.

Wireless Network Connection (WDM_public)
Speed: 54.0 Mbps
Signal Strength: Excellent
Status: Connected

1:41 PM

Basics: Finding SSID in list

Finding the library's Wi-Fi signal (SSID) in wireless networks list –

Connect/Disconnect button
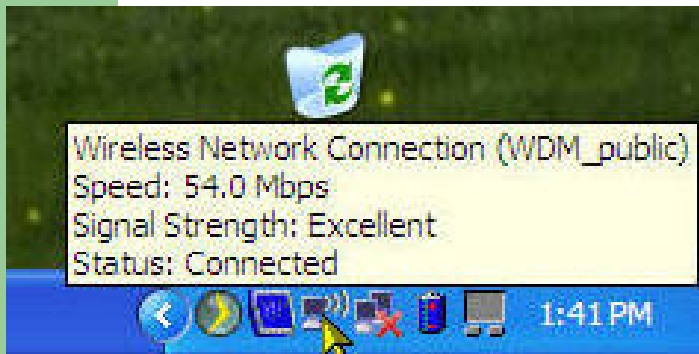
Basics: Settings for different operating systems

(Windows vs. Mac)

www.wtamu.edu/library/circulation/wireless-tsg.shtml

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Wireless Access: Troubleshooting Guide

Remember! You do not have to reinvent the wheel. Search other library web sites for inspiration. *Adapted from Westchester Library System's Wireless FAQ.*

Wireless Card Settings

Use the software that came with your wireless card, laptop, or other wireless device to configure the settings and to verify a connection to the University's wireless network.

Windows 98
Yes, there are laptops out there still running Windows 98. Your instructions should allow for a wide range of setups.

Network Settings:

1. From Control Panel, select Network.
2. Locate the TCP/IP protocol and get into its Properties. If more than one TCP/IP protocol is listed, look for the one associated with your wireless card.
3. For IP Address, select "Obtain an IP address automatically."
4. For DNS, select "Disable DNS."
5. For WINS, select "Use DHP for WINS Resolution."

Windows 2000 & XP

Network Settings:

1. From Control Panel, select "Network and Dial-up Connections" or "Network and Internet Connections > Internet Connections."
2. Right-click on "Wireless Network Connection" or Local Area Connection" and click Properties.
3. Locate the Internet TCP/IP protocol and get into its Properties. If more than one TCP/IP protocol is listed, look for the one associated with your wireless card.
4. Select "Obtain an IP address automatically" and "Obtain DNS server address automatically."
5. For XP, right-click on "Wireless Network Connection" and select "View Available Wireless Networks." Select the name of the wireless network (PUBLIC-ACCESS-LIBRARY) and click "Connect."

Internet Explorer Tips: *Few of the tip sheets we found included info on how to configure the browser, as well as the NIC. This is a good addition.*

Please note that depending on your version of software, there may be variations in the procedures.

1. From Control Panel, select Internet Options > Connections tab.
2. If you have a dial-up connection, it should not be set to "Always dial my default connection."
3. LAN Settings should be set to "Automatically detect settings."
4. Leave the Proxy server settings blank.

Macintosh
Don't forget your Mac users! Also useful: info on configuring PDA's, even if you only provide links to their help web sites.

Network Settings (OS 8 & 9):

1. Select: Apple Menu > Control Panel > TCP/IP.
2. Connect via "Airport."
3. Configure "Using DHCP Server."
4. Leave Name Server and Additional Search Domains blank.

Network Setting (OSX):

1. Select: Apple Menu > System Preference > Network button.
2. Select TCP/IP tab and Configure "Using DHCP."
3. Above the TCP/IP tab you may need to Configure via "Airport."
4. Leave Domain Name Servers and Search Domains blank.

Coverage

For more information on the range of wireless coverage in the Cornette Library please see the following maps:

* First Floor
* Second Floor

These are both extremely useful pieces of information that many libraries forget to offer to their patrons.

