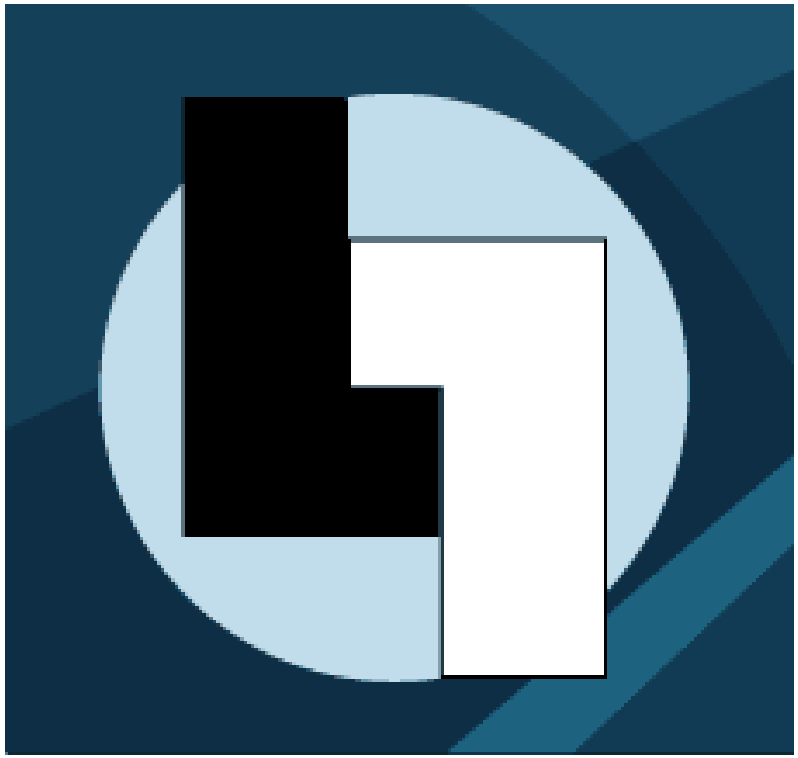
Thanks to the LayerOne Staff!



Who the hell are you?

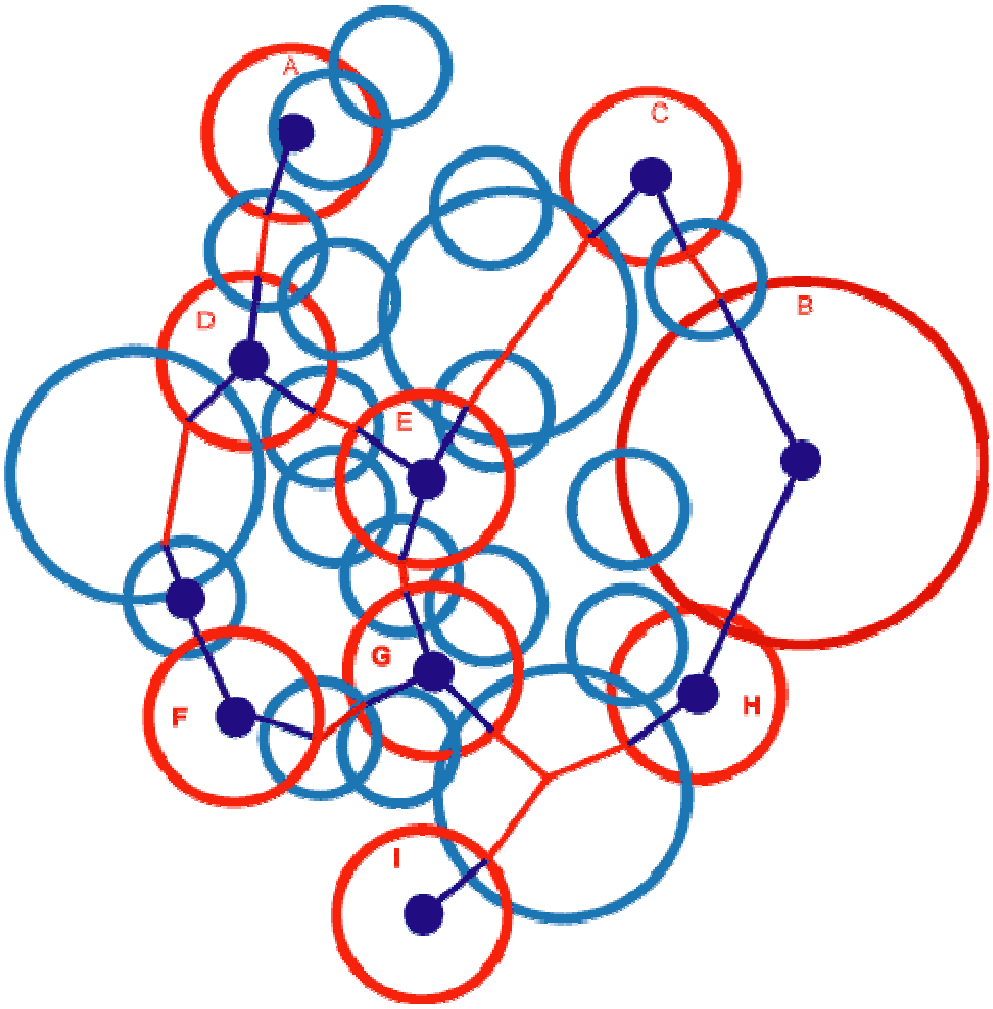
FREE
NETWORKS
.ORG

Don’t believe anything I say…

WTF?

