

April 12, 2000 OARtech Minutes

OARnet Update:

Doug Gale is in Richmond IN to arrange peering with Indiana. OARnet continues to struggle to provide more bandwidth 800Mb/sec with the trend toward prices going down. Older contracts must run out before OARnet can take advantage of the new pricing structure. Within OARnet they will technically contain the costs for four years until the bandwidth management tools are available. Schools need to be thinking of the issue of managing bandwidth. We have about four years to solve the cost problem. OARnet is implementing several methods to help: caching servers in the pops, selling outgoing bandwidth to save money, increasing peering relationships, traffic moving through Internet2. Clifford Collins has been hired to lead a security working group.

Patricia Vendt requested an Orange Barrel or weather report website for Internet links.

Distance Learning at the University of Akron - John Hirschbuhl and Debbie Keller

Akron's distance learning project uses OC12 to OC3 from a Bierce 8540 (ATM and routing) for advanced placement classes to high schools in the areas and for teacher education. Connection to the Internet can occur at any of these sites. Wireless is supported at a high school at 11 Mb/sec Instructional methodology that goes beyond sending out a lecture using Internet2, Internet, and interactive classroom computers. Wireless is a good media for distance education. The problem is developing content that is curriculum based. Wireless drops with distance to 4Mb at 100M, 11 shared. Classrooms have many MPEG2 encoders, three cameras (two student, one instructor, one overhead for media, paper and a whiteboard and the PC output) in the classrooms, scheduling and controllability through a touch panel in a classroom which manages what is seen. The instructor can never see him/herself as that had been found to be confusing. The instructor can change control of the instructor to another site. Multi-point scheduling is possible for four based on the screen split. Leasing fiber was the most reasonable cost for fiber and Akron has a ten-year lease on lighted fiber, 4 fibers with two backups. Vendors are different for the various sites using the electric and cable companies; the telephone companies were not competitive. Plan is to test across the Internet2 network. The classrooms have access to all of Akron9s resources. Have offered a hundred classes, students are satisfied but the numbers are small and instructors are still working with content development. Akron plans for adult certification classes in the future. Scheduling is a non-trivial issue, especially with high schools. One student was extremely unhappy that he was the only one in his class. There has to be a new paradigm for distance learning and we are only beginning - focussed on the teaching at first instead of learning and to be successful we need to rethink the learning part.

Miami is looking at wireless using Apple, Lucent, and small plastic internal antennas. Currently they do not authenticate, but use a wide-open network vlan.

Ohio Learning Network (OLN) - Kate Carey

IOLN is an initiative of the Ohio Board of Regents. It is six months old. 2M was authorized in Jun 98 for statewide issues: certification, on-line catalogue of 800 courses, credit and non-credit, undergraduate and postgraduate. On line - six distance learning individuals in each of six regions, an outreach person and contact. OLN brokers campus services. Technology initiatives were \$1M last year; competition for professional development for campuses is \$1.5M. Provosts from two and four year colleges and universities across the state make up the OLN board.

The environment in higher education is being driven by .com world. .com companies spend money for products. .edu do not move quickly. Integration of various components is most difficult in the classrooms.

Costs are critical, Coase's Theorem (Unleashing the Killer App) focuses on business but can be generalized to education. OhioLEARNS provides a portal for the Ohio education resources. Ohioans in general want Ohio products. OLN pulls together web based resources so teachers can find information more quickly, use push and pull technologies to share information and network communities. OLN wants to provide more services and funding to campuses. OLN will fund another program for professional development and degrees this year. The content of OLN's site is at the Ohio Colleges and Universities.

Content and professional development, not technology is the next steep curve - there is much to do for instructors to be comfortable using PowerPoint presentations. The next model is learning anytime, anyplace especially for adult learners. The current answer is the web. Distance learning will be many models in the future - hopefully to the home and every group has a different perspective. We have to integrate the strategies at Internet speeds, meet market demands and we need sustaining funding for these solutions.

OLN2000 strategies

OhioLEARNS

Emerging Needs - current engineering focus

Distance Learning Specialist Activities

Web-resources

Broad state resources need to be available to more people, more accessible to individuals, shared among campuses, OVI (multimedia) Conference, best practices, electronic poster presentations, degree completion (the engineering focus), assessment and testing at a distance, authentication and authorization implementations, professional development grants.

Web-CT Rio-Grande - Kingsley Meyer and Michael Snider

Description of Rio-Grande services and classrooms and network: 27/30 buildings fully networked, manageability, 3Com hardware, 100Mb and 10/100 Mb sensing hubs. "Better Learning through Networking", 2 people office, 6 of the 250 participants trained during a Summer Institute. Kingsley and Michael had a delightful video tour of their campus.