Electrical Outlets

Please be aware that there are a limited number of electrical outlets for use. You may want to insure that your batteries are fully charged before you begin your work. Also, for safety reasons, please keep power cords out of public walkways.

For the locations of available power outlets please see the following maps:

* First Floor
* Second Floor

Including both coverage areas and electrical outlets in map form is an excellent idea. Patrons appreciate visual presentation of information.

Note: The Cornette Library is not responsible for any changes you make to your laptop or wireless device's settings and cannot guarantee your hardware will work with the University's wireless network. *A reasonable disclaimer.*

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Authored by Carolyn Tatley, Head, Circulation Unit
Comments to: ctatley@mail.wtamu.edu
Wednesday, 14-Dec-2005 10:00:12 CST
http://www.wtamu.edu/library/circulation/wireless-tsg.shtml

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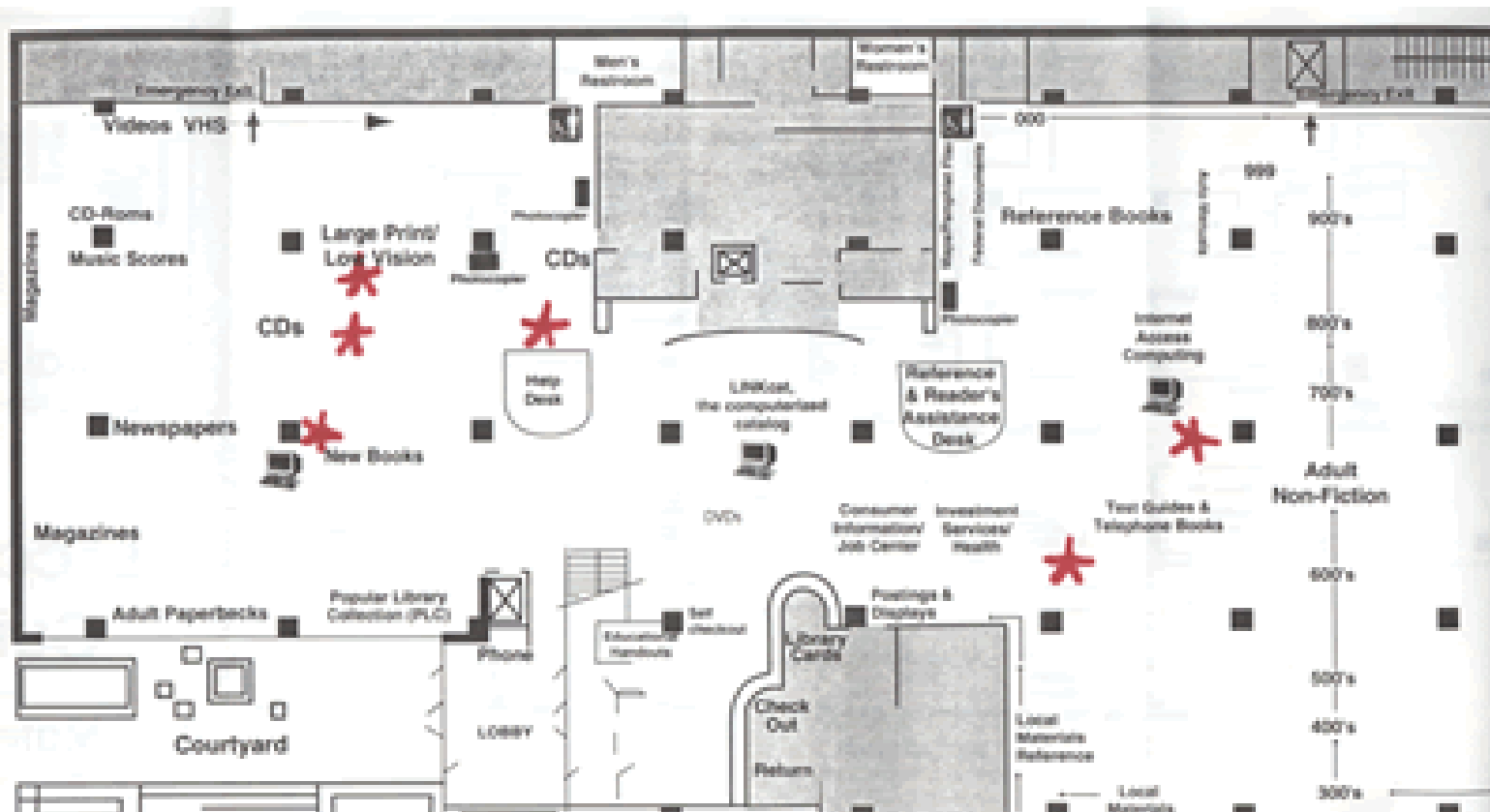# What Staff _and_ Patrons Need To Know

