

# Fulfilling Library Computer Requirements on a Limited Budget

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IT Coordinator

Prince Edward County Library and Archives

OLA Super Conference Feb 25, 2010 – Pres V1.1

See notes for additional information

For copy of presentation and notes see  
conference site, or email me at

[computerlab@peclibrary.org](mailto:computerlab@peclibrary.org)

Questions at end, or offline later

# Outline

- Orientation to PEC Library
- Justifying full time IT staff
- Planning: Strategic / Procurement / Ops
- Standard PC Build
- Line of Business Applications
- Tutorials and Workshops
- Network
- The Future

# How many of you...

- Have at least 1 full time IT person?
- Are Library leadership?
- Are Library staff (non IT)?
- Are Part time IT staff?
- Are Full time IT staff?





Quinte West

62

401

Napanee

Loyalist

Deseronto

Belleville

Tyendinaga  
Mohawk Territory

Hay Bay

Bay of  
Quinte

Trenton

Big Bay



Sandbanks  
Provincial Park

# PEC Library

- Accredited Library, 6 branches (w / Archives)
- 9000 Members; Circulation 17,000 / Month
- 11 Full time staff:
  - CEO, 5 Branch Managers, Teen Coordinator, Seniors Coordinator, IT Coordinator, Office Manager, Archives Manager

# Funding Sources

- County – 80%
- Federal Gov. - Pay Equity
- Provincial Gov. - Grants
- SOLS – Grants: Internet connectivity
- CAP – Grants: PC and Computer upgrades
- OLA - Grants

*Public Library, Picton, Ont.*

1907





2010







Asset Tag

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←



Several white notices or papers are pinned to the wall above the copier.

Small notices or papers are pinned to the wall to the right of the window.









Laptop  
Position







reserve books  
search titles and authors  
renew books  
ALL ONLINE!







**County of  
Prince  
Edward  
Public  
Library  
archives**

*It's more than you think*



*The Prince Edward County  
Archives*

Open

Tuesday 2-5pm  
Wednesday 10-4pm  
Thursday 2-5pm  
Friday 10-4pm  
Saturday 10-4pm

261 Main Street  
Wellington, Ontario

Phone: 613-399-2023



Built in 1928





### Story Time



every Saturday  
11 a.m.  
Meeting  
District 4

**NEW THURSDAY HOURS**  
2 - 4 P.M.  
EFFECTIVE THURSDAY FEB 4

**NEW DAYWAY**  
2-11 PM  
THURSDAY FEBRUARY 4

PLEASE  
REMEMBER  
TO BRING  
YOUR OWN  
MATERIALS

Meeting Room Rules  
1. Arrive on time.  
2. Turn off your cell phone.  
3. No eating or drinking.  
4. No smoking.  
5. No alcohol.  
6. No drugs.  
7. No profanity.  
8. No loud music.  
9. No disruptive behavior.  
10. No talking back to staff.





MAC



# AWE Early Literacy Station







DO NOT  
TURN OFF  
THANKS

ServiceOntario  
[www.ServiceOntario.ca](http://www.ServiceOntario.ca)

WORLD BOOK

Looking  
something

Your  
family

Looking for  
World  
Study

askON  
Visit your local public library online at  
[www.askON.ca](http://www.askON.ca)

facebook

FOOTY  
FISHING  
Home

TIMES



COUNTY OF WIND FORD  
PUBLIC LIBRARY  
BLOOMFIELD BRANCH

Handicapped parking sign





THE AL PURDY PUBLIC LIBRARY  
HOURS  
TUESDAY - 10  
THURSDAY - 10  
SATURDAY - 10

809







It's All About  
**Your Family Tree**

Subscriptions from  
ashON  
Visit your local public library or  
[www.ashON.ca](http://www.ashON.ca)

COMMUNITY ACCESS PROGRAM

PUBLIC NOTICE

WIRELESS CAMERA



# IT (Computer) Services Offered

- PCs with access to Internet
- Library website: Catalog, DBs, Audio Books
- PC Apps: WP / SS / PG / CD, DVD burning
- Color & BW printing / Copying/ Faxing
- Loan of Laptops and Projectors, Screens
- OPEN WiFi access inside and out 24\*7\*365
- Patron usage assistance, tutorials and workshops
- Support of LOB Applications, Staff training

# Eric Pierce

- Grew up in “The County”
- Ryerson University - BTech, Electronics Engineering
- 35+ years of professional IT experience
- Transport Canada, DEC, Compaq, Solect, TVWorks, London Life, Loyalist College
- SW/HW Eng, Trainer, Sales Eng, Arch, Team Ldr, Mgr
- MCP (Microsoft Certified Professional) certification
- CompTIA certifications: A+, Server+, Network+, Internet+, Linux+ and CTT+ (Certified Technical Trainer)
- PEC Library IT Coordinator Jan 2, 2009 (2<sup>nd</sup> Full Time)







# Justifying Full Time IT Staff

- Barb Sweet, PEC Library CEO:
  - “We were spending enough on consultants that we saved money immediately hiring 1 full time IT staff”
  - “Response time to problems with consultants was days, now it is minutes”
  - “IT is a core competence of libraries today; to help patrons, help staff and keep equipment working”
  - “We would never go back to not having full time IT...”
- Somewhere between 10 – 100 PCs (PECLib has 92)
- Start: part time or contract; Small? form a group

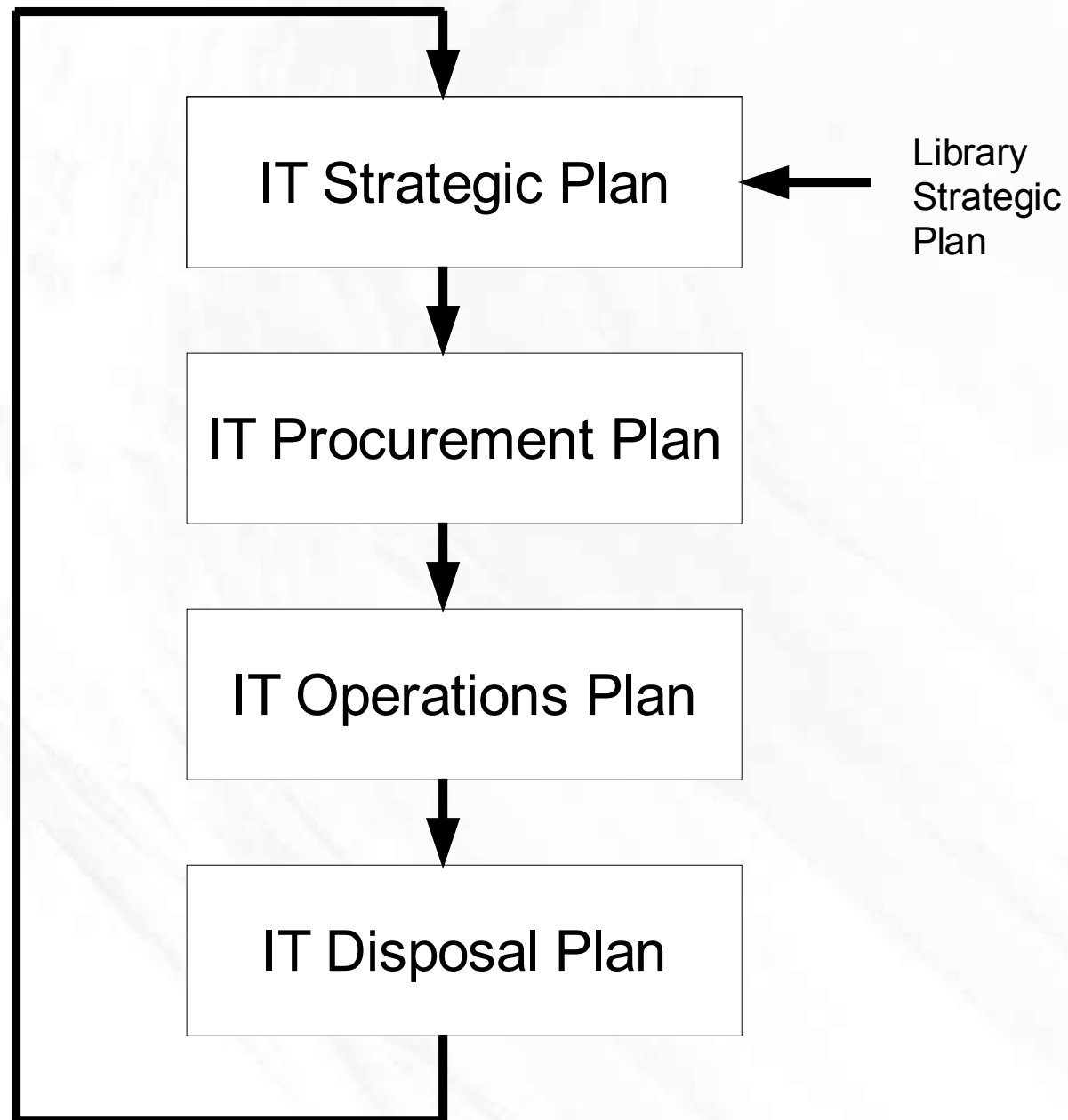
# IT Coordinator Job Desc.