Sticking it to the man

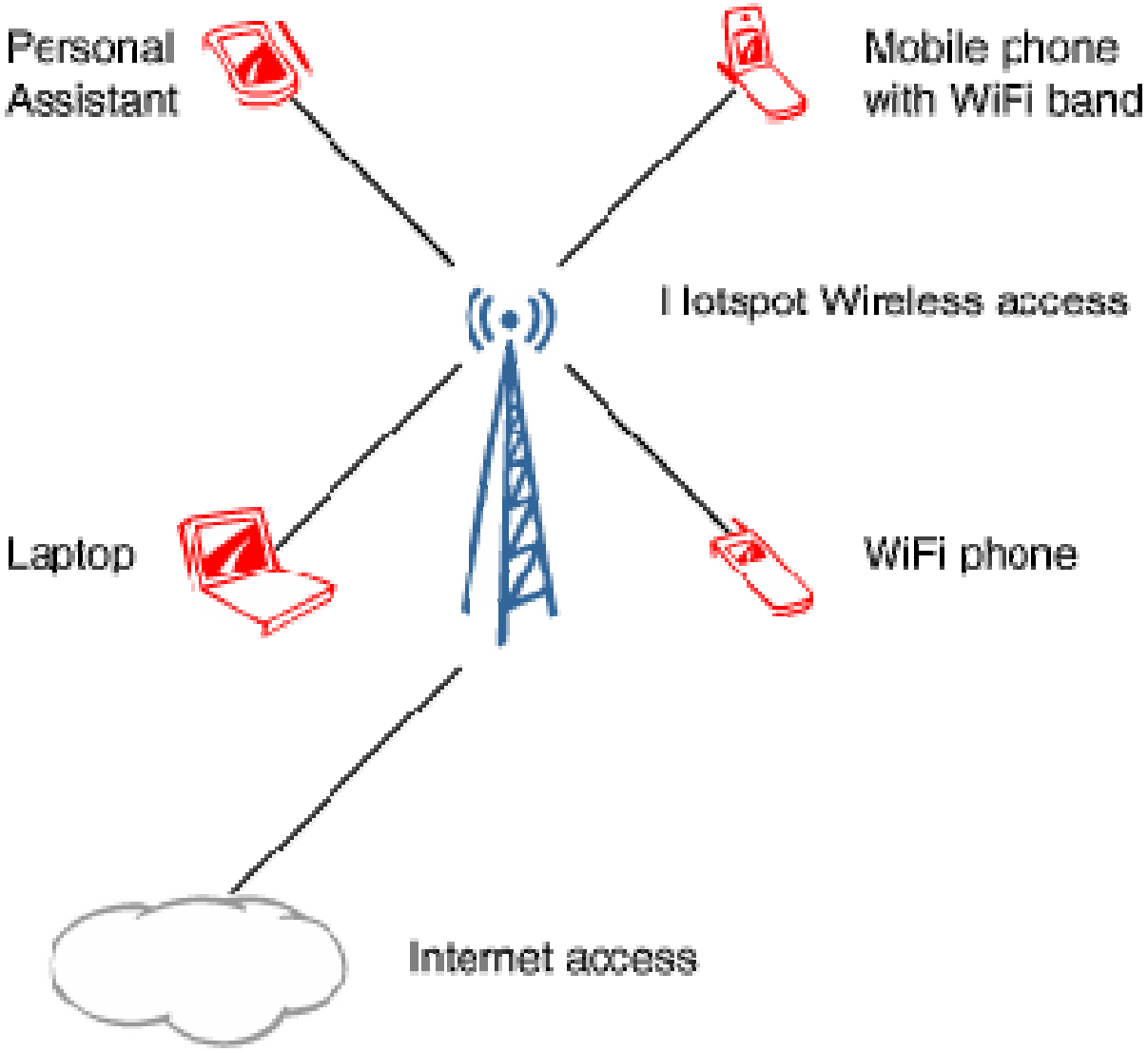
Much Better



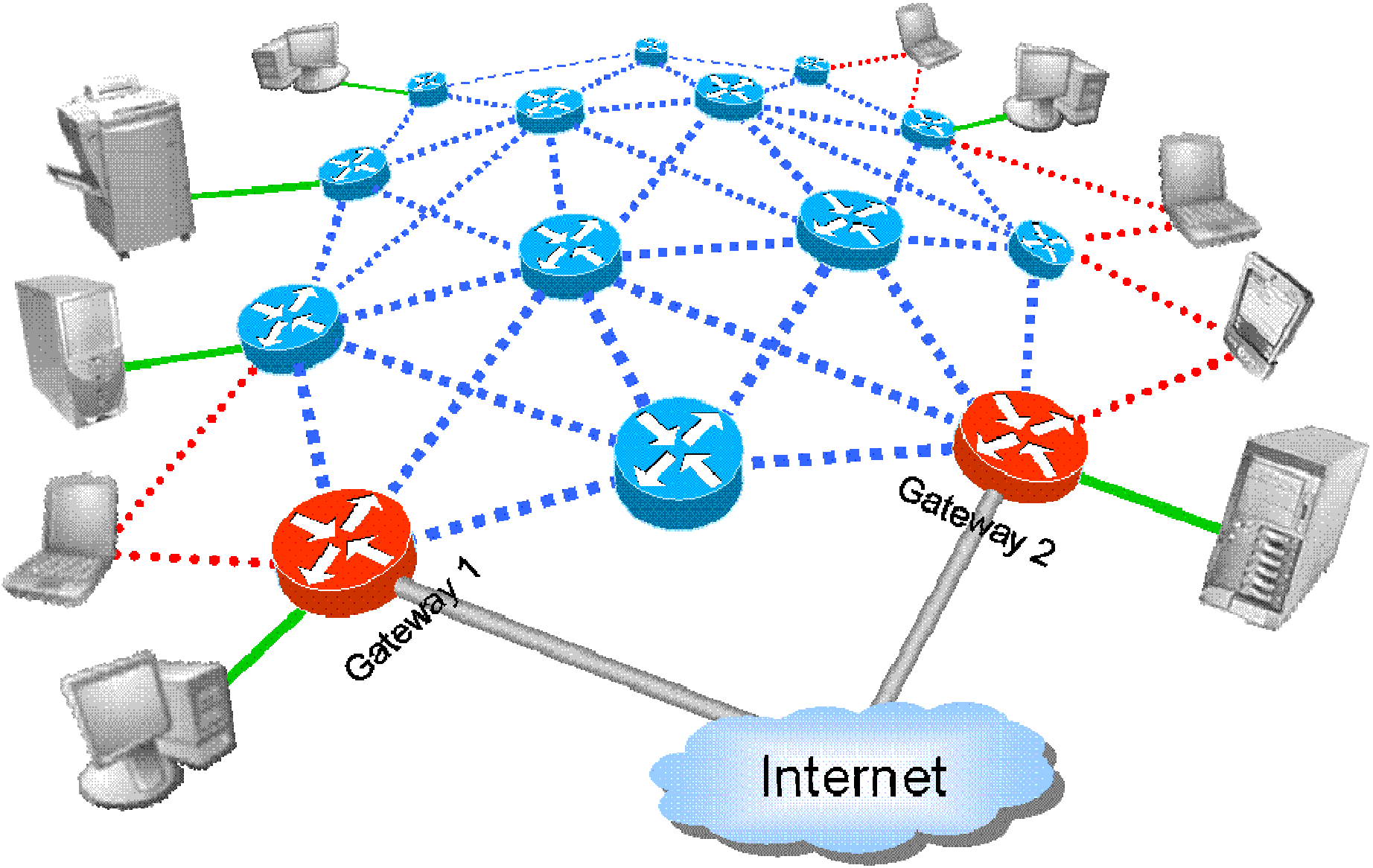
SeattleWireless Brief History

- Founded in 2000
- 6 people meeting in a café
- Wireless was getting cheap
- Interconnected nodes in a city wide wireless network sounds useful
- Experiment, Educate, and see if we can pull it off

