

Wireless Networking...Is it Right For Your Campus?

Current Issues Roundtable Discussion Notes

EDUCAUSE Conference - October 28, 1999

Leader: Judy Lilly L. Lilly, Director, Communication Network Services, Virginia Tech

Below are comments, questions, and topics discussed by individual participants in the roundtable discussion. They do not represent the opinion of the entire group.

INVESTMENT/IMPLEMENTATION

Is it too soon to implement wireless LANs? Is it important to jump on this early or wait?

Will the investment be scalable or upgradeable? Technology life span may only be two years.

How will wireless scale? Most universities are too large to impose strict hardware requirements on students.

If you have to chose between wiring and "unwiring" a building, what are the decision parameters?

No matter how good wireless is, fiber electronics will always exceed wireless. Plan for conduit in buildings even if it's not used right away.

NETWORK MANAGEMENT AND SECURITY

Lucent has a "silver" brand of product that includes encryption. The equipment is priced higher.

Users can be registered as authorized users by registering MAC addresses.

There are similar issues in managing wired and wireless ports.

What are the interoperability issues?

How do you handle release/renew when walking in and out of coverage areas?

How will the technology fare out of a testbed environment and in an actual deployment, especially with 30 students all hitting "return" at the same time? How will the systems do with multiple access points and overlapping coverage areas?

HARDWARE MANAGEMENT

Is it correct to assume the end devices are laptops? What about desktop PCs, palmtops, or PDAs?

Do you require certain laptops? Certain configurations?

How do you handle power issues? Some schools have looked into hot swapping batteries at strategic locations like computer lab, student center, library. How do you know the battery you got can hold a charge and isn't beyond it's useful life?

Do students buy, lease, or check out cards?

APPLICATIONS

What will you do with a wireless connection?

How realistic is it to expect students to have a laptop in the library stacks?

How will teachers effectively teach a room full of students with laptops?

Does the "if you build it they will come" philosophy apply? How will people use the technology? Do we really need it?

One comment was that until we had email, no one did anything with that. You have to build the infrastructure first.

What can we do with wireless LANs that we can't do with wireless networks?

BEYOND CAMPUS

In some communities, local businesses and coffee shops are interested in wireless access nodes with the caveat that they are connected back to the campus backbone network.

CASE STUDY WIRELESS IMPLEMENTATIONS

Illinois Wesleyan University is currently using wireless LANs in the library and it's going well. They are also using a 2Mbps line-of-sight Ethernet bridge to connect two buildings. It's about \$1000 per end for the short hop.

Virginia Tech is investigating wireless for use in the music department and the Continuing Education Center.

Buena Vista University in Iowa is expecting 100% wireless coverage by next fall including 130 access nodes at a cost of \$1000-\$1500 each for 1400 University-owned computers. A vendor has not yet been selected. The plan includes 100% interior building coverage as well as some outside coverage on their 70 acre campus. They planned for the system by plugging in an access point and testing the coverage area. They will plan for up to 20 users per 10 Mbps access point. Fee or tuition increases may be needed to pay for the system. BVU wants to be a "laptop campus" by Fall of 2000. See their Web site (ims.bvu.edu/tlt) for information about this Universal Access Program including a survey of ten colleges who have implemented a Univ. Access Program. The campus is almost 100% full-time students which eliminates the question of computer allocation to part-time students.

Failed or decommissioned wireless projects? Someone suggested that Cornell may have pulled a wireless LAN out.

FOLLOW-UP

The group was interested in a report from Ken Clipperton of BVU at the next EDUCAUSE conference to hear how the implementation is going. One participant suggested a speaker from Microsoft where there is some wireless activity on their campus.

Discussion will continue in conjunction with the Network Management Constituent Group. This group discussed wireless at their last meeting and will be adding that to the group charter. To join the listserve, sign up at: <http://www.educause.edu/memdir/cg/netman.html>. The group is led by William Betlej, Director of CIS, Mary Baldwin College and Stuart Warford, Director of Telecommunications Services, Pepperdine University.

There is a Broadband Wireless Networking working group with its own listserve in the Net@EDU organization. Net@EDU members provide national leadership for the development and deployment of advanced networking through the execution of a number of member-driven projects. For information on joining Net@EDU, see <http://www.educause.edu/netatedu/contents/membership/>.

Prepared by Cortney Martin, Broadband Wireless Networking Director, Virginia Tech Communications Network Services.