- Patron assistance, tutorials and workshops
- Repair Computer and Net HW/SW
- Support of ILS, Office Automation, Staff training
- Website maintenance
- Moves, Adds, Changes, Updates HW/SW
- Strategic IT planning, “CTO” counsel to staff, CEO
- Funding Proposals, Procurement, Disposal
- Rollout new HW/SW and services
- Other related duties (in my spare time :-)

# Hiring Criteria

- Diploma or Degree in computer technology
  - Or “equivalent”: progressively responsible experience and training in professional IT environment, 8+ years
- A+, Network+, MCP(?) Certification desirable
- 5+ yrs progressive experience in Desktop and Network support in professional IT environment
- Demonstrated track record in same / similar work
- Excellent interpersonal / tutoring skills
- Self starter, Self managed, Exc Time Mgmt Skills

**Failing to Plan...  
Is Planning to Fail**



# IT Strategic Plan – What it does

- Aligns with the Library Strategic Plan
- Updated on a yearly basis (continuous)
- IT Strategy, Principles, Standards, Architecture
- Provides 3-5 year long range vision
  - e.g. out of Win XP by 2014
- Provides year by year “target state” to aim for
  - e.g. must update 15 Win XP systems in 2010
- Drives yearly funding and procurement plan

# IT Strategic Plan – Mgmt Princ

- Use COBIT and ITIL Processes (simplified)
- Define service levels (i.e. Fix 1 day, SW upd./30 days)
- All activities => maintain and deliver patron svcs.
- Most Cost effective existing, new svcs.; look at TCO
- Continuous improvement via root cause analysis
- Work done to professional IT best practice standards
- Self documentation when possible, min. but sufficient
- Reuse / Redeploy
- KISS (Keep It Simple, Sir)

# IT Strategic Plan – Tech Princ

- End User Licensing Agreement Compliance
- Only supported version of OS, Apps
- Use only open standards (not vendor lockins)
- FOSS or FAIB (w/caution) SW where practical
- No single source solutions (when possible)
- Use solutions out of the box, don't “customize”
- NO “custom” software (or hardware)
- Net. appliances / File Svrs. Only / NO AD, EXCH
- “Cloud” (SAAS, ASP) based mission critical apps<sup>52</sup>

# IT Technical Architecture

Browsers / Flash\* / QT\* / Office Suite (\*)

Windows / MAC / (Ubuntu) / (Other)

Intel / AMD 64 (32) / (Other)

Internet / TCP/IP

CAT 5E Ethernet / 802.11 b-g-n

# IT Procurement Plan

- Standard templates and process
- Standard approved HW and SW list
- Preferred Vendor List
- Sole source procurement with preferred vendors where allowable
- Multivendor RFQ process where required
  - Ask for functionality, not brand unless you have very specific need
  - Have all vendors fill out YOUR spreadsheet in their response, makes price evaluation very easy

# Current PC Buying Standard

- Min 2 Ghz dual core (or faster)
- Min 2 GB memory (or more)
- Min 80 GB hard disk (or more)
- DVD Reader / Burner
- MS Windows 7 Home (or Professional)
- Desirable – can run Ubuntu Linux (just in case)

# IT Operations Plan

- All of the “delta” information that a similarly skilled IT professional would need to perform daily work (but don't over document)
  - Workstation configurations, “standard build”
  - Network configurations: routers, dhcp, servers, waps, printers
  - Standard operational procedures (usage, backup)
  - Application, License and Physical Inventory
  - Passwords (separate document)
  - MUST be kept simple and up to date

# IT Disposal Plan

- New computers go to Patrons, “hand me downs” to staff, archives, infrastructure
- Strip machines of usable parts for upgrades, spares
- Delete all licensed sw, sensitive data
- If possible, refurbish for sale or donation (use volunteers)

# IT Budget

- IT Coordinator Salary (County)
- ILS - \$13.5 k
- Databases - \$16.5k
- SOLS – Internet \$7k Op + \$4k Cap
- CAP – PC and Computer upgrades \$24k

# IT Projects Completed 2009

- All break / fix
- Patron Q/A, tutorials and workshops 2 / Mo
- Development of outline Strategic, Ops, Procurement, Std PC build plans
- 22 new computers, new monitors rolled out
- Computer room and Network upgrades in Picton, Wellington
- 80% of non upgraded computers to target state

# IT Projects Underway 2010

- All break / fix
- Patron Q/A, tutorials, Workshops to 4 / Mo
- 20 new computers rolled out
- 20 computers upgraded from Vista to Win7
- Redeploy trickle down computers
- Memory upgrades (from retired computers)
- 100% of non upgraded computers to target state

# Standard PC Build Document

- Ensures consistent patron experience
- Minimizes questions to staff
- Allows new / redeployed PCs to be built by a skilled volunteer
- Allows spare PCs to be pre-built, and then quickly deployed for either patron or staff use

# Standard PC Configuration

- Admin (p), Staff(p), Patron logins (all admin)
- Latest Service Packs and updates, ALL Auto updates OFF (notify for staff)
- Screensaver, mon off disabled, no sleep/hibernate
- All warn icons in Win7 notify “penalty box”
- Startups for all apps run
- EN / FR keyboards
- Firefox with library home page in Start group
- Patron PC Locked with Faronics Deep Freeze



Admin



Patron



Staff

# Standard PC Icons / Apps

- Recycle Bin, Computer, (local share)
- Microsoft Live Chat (set to not autostart)
- IE, Firefox (def), Google Chrome browsers
- Open office: Word Processor, Spreadsheet, Presentation Graphics (set to save in MS Office 97/2000/XP format, not warn)
- Hidden: Flash, Adobe Reader, Quicktime, Printers
- MS Security Essentials



**County of  
Prince  
Edward  
Public  
Library**  
*archives*

*It's more than you think*

# Other Useful Free SW

- Apps: Lotus Symphony 1.3 Suite, Paint.net (both FAIB), VLC media player (FOSS)
- Inventory: FreePCaudit (misutilities.com, FAIB)
- Hardware Diagnostics: Memtest86+ (FOSS); Tufftest Lite, Seatools, Heavyload (all FAIB)
- If you can't afford supported version of Windows OS try FOSS LINUX
  - UBUNTU distro, very easy to set up, “MAC like”
  - Puppy Linux, runs on OLD hardware