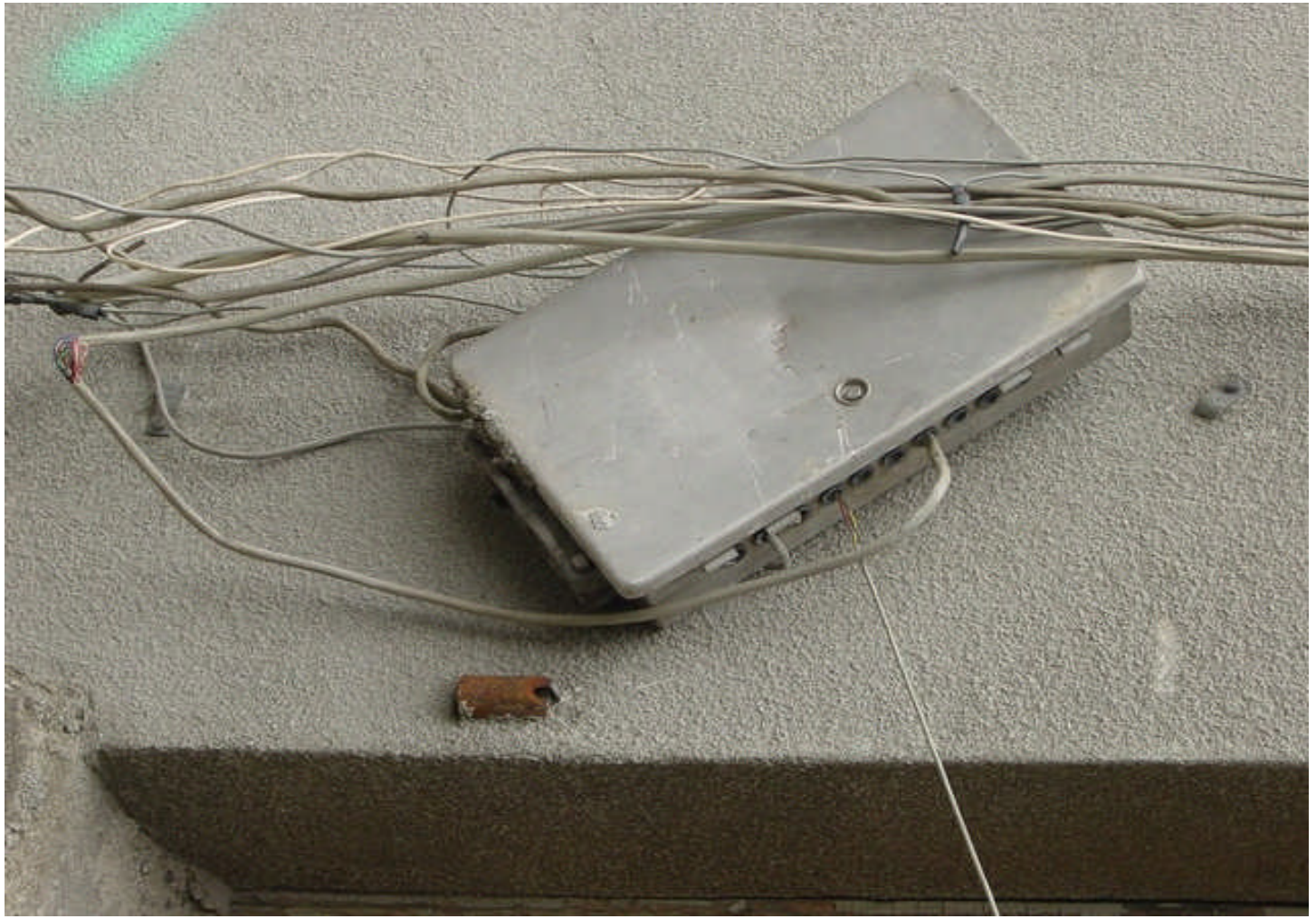
This is not interesting



This is interesting



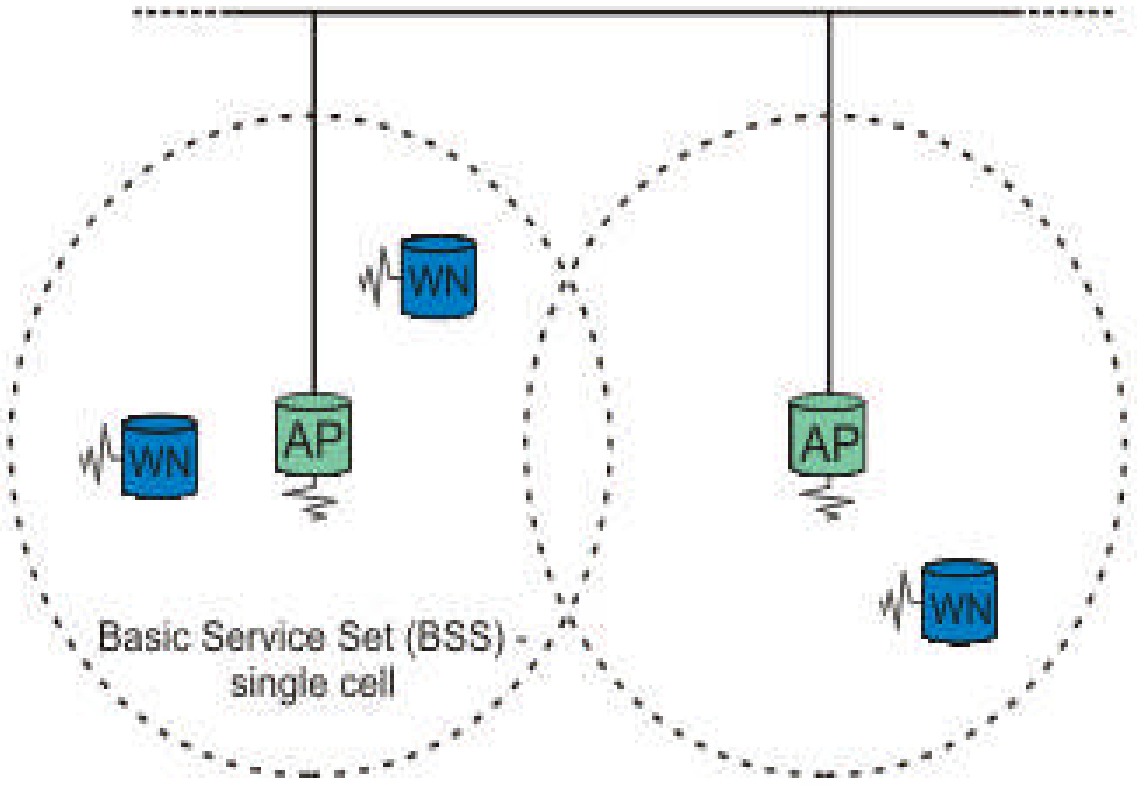
Break the local loop



First Nodes