Your Wireless Setup

– Where are your APs? (staff only)

– Where are the 'hotspots'?

– Where can patrons plug in their laptops?

– Do they need a WEP key or other access code?

Consider Making a Map

– Hotspots where coverage is good

– Electrical Outlets! (we often forget this)

Idea: HotSpot and/or Electrical Map

From **www.madisonpubliclibrary.org/services/wireless.html**

What Staff **and** Patrons Need To Know

Your Wireless Setup (cont.)

- What type of transmission (802.11a/b/g) and thus what type of NIC required (usually multiple)?

- SSID – your network 'name'

- Why it isn't "just like Panera or Starbucks" (unless it is)

- Proxy settings? Authentication? Any special instructions.
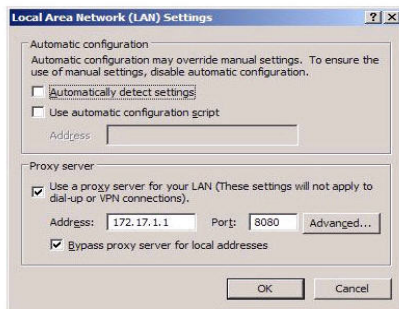
Idea: Handouts on Proxy Settings

Proxy Settings for Wired Ethernet Ports AND Wireless Use – Internet Explorer

If you bring in your own laptop and plug directly into one of our network jacks OR use our wireless network (**SSID = wdm_public**), you will now need to manually enter new Proxy settings in IE. If you use another browser, these settings can also be changed, though the steps may vary.

In Internet Explorer, go to **Tools—Options**. Choose the **Connections** tab. Toward the bottom is a button that says **LAN Settings**. Click on that. You will see a box that should look like this:
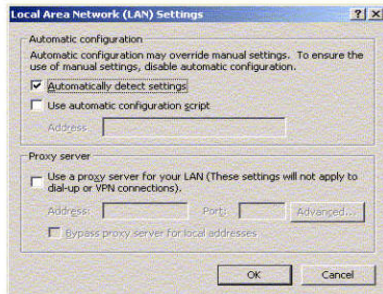
You will want to **change the settings so they look like the box BELOW**. The new address is 172.17.1.1 - port 8080. This is what it should look like:

Note: When you are done browsing using our wireless connection, you can simply uncheck the "use a proxy server" checkbox and re-check the "automatically detect" box (as in the first image above) to return your browser to its previous settings.

Click **OK**, and you should be set to go. Please note that these settings may not work if you are using a Virtual Private Network (VPN) through your employer or university. Talk to your employer or university's tech support.

**Proxy Settings for Wired Ethernet Ports AND Wireless Use – Mozilla Firefox for Macintosh**

If you bring in your own laptop and plug directly into one of our network jacks OR use our wireless network (**SSID = wdm_public**), you will now need to manually enter new Proxy settings in your browser. Below are steps for changing these settings if you use **Mozilla Firefox for the Mac**:

In Firefox, click on the **Firefox** menu and pull down to **Preferences**. You will get a popup window whose header looks similar to this:

Choose the **Advanced** tab. You will then see four sub tabs – one says **Network**. Click on that. You will see a button that says **Settings…** Click on that. This will bring up another popup box.