# Line Of Business Apps

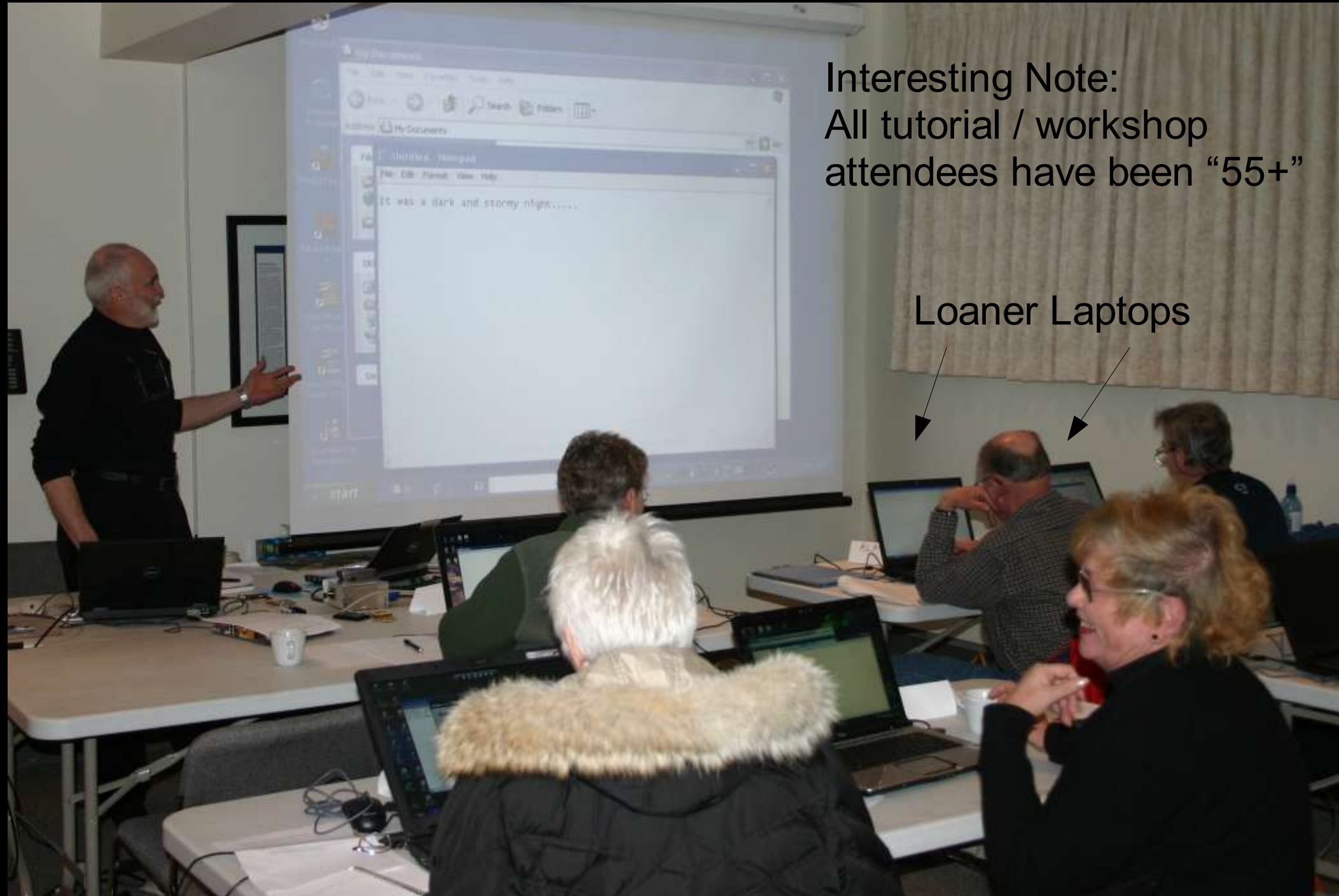
- Mail, OA – Google Applications (free, or \$50/yr/emp)
  - Work order system with tags: L1, 2, 3, 4 Incidents
- ILS - SirsiDynix Symphony/Workflows (via OLC)
  - Use to check PCs in / out
- Archives data – SirsiDynix Hyperion (via OLC)
- Picton, Well – XP pro 1TB File Svrs, RoboCopy BU
- [www.peclibrary.org](http://www.peclibrary.org) on [www.osmnetworks.com](http://www.osmnetworks.com)
  - Mtc. By Picton Br Mgr, IT Coord
- [www.countyteens.com](http://www.countyteens.com) on [www.godaddy.com](http://www.godaddy.com)
  - Maintained by Teen Coordinator

# Patron Tutorials and Workshops

- 1:1 Tutorials – currently using volunteer(s), CAP interns when funded following our guidelines
- Prime directive: the patron drives
- Workshops
  - 4/Mo, Alternate Picton and Wellington
  - Basic and Intermediate/Advanced
  - 10 AM to 12 AM, 1 PM to 3 PM
  - Patrons bring their list of questions / needs, or work on our worksheets based on their needs

Interesting Note:  
All tutorial / workshop  
attendees have been "55+"

Loaner Laptops



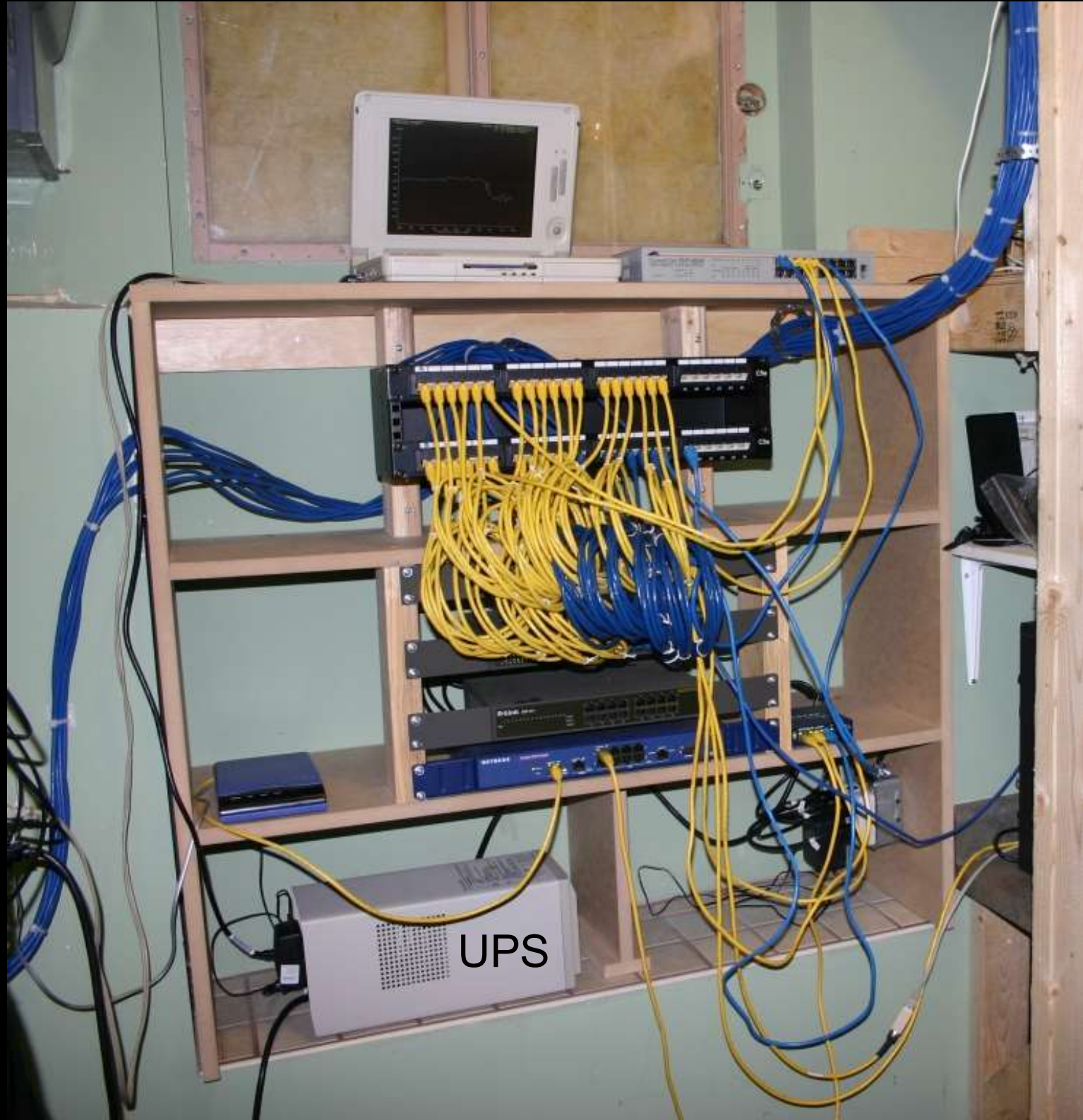
# Tutorials / Workshop Guidelines

- Basic skills (as determined by patron requests)
  - Setup / Start computer
  - Connect to WiFi
  - Library web site / iBistro / Databases
  - ServiceOntario / ServiceCanada Websites
  - Wikipedia (“about as good as Britannica” - Nature)
  - Google / Bing search
  - Email (gmail if not using something else)
- Did a pilot to Seniors home this week – Mouse skills<sub>50</sub>