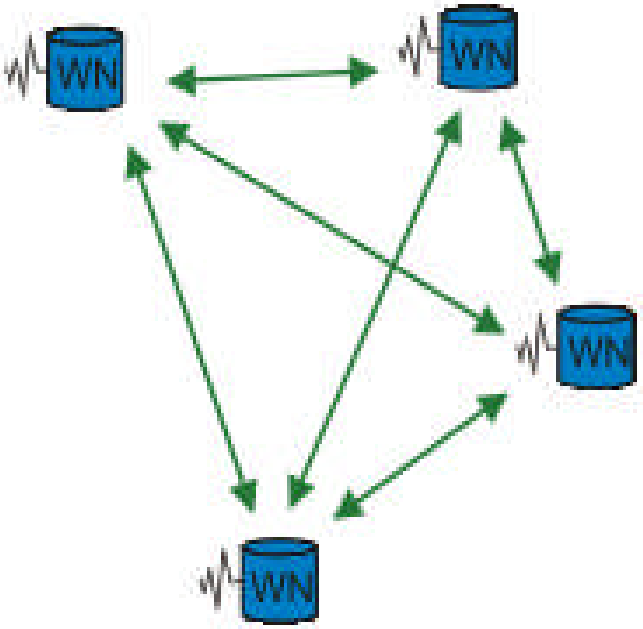
- Rack mount boxes
- PCI Wireless cards
- 802.11 Ad-Hoc
- Static Routes and/or RIP
- Commercial and DIY Antennas

Infrastructure Mode:

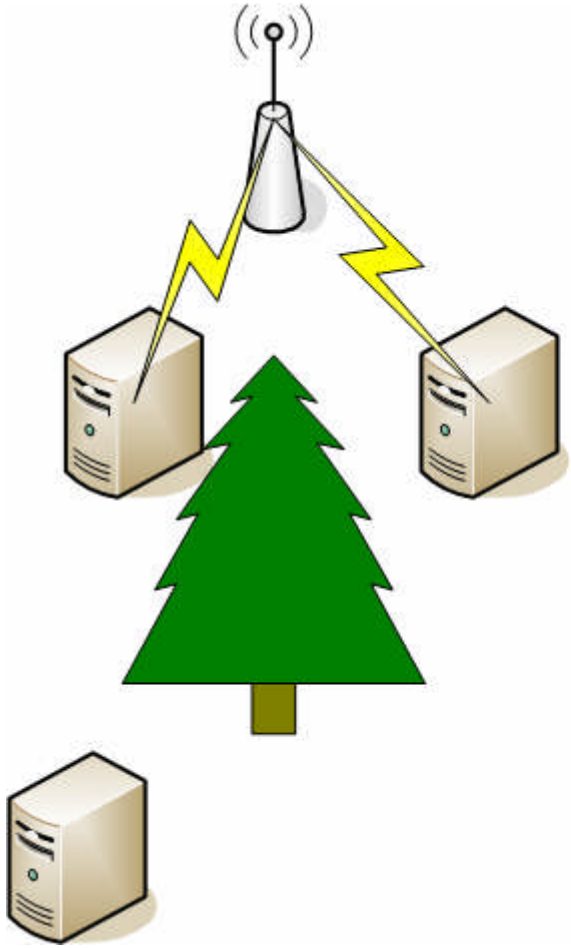


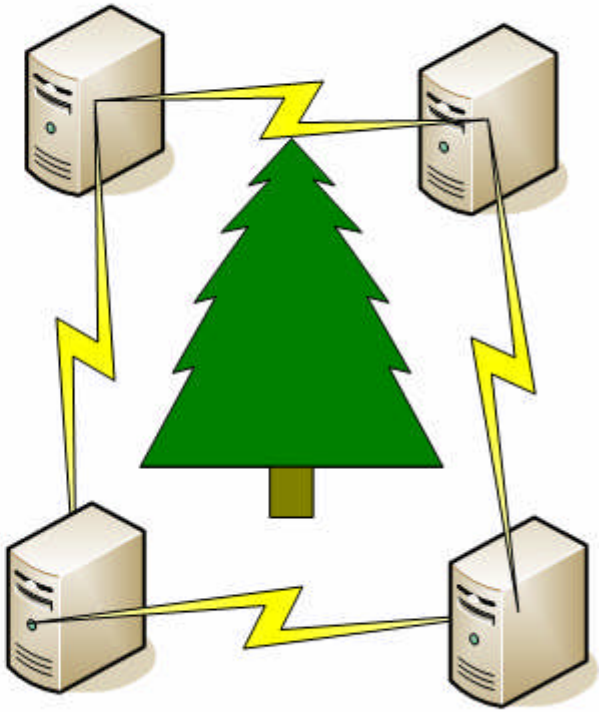
Extended Service Set (ESS) - multiple cells

IEEE Ad-hoc Mode:



Why Ad-Hoc?

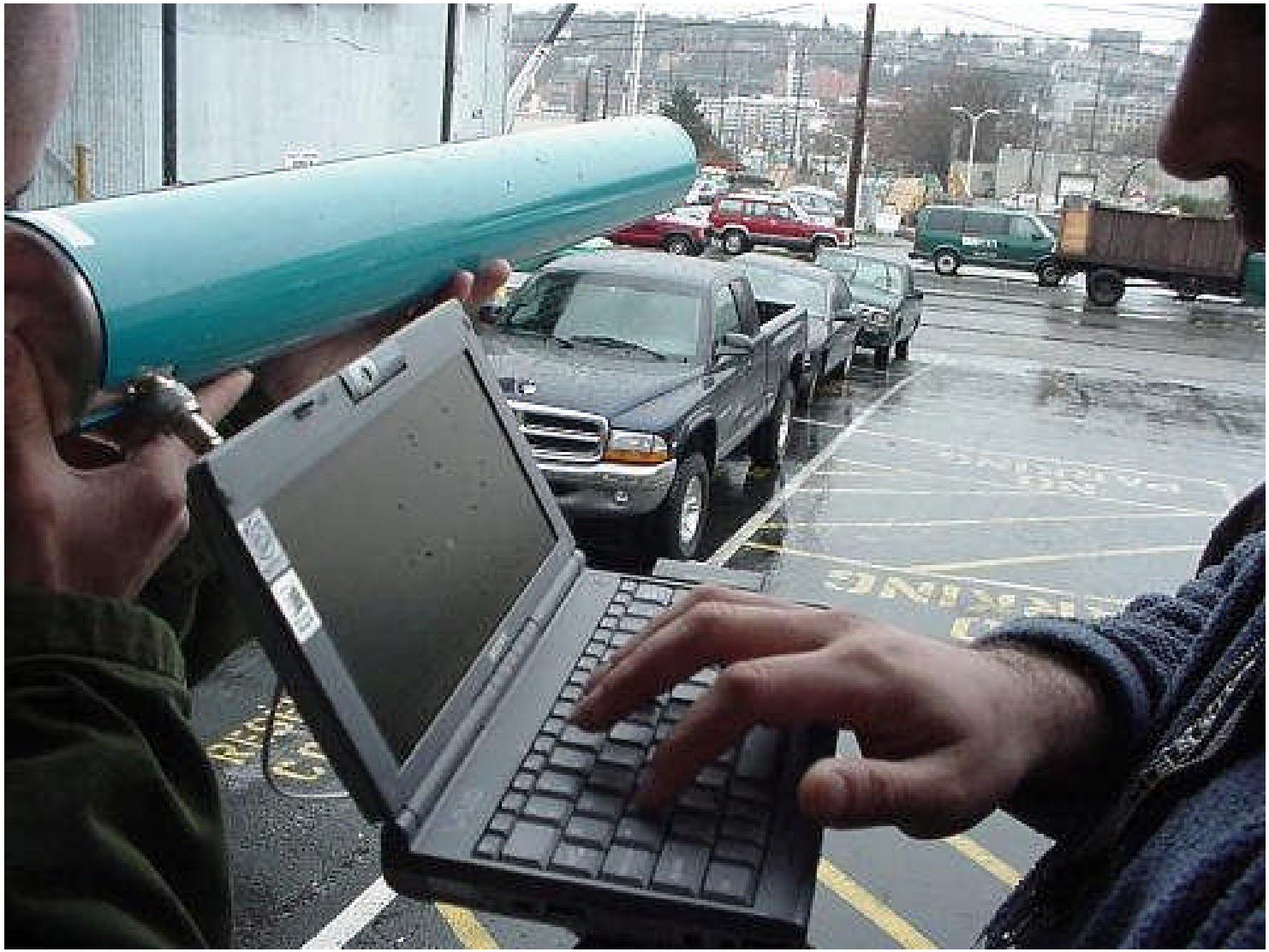




Ad-Hoc Mode Sucks

- Vendors implement differently or haphazardly
- Does Wifi Alliance even test ad-hoc mode?
- Ad-Hoc mode exhibits strange behavior, unrealiable

OG: Original GhettoTech



2600
2600
FREE
Crème de
Pirouline

2600

BUY/DETAILS

$49.95

6 years later. What has changed?

