

Sussex-Warren Library Forum Wireless Roundtable

November 19, 2004
1:00p.m. - 3:00p.m.

Attending: Suzanne Blecker, Timothy Domick, David Costa, Stan Pollakoff, Kim Grohs, Elaine Rottger, Rona Mosler, Barbara Rose, Bill Suter, Peter Panos, Rob Zangara

Rob Zangara - Directory of Information Technology, NJ State Library

Started by asking SWLF members to describe their setup or interest in WiFi

NJSL - teaches about it, **in the process of implementation**

Hackettstown P.L. - far from implementing it, but interested in feasibility

WCLS - is getting a new headquarters and hopes to have wireless access throughout the building

Sparta P.L. - has it already, easy to maintain, patrons use it

SCCC - has a cart of laptops that are about to be set up that students will check out for use within the library that will be wireless

SCLS - not ready to implement, but patrons have expressed interest

Rob then provided an introduction to WiFi. Please excuse any inaccuracies in my notes.

WiFi - Wireless Fidelity

Specifications

WiFi runs off specifications defined by the IEEE - the standard is 802.11

This is the same frequency as cordless phones. There are a few versions of 802.11:

802.11a

802.11b - 54MB/sec, 50Hz, limits interference

802.11g - 54MB/sec, 2.4 GHz faster - only \$20.00 more - worth it.

Versions b & g are compatible, a is not. Most patrons coming in with their laptops looking for wireless access to the internet will be compatible with all three versions although few will have a.

For libraries with smaller needs (fewer than 30 devices accessing the wireless network) - look at products produced by Linksys, Netgear or **DLink**. For libraries with larger needs (30+) look at Cisco or **Proxim**.

Security

WEP - Wired Equivalence Privacy and WPA - WiFi Protected Access both encrypt for security, and the downside to this is that it must be configured at both ends (the library side and the patron's laptop).

MAC - Media Access Control Address Configuration - already on every computer and peripheral. Easy to get for staff only access to a wireless network, but not practical for patron access. Not hugely secure.

SSID - Service Set Identifier - public name for a wireless network. Patron uses this to connect. You decide if you want to broadcast this or not. If you do, it is like someone just walking into a Starbucks,

opening their laptop, their laptop can then scan for the SSID and access the internet. If you do not, the patron would need to come in and ask for your SSID number. **Make sure you change the default SSID to something unique.**

Authentication – use a 3rd party product to protect your library system. These are more locked down, require more staff time, are expensive and require technical expertise.

In point of fact, most libraries offer wide open wireless access.

On the patron side, in order for them to access the wireless network, they would have to have a wireless card. Some patrons don't realize this.

Best Practices

Always change the default **administrative** password that comes with your WiFi.

Keep your private (library related) and public network separate.

The easiest way to do this is through a completely separate ISP. Much of the state has been provided with one free cable modem connection via Comcast and Cablevision). The problem with most of Sussex & Warren Counties is that they do not have the local TV cable companies are not yet offering two way internet connections.

Another way to do this is to subdivide your network in your router or firewall – with strong virus protection on the public side.

Have a thorough policy

Block peer to peer i.e. Kazaa – to do this block SMPT traffic on port 25 (stops spammers)

Installation

Central placement away from metal, microwaves, fluorescent lights. Should be good 50 yds. Out.

Great tip – since on same frequency as a cordless phone, just plug in a cordless phone near where you'll put the base for the wireless network, and walk around the building to see where you do and don't get a dial tone.

Notes

Patrons need hand holding.

Policy should include that patron privacy cannot be guaranteed over the wireless network.

Rob will do site visits and is happy to answer any questions about wireless or networking questions in general – call him at 609-984-3282. He can help with issues related to firewalls, switches and VLANs. Bluetooth is a different technology for cell phones and PDA's.

Wireless comes with a firewall functionality – 2 separate networks on a firewall.

Vacationers like wireless!

Discussion

There was some discussion on the pros and cons of leaving the network wide open. Sparta P.L. has people who can come during closed hours and sit in their car surfing the internet. Others had concerns about security. Rob explained that if you have the completely separate ISP like that provided by the cable companies that security won't be a problem.