# Tutorials / Workshop Guidelines

- Advanced Skills (As determined by patron requests)
  - File management: organizing files on the computer
  - Computer maintenance: perf analysis, disk mtc, antimalware, sw updates, sw installs/deinstalls
  - Digital photography (using file management)
  - Social networking: Facebook, Twitter, Buzz, etc.
  - Blogging, creating a Web Page
  - Buying and selling on the internet: eBay, Paypal, etc.
- Beyond Advanced: Open ICDL curriculum

# The Network



UPS

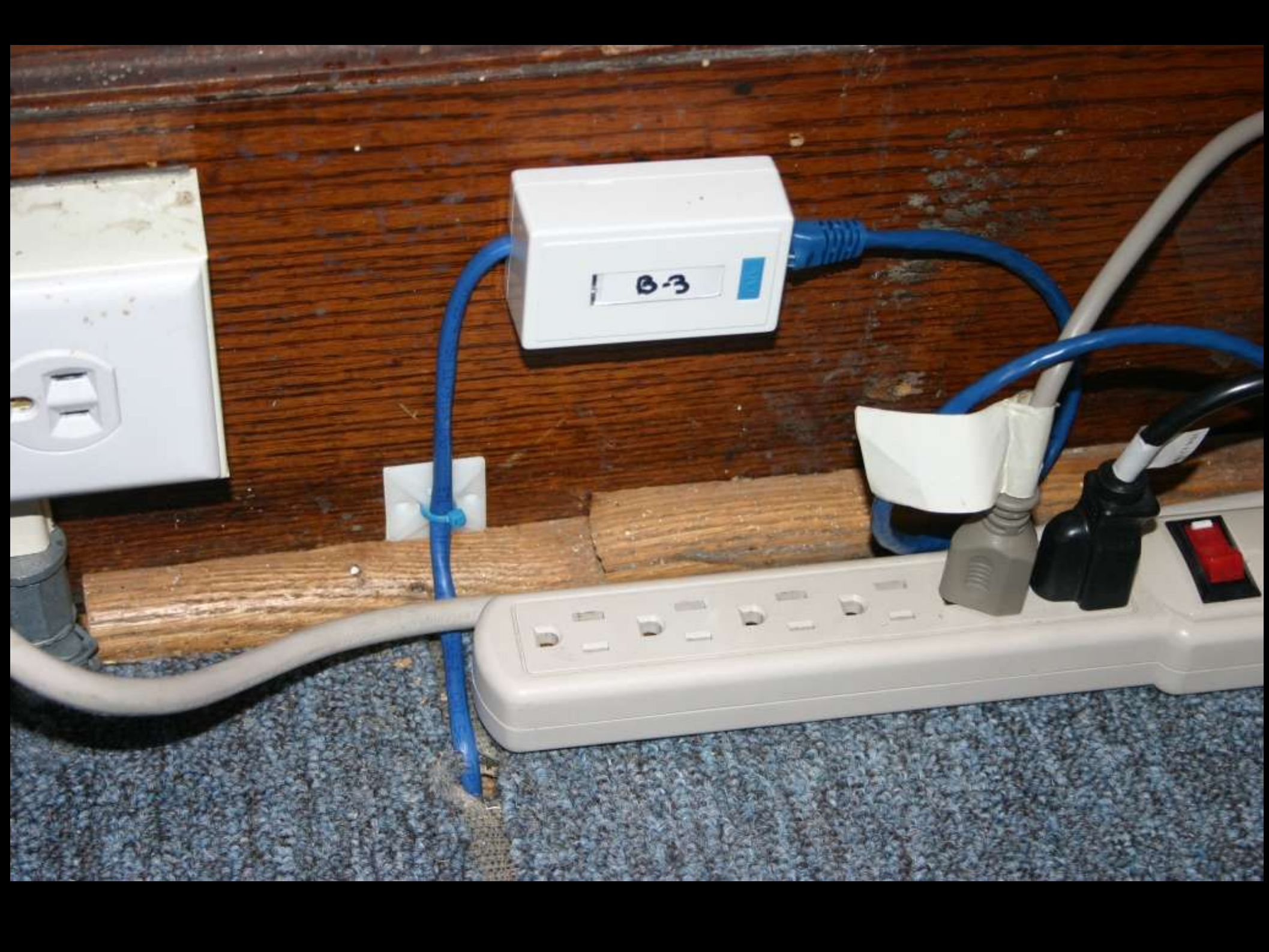


<= UPS









B-3

# Picton / Wellington Wired Network

All equipment on UPS



Internet

ADSL Modem (ISP supplied)



FVX538 Router



▶ To Wireless (DMZ)