In the **Settings** popup box (which will look similar to the one below), you will want to **change the settings so they look like the box BELOW**. The new address is **172.17.1.1 - port 8080**
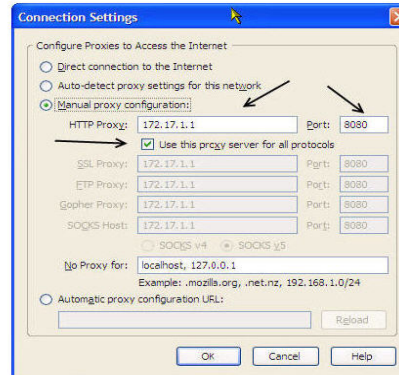
You may have either of the first two radial buttons checked – you will want to choose the button that says "**Manual proxy configurations**" and enter the settings listed at left.

Note: When you are done browsing using our wireless connection, you can simply choose the radial button that was marked previously to return your browser to its previous settings.

Click **OK**, then close any popup boxes until you're back to the browser window. Once there, try hitting **Home** or **Refresh** and see if you get to your home page. If you don't, try another web page or retry the instructions above. Please note that these settings may not work if you are using a Virtual Private Network (VPN) through your employer or university. Talk to your employer or university's tech support about an alternate web-based option.

What Staff Can/Cannot Do

Turn AP's off/on to reset service?

Touch patron laptops to help with troubleshooting?

Make suggestions:

- better 'hotspots' in building
- "is your wireless card turned on?"
- basic troubleshooting ideas (handouts!)

Idea: FAQ for staff <u>before</u> launch

What Staff Need To Know

Problems That Patrons Might Encounter

- <u>No</u> idea how to access wireless with their new laptop (newbies)

- No signal

- Low signal, low connectivity

- Signal fine, web pages not coming up

    Are they set up to accept DHCP? Loss of signal/connectivity during session

    Do you need to release/refresh their IP?

Situation: Limited or No Connectivity

Possible Explanations:

    1) they are in a 'cold spot' – move

    2) they have a bad wireless card (rare)

    3) they haven't put in your proxy settings or WEP key (if you require them)

Situation: Limited or No Connectivity

4) "Cannot find server – DNS error" - They have a 'stuck' IP address that needs releasing.

What Patrons Need To Be Told

Checklist:

- ❑ <u>Where</u> the access is available (description or map of coverage areas)

- ❑ <u>When</u> is it available (after hours in parking lot?)

- ❑ <u>How</u> to get encryption key or how to authenticate (if applicable)

What Patrons Need To Be Told

Checklist (cont.):

❑ What <u>support</u> is available, and during what hours.

❑ Some <u>helpful links</u> to troubleshooting sites from Microsoft, Apple, Palm, etc.

❑ A simple set of <u>troubleshooting tips</u>, for common problems.

What Patrons Need To Be Told

Ways to tell patrons what they need to know:

- ❑ Website
- ❑ Handouts
- ❑ Table Tents
- ❑ Bookmarks
- ❑ Captive Portal website with access info
- ❑ **Staff interaction**

Idea: Sample FAQ

Menlo Park Library

Come to the Library | Use the Library from Home | About Us | Search [ ] Go

MPL Wireless Network FAQs

http://www.menloparklibrary.org/wireless.html

Q: What do I need to access the MPL wireless network?
A: You need a laptop computer and a Wireless Network PC Card. After you purchase the card, follow the manufacturer's instructions to install it on your computer. This should involve installing the network card driver, and also a client utility program. This program will allow you to configure the settings for your network connection, monitor signal strength, and perform other useful tasks.

Q: What kind of wireless card do I need?
A: You need an 11Mbps 802.11b (or 54Mbps 802.11g) Wireless Network Card for your laptop. Based on online user opinions, Cisco Aironet and Netgear brands should also work well, but Linksys, SMC, D-Link or US Robotics brands may be problematic, especially for Windows XP users. For Apple notebooks, their Airport card is recommended. Most cards are available for about $70 at local computer stores, or one of many online computer stores. Most laptops with Windows XP or newer come with built-in wireless cards. If yours does, make sure the card is turned on (your laptop may have an external switch or button for this).