Network Services for distance learning classes:

Web authoring FrontPage and Access 2000

Hosting Windows NT Server with Internet Information Server running FrontPage

Web and POP based e-mail (Imail)

Web and Client based news

Real Audio and Video Server for faculty instructional tapes

Digital/Analog MultiMedia Station

In the future Rio Grande will have a CourseInfo Server on campus

Security at AFIT - Securing Your Campus - It's more than locking your

Captain Maynard, Communications and Information, Air Force Institute of Technology.

Air Force viewpoint

"Operationalize and Professionalize" the Air Force Network (certified)

It's a Weapon System, Stupid

One Base, One Network, One Enclave

Education viewpoint

Reasonable Access

Flexible Configuration Management

R&D Environment

Open Architecture

Academic Freedom

Our Goal

Anywhere, anytime computing

Transparent connectivity

Complete Information Assurance

AFIT Network Security Design

Internal Connections

Switched 100Mb to OC-12

ATM

VLAN for security authentication and authorization,
dynamically assigned

MAC addressed vlan

PKI enabled mail, 128 SSL, password file scans, audit logs

External Connections

Secure Shell 2.1 (X, telnet, ftp) no clear text usernames
and passwords

Virtual Private Network

Transparent Connectivity

Resources available at the school should be available across
the Internet

Single Login for all systems

PKI enabled for E-Mail managed by the military side for all official
documents

128-bit SSL for all Web transactions for military
No "clear text" username/password
Point-to-point encryption for remote users
24-hour monitoring via intrusion software - three level monitoring,
Internet, Enterprise, and Intranet

OARnet created the e-mail address OARtech_Webmaster@oar.net oartech.oar.net
ransel@kent.edu
keckert@kent.edu

Vice-chairperson nomination

The Honorable Delegate from Dennison Teresa Beemer was nominated.
Lee Stulz motioned to close, seconded by Roslyn
E-mail additional nominations to David Leitch.

June Meeting

John Garcia
Bill Mayhew fiber network
Vendor PC hardware-security

Tim proposed informal list of representatives on website. The site contact should be e-mailed to oartech_webmaster@oar.net
Bill seconded the proposal

Security Update - Mowgli

Windows Share 911 Worm batch and bb script that looks around for open
filesystem, if the root section is shared. If on the Internet, it could have
acted like a worm. Occasionally if there was a modem detected, it would dial
911. The lesson for this is that it is forewarning of what is to come. We must
educate clients to not share their whole drive.

Mass denial of service attacks: Windows version of Trinoo

Cisco PIX Firewall Holes - FTP proxy. Firewall allows ftp through the firewall.
Microsoft9s IIS problems
Miscellaneous LINUX implementations bugs

Recent OSU trends

Harassing E-mail problems are rising
Sun RPC (port 111) and DNS (port 53) problems continue.
BIND 822 patch level 11 or higher

url www.net.ohio-state.edu/security

Steve's talks

OARTech Security Update

OARnet's Bill Miller

Preliminary Announcement of eCommerce Services to clients
Will be providing secure services for transactions

CyberCash will be used as a gateway but OARnet will become Gateway in the future; shopping carts, checkout, secure servers, etc. Shopping carts can be customized - call Ruth Crites for details

OARnet's Fred Crowner
Napster and such

www.napstser.com
www.imesh.com
www.cuteftp.com
www.scour.net
www.on2.com

The top five sites were women on www.scour.net but not offensive. www.on2.com can take 1/3 of your T1, if bandwidth is tight, it downgrades its usage. It has become an issue of managing your bandwidth because you will not be able to block for any time period and then you will have unhappy customers but the sites are growing too rapidly. Investigating the possibility of recognizing signature. Housing clients have expectations of availability.

OhioLINK Anita Cook

Survey of video-conferencing on campuses shows Vtel H320,321 and H323. OARnet and OhioLINK and DAS point to point T1 384mps A big problem is coordinating the schedule. OARnet may organize the directory of video distance learning for Ohio universities. How do you bridge the H320 to H323 community? Video is used for branch campus distance learning or high schools. Miami is participating in the Schoolnet IVDL Interactive Video Distance Learning and Kent State's OhioLEARN program.

Gene Wallis will provide an update on the OARnet position via e-mail. Scott Gaughen is the DAS technical contact for video-conferencing. DAS should have the directory of sites, protocols, schedules, speeds, etc.

Kingsley motioned to close, Roslyn seconded.

Patricia Vendt, Network Services