Ubuntu  
Linux +  
ntop



10 Mb Hub



DSS 16+ SW



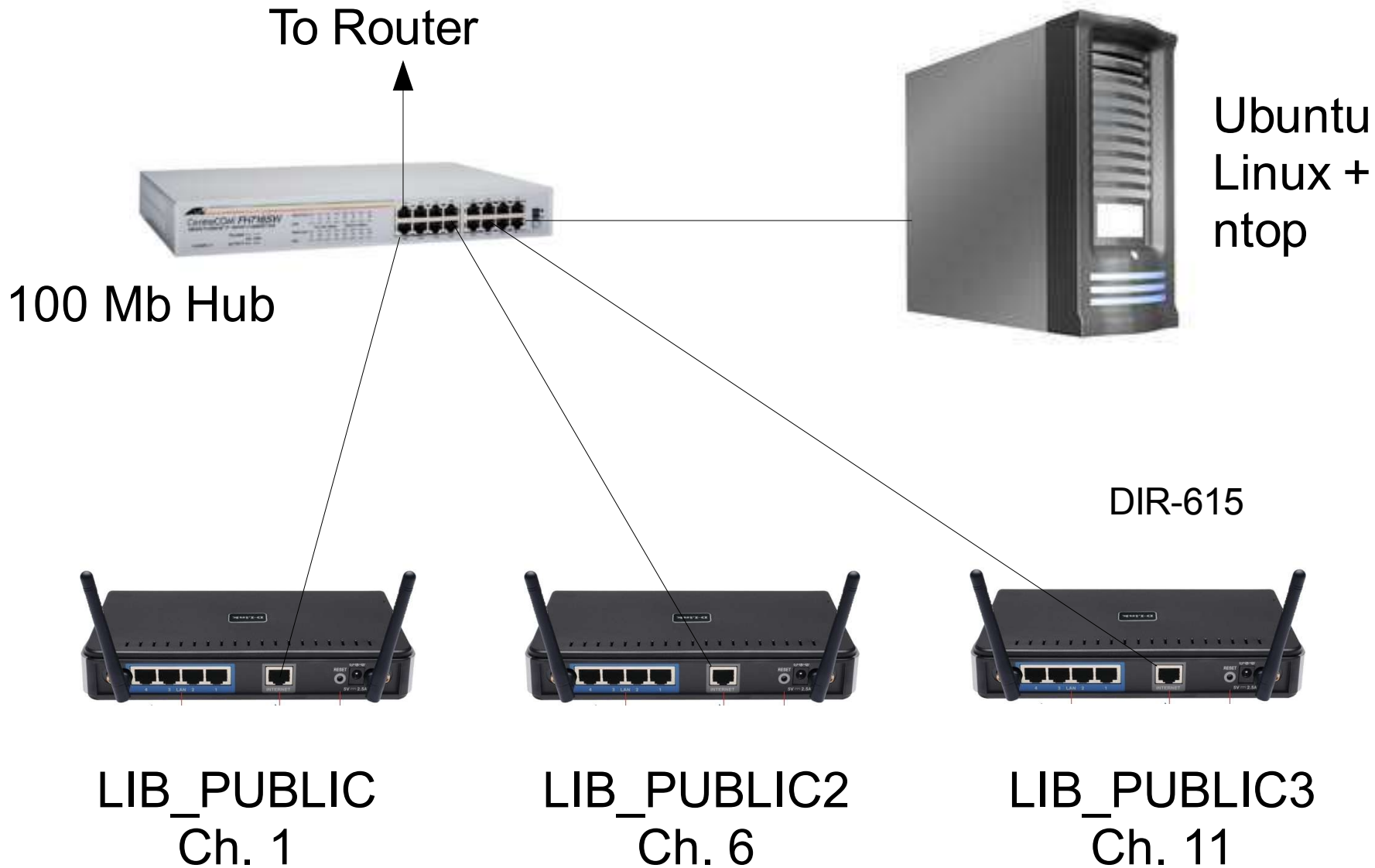
DSS 24+ SW



DES1108 SW

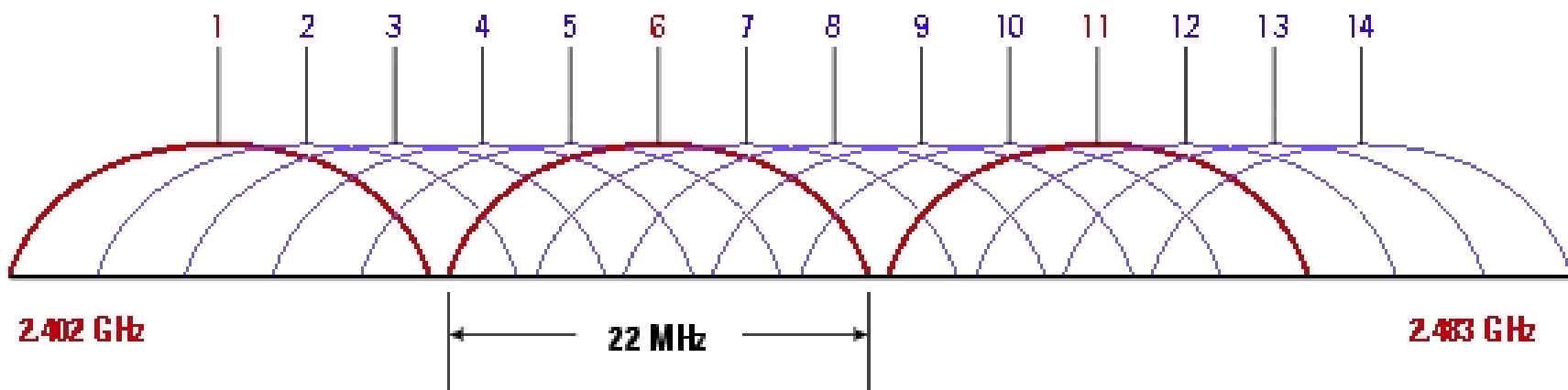
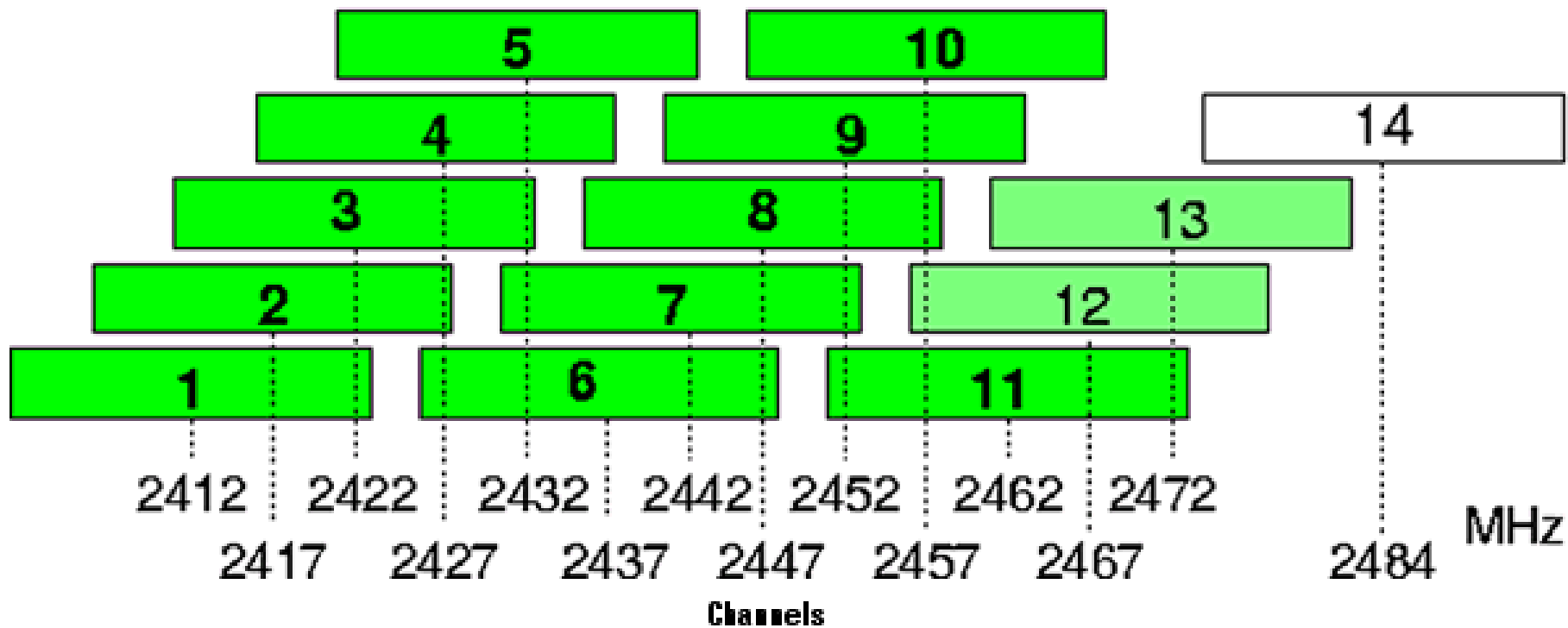