More Mature

PH163112
YCL 0310
FOXCONN
45C6R
040816
Soekris Engineering net4826
49LF040
33-4C-NH
0225111-BA
Geode
SC1100
SCH100UFH-286
SAMSUNG 349
YC00

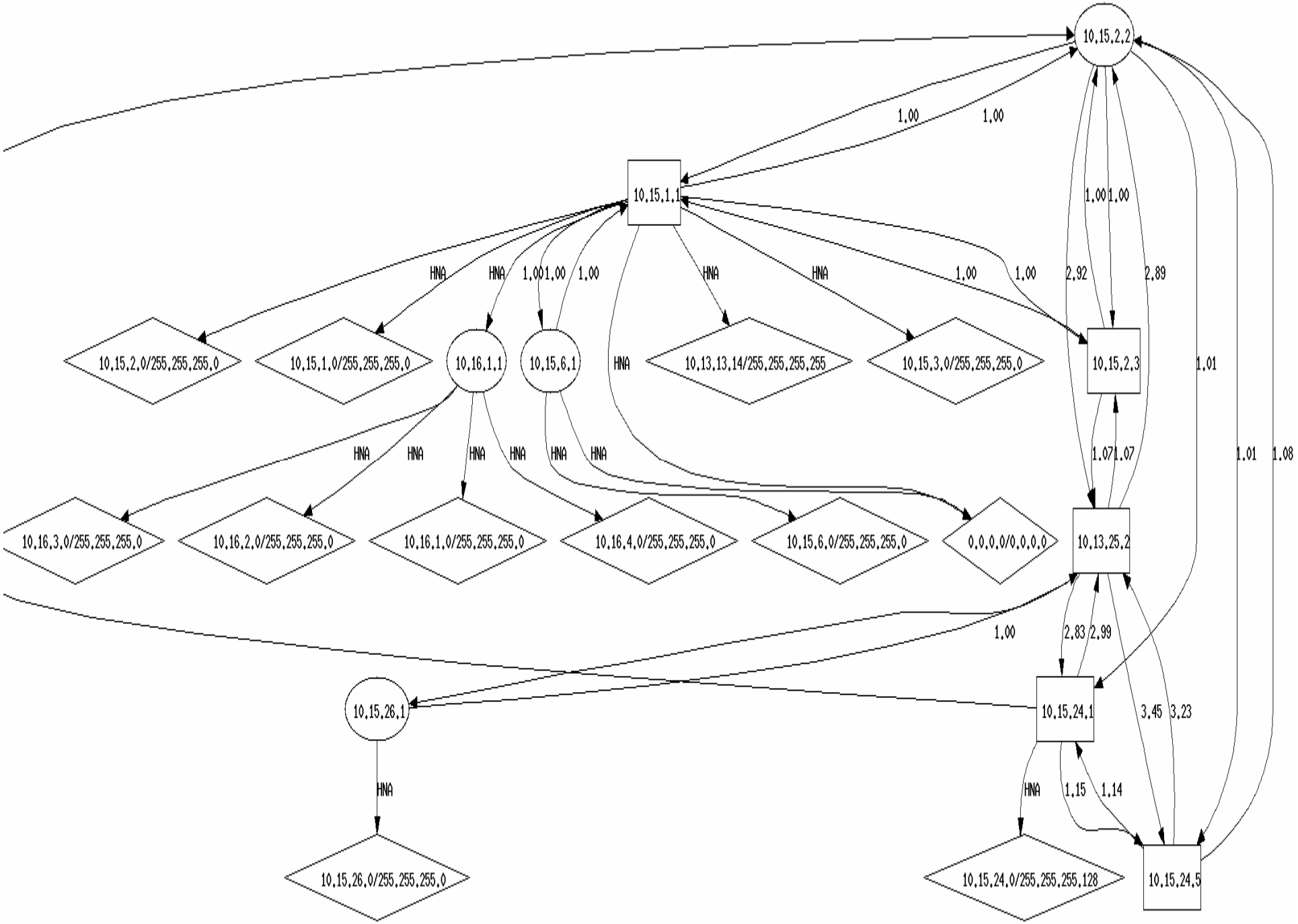
Ad-Hoc?

AP and client mode is used mostly. Way more reliable.

Requires in some cases multiple nodes or radios to create multilink nodes

Routing

- OLSR, Optimized Link State Routing Protocol: RFC 3626
- Pro-Active route building
- Portable


10.15.2.2
10.15.1.1
10.15.2.3
10.13.25.2
10.15.24.1
10.15.24.5
10.16.1.1
10.15.6.1
10.15.26.1
10.15.2.0/255.255.255.0
10.15.1.0/255.255.255.0
10.13.13.14/255.255.255.255
10.15.3.0/255.255.255.0
10.16.3.0/255.255.255.0
10.16.2.0/255.255.255.0
10.16.1.0/255.255.255.0
10.16.4.0/255.255.255.0
10.15.6.0/255.255.255.0
0.0.0.0/0.0.0.0
10.15.26.0/255.255.255.0
10.15.24.0/255.255.255.128
HNA
1.00
2.92
2.89
1.01
1.08
1.07
2.83
2.99
3.45
3.23
1.15
1.14

Will it scale?

I don’t know

100+ node OLSR Mesh in Germany

What about the network?

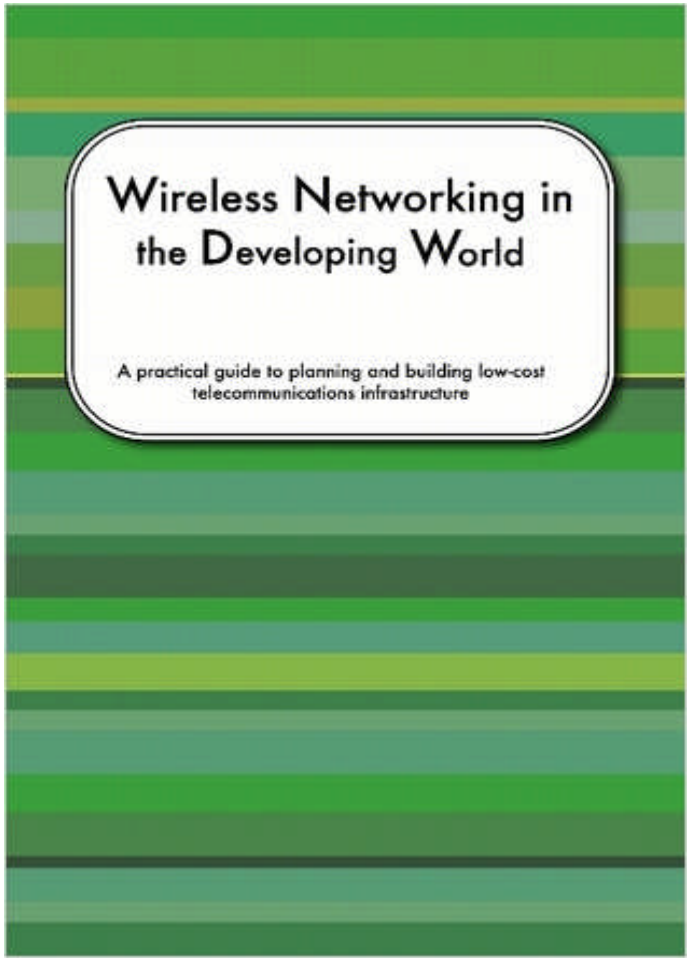
- 35 Nodes
- Small number of interconnects
- Some high profile nodes

Is this Progress?