Q: What are the minimum requirements for my laptop (PC and Apple)?
A: You should be limited only by the wireless network card you buy. The drivers and software to operate the card must be compatible with your system. See the card's packaging and documentation for compatibility and minimum requirements. The slower your computer, the slower your Internet response time will be.

Q: What settings do I use?

A: **SSID or Network Name:** Menlo Park Library
WEP: disabled
IP or Network Settings: DHCP enabled or obtain an IP address automatically
DNS: obtain DNS address automatically
Gateway: no default gateway set — your card should detect it automatically.
Close settings and restart computer if necessary

Q: If there are too many users, will I be blocked from using the wireless network?
A: A pool of resources has been set aside large enough to accommodate users at the library. You will not be "blocked" from accessing the network because of too many users.

Q: What speed is the Internet connection at MPL?
A: MPL has a T1 line. However as with any Internet connection, your speed may fluctuate greatly due to heavy traffic on the Internet at different times of day.

Q: From where can I access the MPL wireless network?
A: The network is accessible from anyplace in the library, including the outside patio and the downstairs conference room.

Q: Can I download large files?
A: The bandwidth available for the wireless Internet connection is shared with all others in the library. To show consideration for others' needs, we ask that you not download excessively large files, use peer-to-peer file sharing programs, or access streaming audio/video.

Q: Where did the money come from for the wireless network?
A: MPL wireless network equipment and setup costs were kindly funded by the Friends of the Menlo Park Library. The Friends is an organization of volunteers dedicated to enhancing the library, its resources and services. Activities include sponsorship of events and efforts to promote literacy, as well as raising funds through the sale of donated books. To volunteer, or for more information, call 330-2521.

Additional Ideas for your FAQ: What You Offer and What You Don't

- "The library does/does not provide the ability to access streaming audio or video, telnet or FTP."
- "Web-based email only, no SMTP server connected."
- "No printing is available from the wireless network. You can save your documents to floppy or USB drive and print them from our wired stations."
- "Staff will provide no/little/some technical support, including/not including dealing with patrons' personal computer equipment."

Libraries with good troubleshooting or wireless FAQ's on their websites

West Texas A&M –
http://www.wtamu.edu/library/circulation/wireless.shtml

West Deptford (NJ) Free Public Library -
http://www.westdeptford.lib.nj.us/wireless_policy.htm

(I like their use of a Q&A format, and their list of other area 'hotspots' like cafes).

Chicago Public Library -
http://www.chipublib.org/003cpl/computer/wifi/wififaqs.html
(very comprehensive and understandable).

Thinking Outside the Wires

Marketing
and
Policy

Marketing Your Wireless Service

- **Tell your staff <u>first</u>.**
- **Tell your larger organization.**
- **Tell your patrons.**
  - Website
  - Tent cards
  - Handouts
- **Make a map**!
- **Tell your colleagues in the greater library world.**
- **Tell the press.**

Wireless Policy Issues

Don't forget:

Your existing **Computer/Internet Use Policy**

Your existing **Library Conduct Policy**

These cover most of what you need for wireless use by patrons.

Wireless Policy – Read More About It

- MaintainIT website – Louise's blog:
    http://maintainitproject.org/blog/136

Wireless Access Policy: Additional Disclaimers and Warnings

- "The library cannot guarantee a secure connection at all times and in all places…" *(two tin cans and a string…)*

- "Wireless networks are transmitted via radio waves, and are therefore susceptible to 'eavesdropping'. Patrons should be aware of what they are transmitting over this open network."

- "As the library's Internet access is filtered, so is the wireless access to the Internet." (or whatever – be consistent!)

- "Patrons are responsible for their own equipment."

- "All library policies concerning legal and acceptable use of computers and the Internet, as well as library conduct policies, apply to patrons using our wireless service."

Any Final Questions?

Thank You For Your Time!

Louise Alcorn

email: louise.alcorn@wdm-ia.com