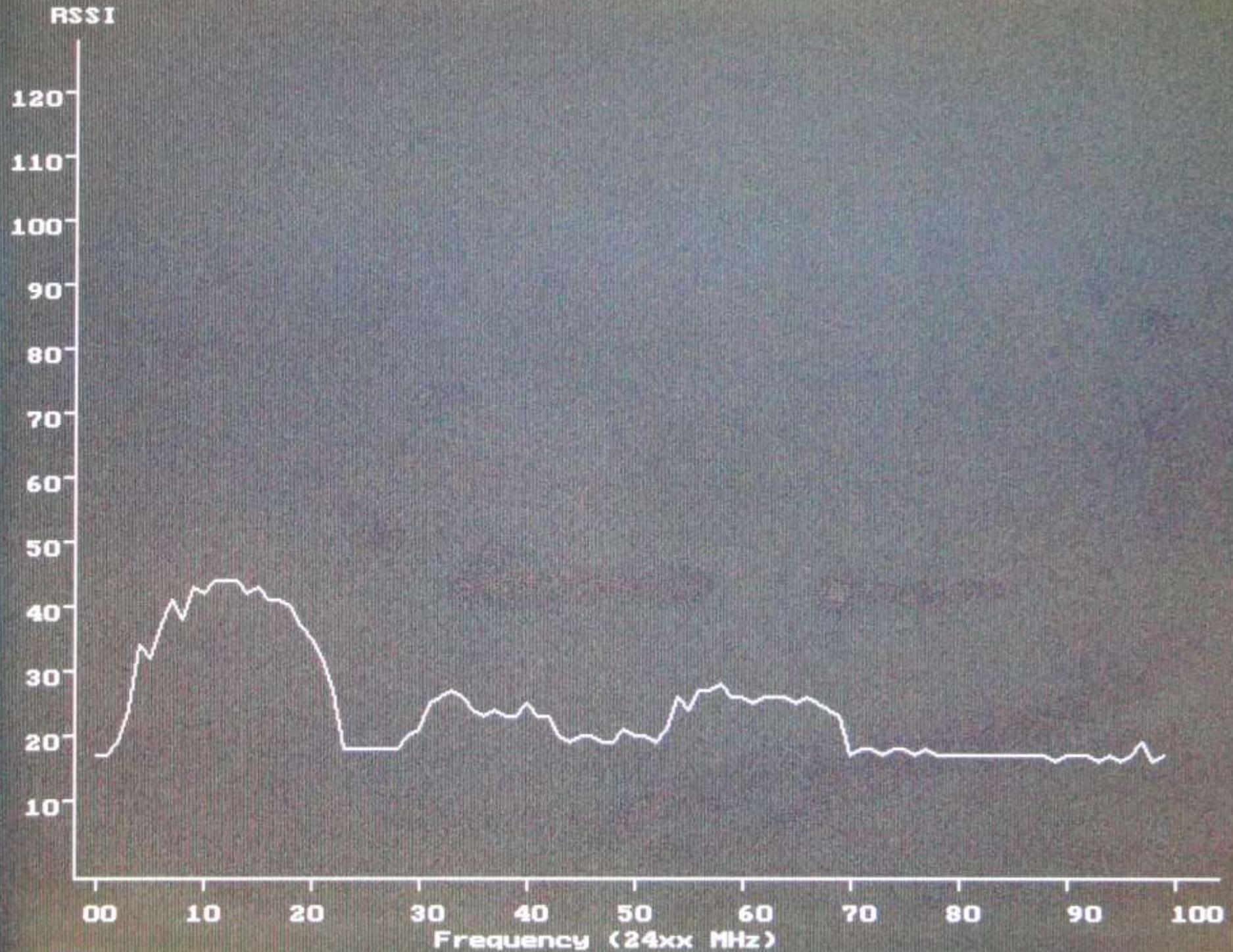


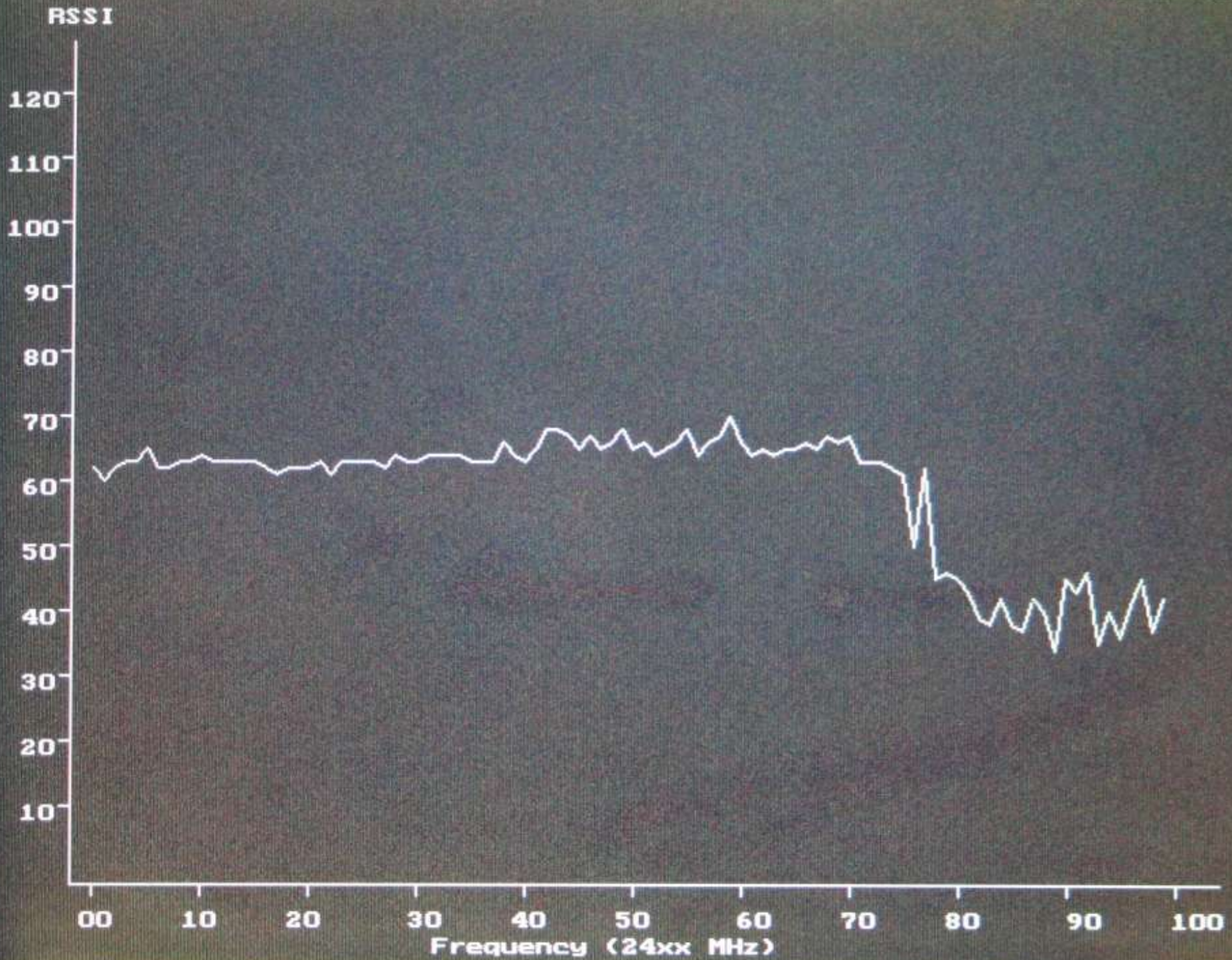


# Picton Wireless Network

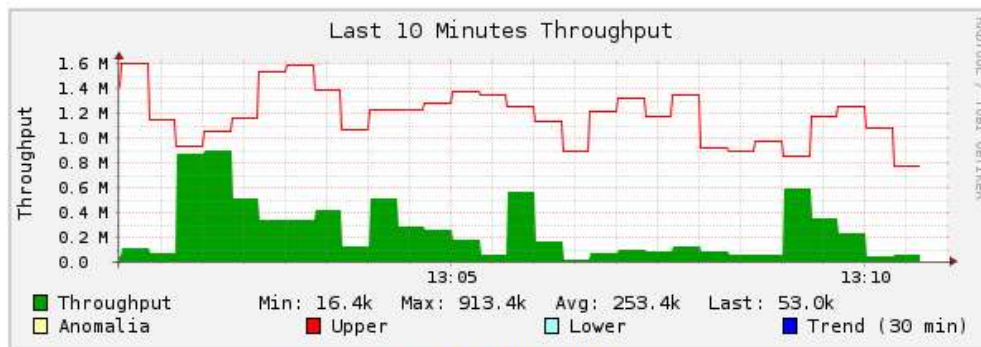
All equipment on UPS



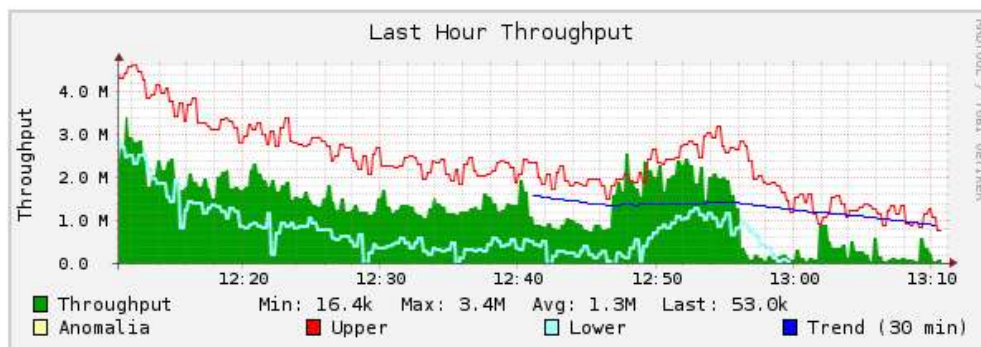




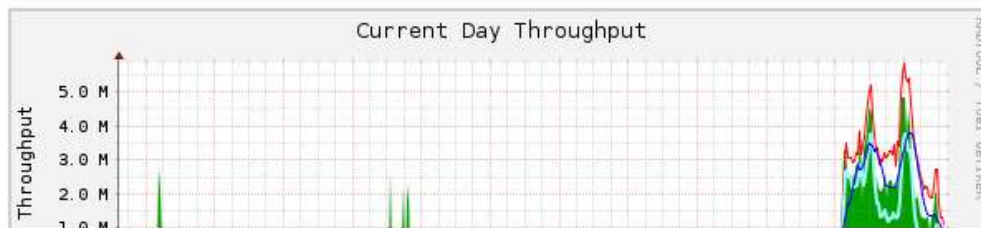
### Network Load Statistics



Time [ Fri Feb 19 13:00:58 2010 through now ]