- Network has not progressed as much we would like
- Work we have done has proven valuable…

WNDW

- Guide for building standards based wireless networks
- Free PDF
- $9.62 for a print copy
- Based of work and research of community wireless everywhere



It does work

Active working networks in:
Ghana

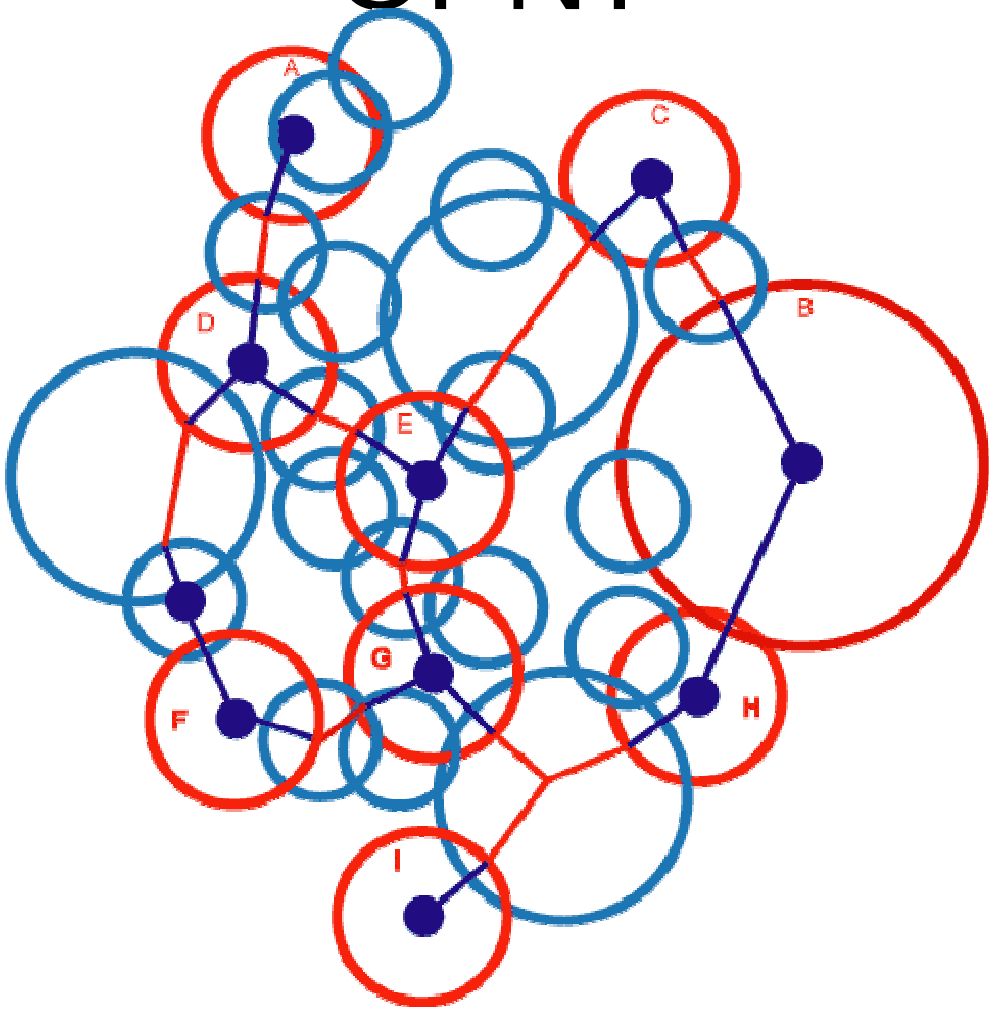
Belgrade

Hungary

TONS more see: http://freenetworks.org

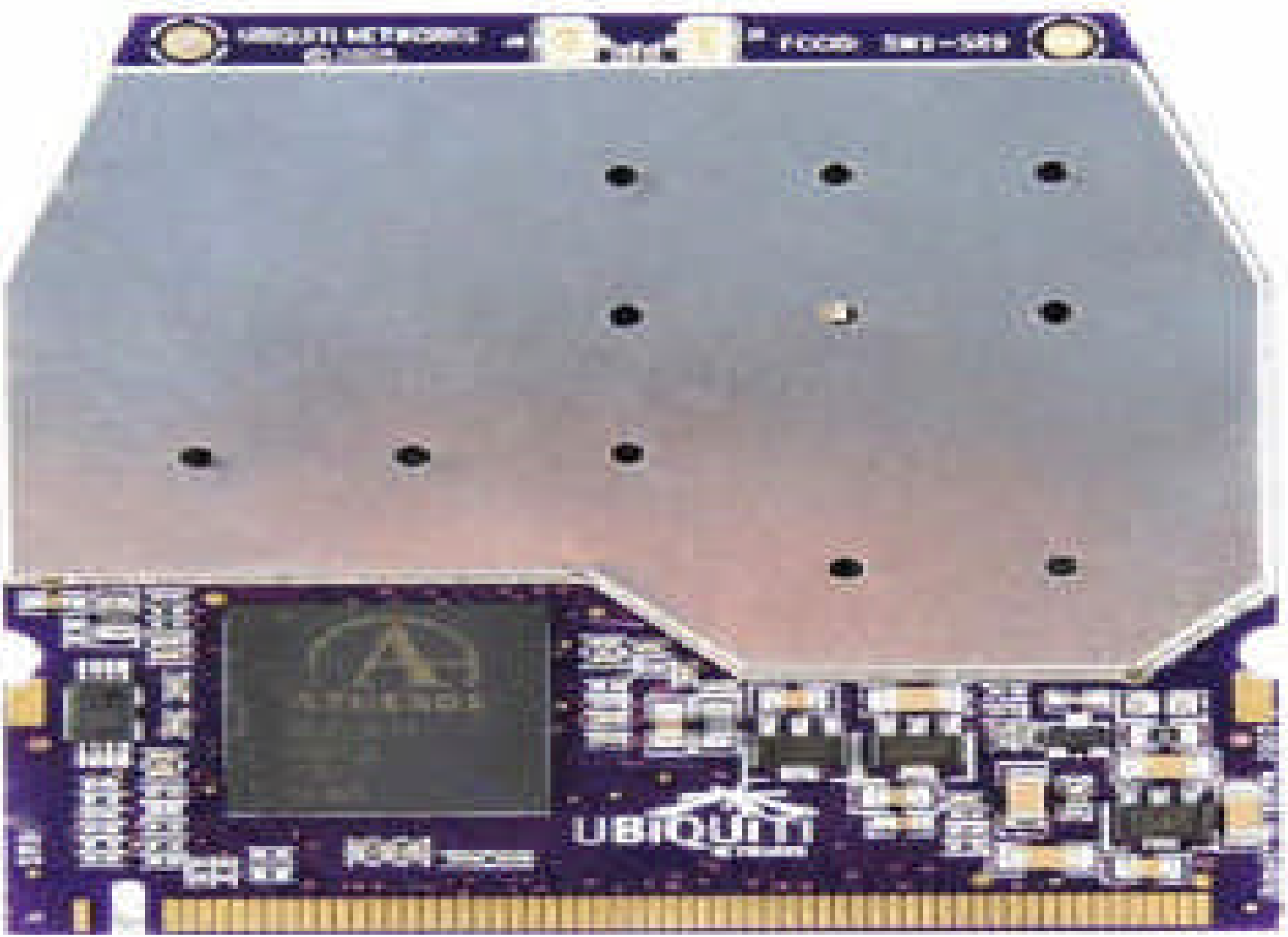
So whats the next “big thing”???

OPN?



Madwifi-NG?

One radio can act as client and AP simultaneously, good for OPN


UBIQUITI NETWORKS
UBIQUITI

Better Portals

Nocat Captive Portal → WifiDog

I am not logged in.
Login

Île Sans Fil | Where am I?

Île Sans Fil Building your wireless community

Language: English

Online users

Nobody is online at this hotspot...

START

Accounts on Île Sans Fil are and will stay completely free.Please inform us of any problem or service interruption at:tech@ilesansfil.org

île sans fil

Île sans fil news

Source: **Île Sans Fil: Points d'accès les plus récents**
- 2005-12-19 **Restaurant El Zazium**
- 2005-11-26 **Bistro Part Ici**
- 2005-11-23 **Homeless Archives**

Source: **Ile Sans Fil - Nouvelles**
- 2005-12-28 Comptable recherché

Content from: Laïka

Flickr t@g : isflaika

Did you know that you can contribute to this this community photo space ? Simply signup for a Flickr account and add the tag isflaika to some of your coolest pictures.

You'd like to know other people living in Montreal ? Maybe you're curious about knowing the goals and dreams of other montrealers ?

Show all available contents for this hotspot

MuniWireless

“When a parking ticket isn’t enough” –MattW

Muniwireless

- cities and counties with operational networks: 56
- cities and counties with hotzones: 29
- cities and counties with municipal use or public safety only networks: 42
- cities and counties that are in the RFP process or are currently deploying networks: 59
- TOTAL: 186

*Stats thanks to http://muniwireless.com

My beef with muniwireless

“Totally Secure”, “Infinite Scalability” ???

- Muni networks pouring out $$$
- $$$ goes to proprietary mesh products
- Open mesh protocols and solutions need $$$ and testing
- Proprietary and closed does not make scalable and secure
