
WLANs and Power over Ethernet



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What's a WLAN?

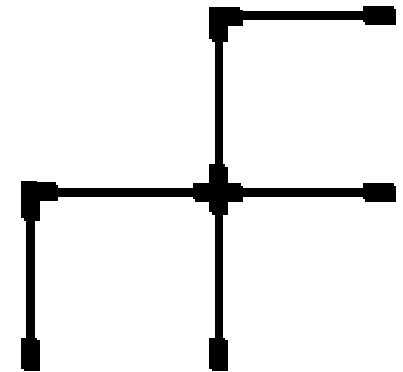
Why are they important?

What's the problem?

What 3Com is considering

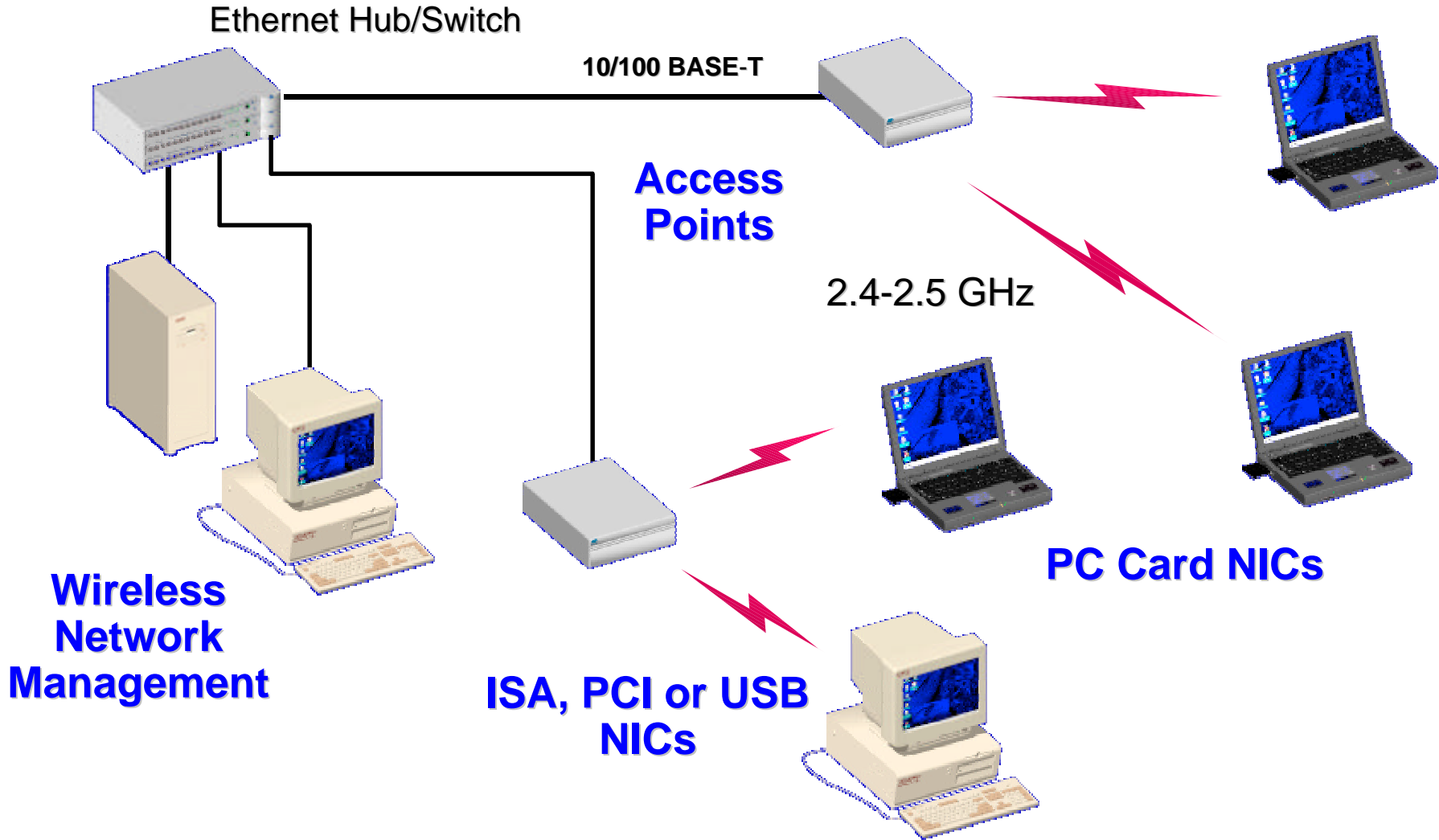
What we really want

Summary





What's a Wireless LAN?





Why are WLANs important?

- They are a big business
- Yankee Group forecast of US Market:
 - 1999 Installed base of 700k WLAN nodes
 - Projected for 2000, 1M nodes
 - Projected for 2001, 1.4M nodes
- IDC forecast of Worldwide Markets
 - 1999 Installed base of 2.3M nodes, 445k Access Points
 - Projected for 2000, 3.5M nodes, 561k APs
 - Projected for 2001, 5.2M nodes, 701k APs
- 3Com is pursuing its share



What is the problem?

- Wireless Access Points require wired network and power connections
- APs are typically located on ceilings or high on walls to provide best radio coverage

APs in 2 buildings

- Each AP needed an AC and a 10BT connection
- Cost about \$200 per AP to wire Cat 5 from hub in wiring closet
- Cost about \$800 per AP to wire, run AC conduit to code

What we are thinking about

- Investigating a different design for WLAN products
- Looking at routing DC power over the unused Cat 5 cable conductor pairs
- Idea would be that the AP would accept DC power provided by the signal bearing conductor pairs, the unused conductor pairs, or both
- Also, a Bias Module would inject DC from a power brick into the appropriate cable conductor pairs
- The Cat 5 cable would be routed so to locate the Bias Module and power brick near a convenient, existing AC outlet



What we really want

- A definitive standard for routing DC over ethernet cables, to phase into our AP designs so to be operable in all infrastructures
- Also, to eliminate the cost of shipping a Bias Module with every AP
- And, to eliminate the cost of individual (larger) power supplies to:
 - Provide AP Bias and
 - Heat up to 100m of ethernet cable (IR losses, each AP)
- So, we really want a powered hub:
 - Say, an 8 way hub with 4 ports capable of delivering DC
 - Containing one large power supply that provides all the bias, and addresses all the reliability,

3Com Summary

- An IEEE standard for powering devices over their network connection would be a significant boon to the WLAN space:
 - Reduces installation, infrastructure costs
 - Promotes compatibility of equipment over the universe of infrastructures
- That's what we're all here for