Time [ Fri Feb 19 12:10:58 2010 through now ]



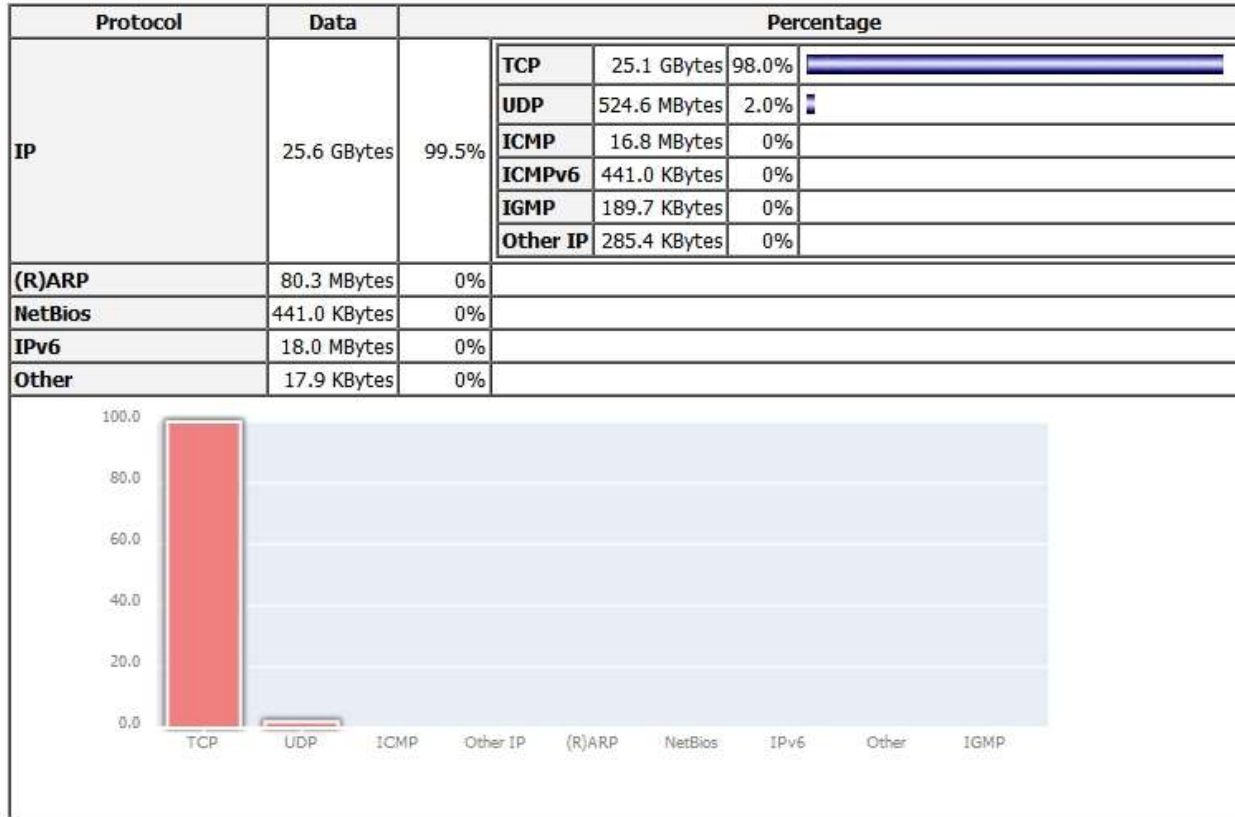
## Network Traffic [TCP/IP]: Local Hosts - Data Sent+Received

Hosts: [ All ] [ Local Only ] [ Remote Only ]

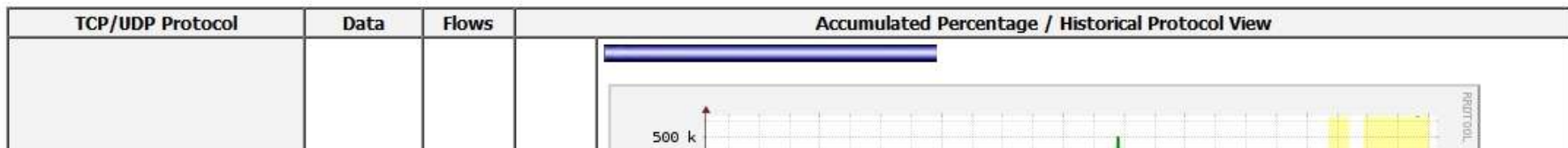
Data: [ All ] [ Sent Only ] [ Received Only ]