- If open stuff gets better, “a WIN WIN situation”
- Do we need to learn these lessons over and over again?

Why should I care??

Whats the big picture

- “A hobbyist collecting Pez dispensers could develop the idea to become Ebay. A couple of Stanford students could start Google and build a better search engine. Two guys in Europe could assemble a handful of programmers to invent Skype and threaten the trillion-dollar annual global tel-economy.” – David Isenberg

Net Neutrality

All bits are equal

Common Carriage – Providers cannot seize critical paths

Providers must remain neutral and not filter or discriminate what bits you send and receive

So What?

August: DSL Deregulation

+

Brand-X Case; Cable network stays closed

Duopoly on consumer internet access

What if?

Internet becomes cable?

- Basic cable – http?
- Extended cable – http, rtsp?
- Premium cable – http, rtsp,voip?

Or

Internet becomes cable?

- Basic cable – some websites?
- Extended cable – all websites, some media?
- Premium cable – all websites, media, voip?
- 71337 Cable – all that stuff plus pr0n

But they wouldn’t do that…

Right?

AT&T's Ed Whitacre wants consumers *and* content providers to pay for use of *his* network. "The Internet can't be free … for a Google or Yahoo or Vonage or anybody to expect to use these pipes free is nuts."

BellSouth's William Smith told reporters that he would like to turn the Internet into a "pay-for-performance marketplace" where his company could charge for the "right" to have certain services load faster than others.

- **Verizon CEO Ivan Seidenberg** says that Web applications need to “share the cost” of the broadband services already paid for by consumers. “We need to pay for the pipe.”

The Internet routes around censorship right?

Building new networks is a way to route around

Won’t we be able to just tunnel through cable tv style Interenet connections?

Wireless is alternative to this

- Alternative local loop networks will route around this
- Everyone can play, commercial, non-commercial
- Competition is good, we know this

What can I do?

- Educate
- Write your congress person
- Write the FCC
- Go to FreePress.net “Defend Net Freedom Now”
- Support Community and Muni networks

THANKS!

- kenc@seattlewireless.net
- http://ken.ipl31.net