

School Infrastructure



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Chief Connectivity Officer

One Laptop Per Child

School Server



- Publishing
 - Internet connectivity
 - Content Cache
 - Backup
-
- XO \Leftrightarrow School Server is not a Client-Server relationship!
 - The School Server is a persistent peer for the laptops.

School Server



Sizes:

- Small: serves ~20 XO's
- Large: serves ~150 XO's

- Small: 500Mhz CPU, 256 MB RAM, 1 radio
- Large: 1Ghz CPU, 1GB RAM, 3 radios

Currently x86, other architectures considered

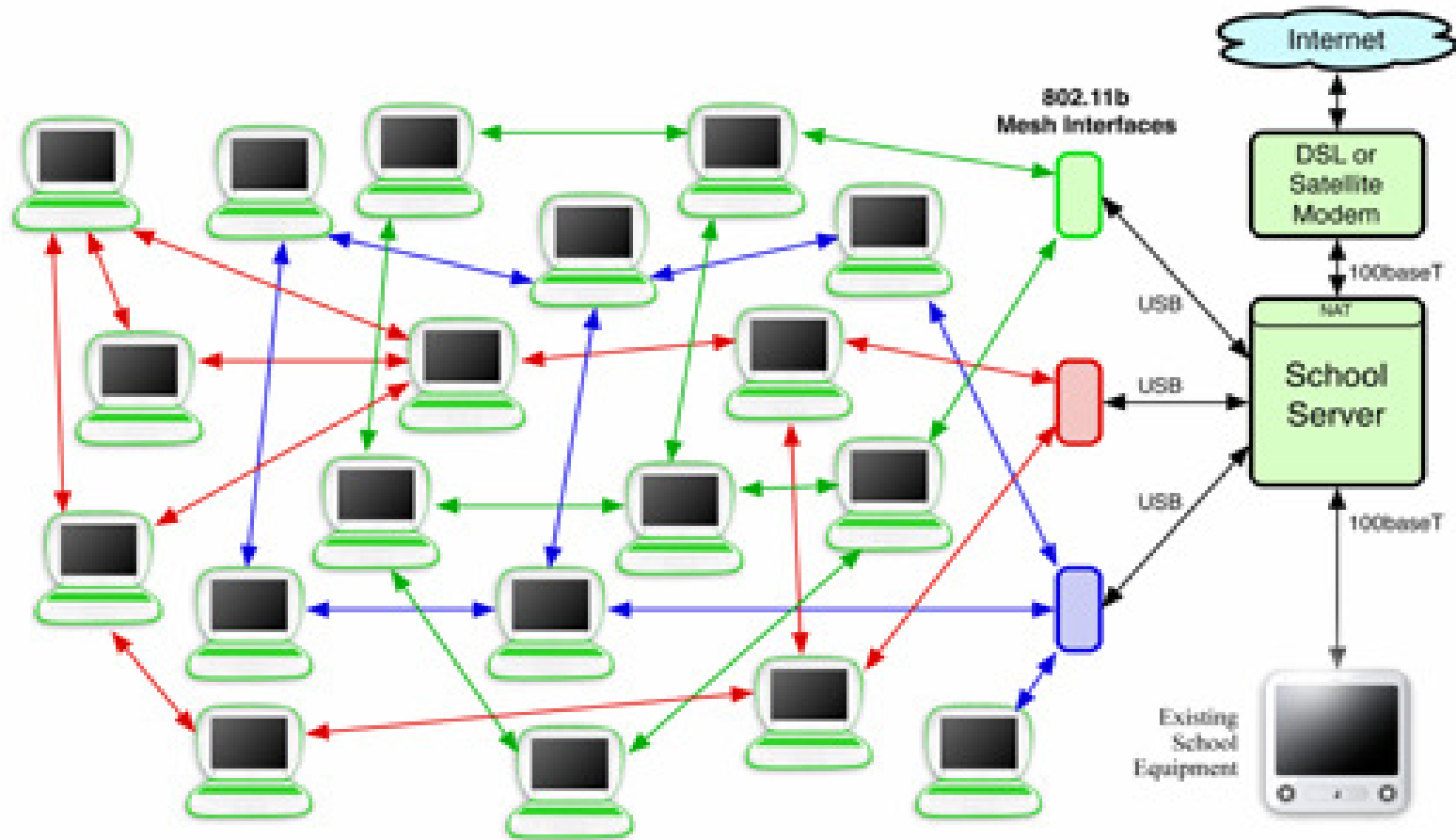
Server Software

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- Kernel 2.6
- MediaWiki, MoinMoin
- Apache2
- Squid
- Rsync
- SSH

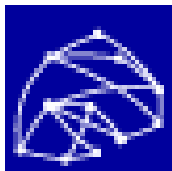
Internet Access



Internet Connectivity Issues



- Density in the schools
- NAT is a necessary (?) evil
- School Subnet address allocation
- IPv6
- Connectivity Manager



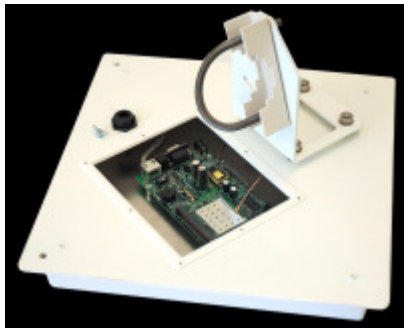
RNP

Rede Nacional de Ensino e Pesquisa
Promovendo o uso inovador
de redes avançadas no Brasil

Wireless Equipment for Digital Inclusion



- WiMax is going the wrong way (802.16e)
- WiFi can't do point to multipoint efficiently
- 802.11 can do it (with the right options implemented => PCF)



We need efficiently packaged outdoor point-to-multipoint equipment (AP and CPE)
An opportunity for Brazilian Industry!