Host	Domain	Data	FTP	HTTP	DNS	Telnet	NBios-IP	Mail	DHCP-BOOTP	SNMP	NNTP	NFS/AFS	VoIP	X11	SSH
192.168.1.231		5.1 GBytes 43.5 %	0	4.8 GBytes	4.0 MBytes	0	5.9 MBytes	27.2 MBytes	0	2.4 KBytes	0	1.8 KBytes	0	1.6 KBytes	
192.168.1.233		1.9 GBytes 16.1 %	0	1.9 GBytes	371.6 KBytes	0	5.9 MBytes	13.6 MBytes	0	0	0	1.8 KBytes	0	0	
192.168.1.232		974.8 MBytes 8.1 %	0	929.0 MBytes	646.1 KBytes	0	5.9 MBytes	480	0	319.9 KBytes	0	1.8 KBytes	0	0	15.6 KByte
c0163		798.4 MBytes 6.6 %	0	753.5 MBytes	1.2 MBytes	0	15.7 MBytes	480	27.4 KBytes	0	0	1.8 KBytes	168	401	
::		296.5 MBytes 2.5 %	0	294.3 MBytes	293.6 KBytes	0	1.1 MBytes	0	6.0 KBytes	25.4 KBytes	0	0	0	0	
::peclibrary.org		271.6 MBytes 2.2 %	0	270.6 MBytes	226.7 KBytes	0	675.0 KBytes	0	3.0 KBytes	20.5 KBytes	0	0	0	0	
192.168.1.1		243.5 MBytes 2.0 %	0	0	25.4 MBytes	0	199.8 MBytes	4.7 KBytes	320.0 KBytes	0	0	18.2 KBytes	1.3 KBytes	0	
192.168.1.53		193.7 MBytes 1.6 %	0	191.4 MBytes	198.0 KBytes	0	867.5 KBytes	0	3.3 KBytes	25.2 KBytes	0	0	0	0	
::		169.1 MBytes 1.4 %	0	168.2 MBytes	112.2 KBytes	0	769.5 KBytes	0	7.3 KBytes	0	0	0	0	0	
::		164.4 MBytes 1.4 %	0	163.4 MBytes	69.8 KBytes	0	869.0 KBytes	0	4.7 KBytes	51.0 KBytes	0	0	0	0	
c0041		147.5 MBytes 1.2 %	0	132.0 MBytes	171.7 KBytes	0	15.2 MBytes	480	7.7 KBytes	0	0	1.8 KBytes	0	0	
0.0.0.0		146.8 MBytes 1.2 %	0	145.3 MBytes	205.6 KBytes	0	764.4 KBytes	0	4.7 KBytes	0	0	0	0	0	
::peclibrary.org		135.1 MBytes 1.1 %	0	130.4 MBytes	345.8 KBytes	0	866.9 KBytes	0	6.7 KBytes	0	0	0	0	0	
192.168.1.116		132.2 MBytes 1.1 %	0	113.5 MBytes	167.1 KBytes	0	771.7 KBytes	0	2.0 KBytes	20.7 KBytes	0	0	0	0	
192.168.1.55		131.7 MBytes 1.1 %	0	130.5 MBytes	152.5 KBytes	0	952.9 KBytes	0	6.0 KBytes	50.5 KBytes	0	0	0	0	
::		129.8 MBytes 1.1 %	0	128.9 MBytes	109.3 KBytes	0	764.9 KBytes	0	6.0 KBytes	0	0	0	0	0	
192.168.1.94		115.7 MBytes 1.0 %	0	114.7 MBytes	187.1 KBytes	0	645.2 KBytes	0	2.3 KBytes	39.4 KBytes	0	0	0	0	
::peclibrary.org		114.4 MBytes 0.9 %	0	113.3 MBytes	113.8 KBytes	0	595.5 KBytes	0	12.4 KBytes	20.7 KBytes	0	0	0	0	
::peclibrarv.org		113.4 MBytes 0.9 %	0	108.8 MBytes	202.3 KBytes	0	656.6 KBytes	0	14.0 KBytes	21.8 KBytes	0	0	0	0	

### Global Protocol Distribution

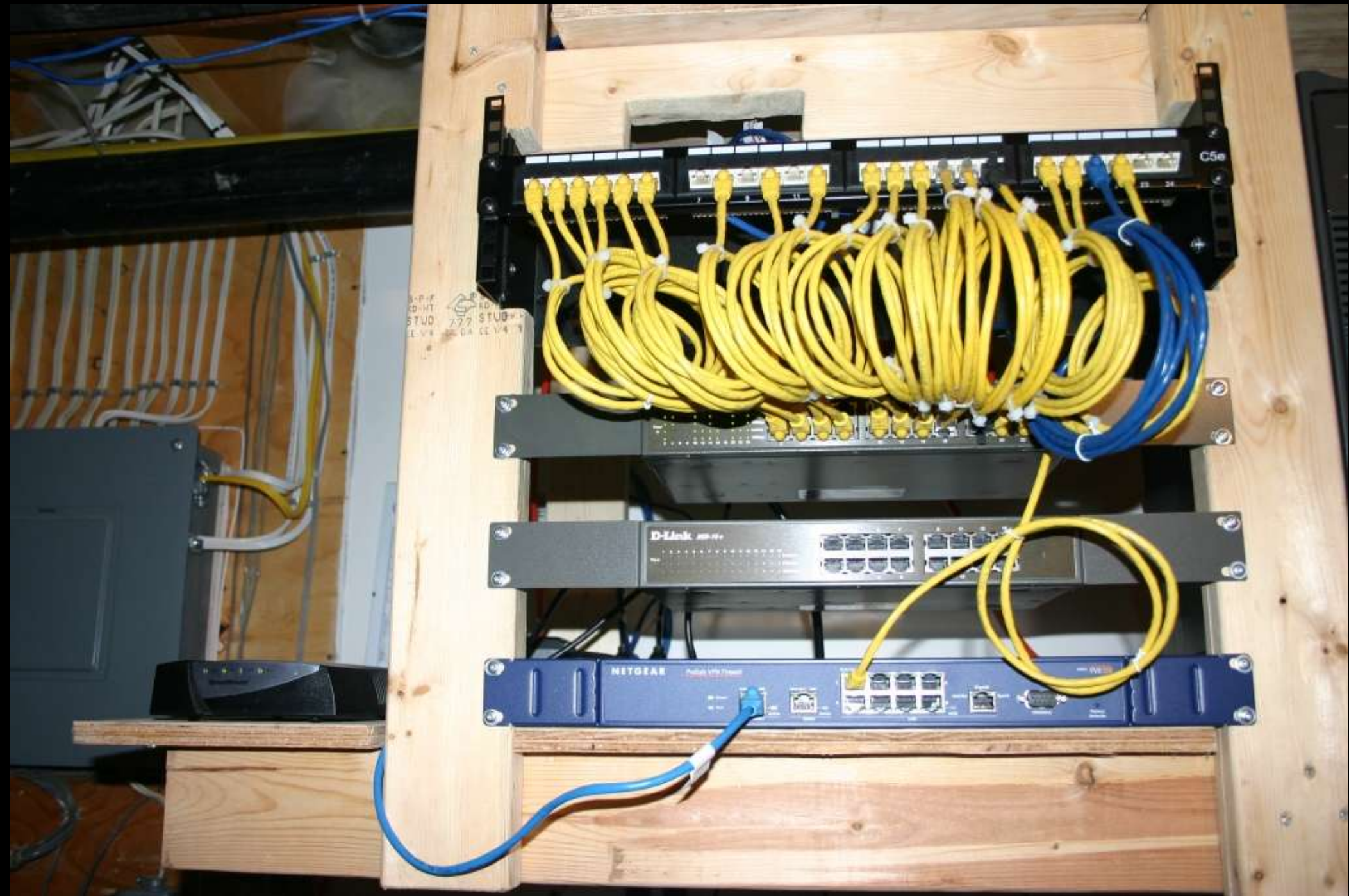


### Global TCP/UDP Protocol Distribution



# Wellington Network





RD  
STUD  
777  
CE V4 '9

C5e

NETGEAR ProSafe V12 24port

D-Link 24-port

NETGEAR ProSafe V12 24port



UPS

\* WATCH YOUR HEAD \*

WATCH YOUR  
HEAD  
(WHEN YOU BEND UP)

\* WATCH YOUR HEAD \*

WATCH YOUR  
**HEAD**  
WHEN YOU STAND UP!

SERVER01

C0943

C0942

C0941

C0944



FAD\*



Small Branches  
Dlink WBR-2310



# Other Projects on my list

- Rollout 3 MACs; Redeploy PCs, memory
- 2nd Picton DSL (\$?)
- 15 Win7 PCs a year, Ethernet printers
- Automate PC Tracking (? / \$?)
- Improve Patron Workshop material
- Improve website: DB page, Kids site, IT policies, IT FAQs
- WiFi on DMZ, WiFi P2P control
- Implement Pict  $\Leftrightarrow$  Well VPN; FTP “dropbox”
- Initiate staff IT skills development program
- Better leverage Google Apps, File shares

# The Future



# Future Trends

- The Internet is the system
- Most popular apps are free on the 'net
- Smart devices outnumber PCs on the 'net
  - OS, large pkgd apps less important (obsolete?)
- WiFi, 3G access > wired
- Higher speed networks
- Ebooks? IMHO in flux due to Stds, DRM
- Patrons more computer literate, requests for assistance become more complex

# Summary

One (or more) full time professional IT staff can provide a wide variety of IT services to Library Patrons (directly and indirectly) in a very cost effective manner

# Call to action

- For a copy of presentation and notes, see conference site or email me at
  - [computerlab@peclibrary.org](mailto:computerlab@peclibrary.org)
- If anyone is interested in starting a “Library IT” mailing list / discussion group, contact me at the same address

**Thanks!**  
**Questions?**