

Utah Education Network Steering Committee

December 17, 2004

**UTAH EDUCATION NETWORK
STEERING COMMITTEE**

A G E N D A

DECEMBER 17, 2004

9:00 a.m. -
10:00 a.m.

Committee of the Whole

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U P C O M I N G M E E T I N G S

Instructional Services Subcommittee Meeting - February 18, 2005
Technical Services Subcommittee Meeting - February 18, 2005
UEN Steering Committee - February 18, 2005

Instructional Services Subcommittee Meeting - April 15, 2005
Technical Services Subcommittee Meeting - April 15, 2005
UEN Steering Committee - April 15, 2005

Please place these materials in your Steering Committee Binder.

SECURITY UPDATE - ACTION

Issue

The UEN Security Working Group met November 4, 2004. A Security Summit has been scheduled for March (dates TBD), and reports on Peer to Peer and Arbor Networks have been developed.

Background

A Security Working Group, chaired by Ray Walker, Rick Gaisford and comprised of stakeholders and UEN staff, has been actively involved in raising the awareness off security issues, and building material and resource to empower local institutions to handle security issues as they arise. At their meeting on November 4, the UEN Security Group outlined their mission and immediate tasks.

Mission

The mission of the UEN Security Group is raise statewide awareness of the importance of good digital citizenship. This is accomplished by convening key stakeholders and decision makers, supporting end user training through quality resources, and communicating standards of best practice.

Tasks/Notes

- 1 Convene educational leaders, technical personnel, and staff development specialists for an educational meeting to raise awareness on the importance of digital citizenship issues.
- 2 Digital Citizenship refers to the norms of behavior with regard to technology use. Securing the network technically and teaching end users about the importance of these issues are strategies to build digital citizenship.
- 3 The role of the UEN Security Working Group is to convene our educational stakeholders. We recommend a team approach with policy leaders, technical specialists or CIO, faculty development personnel, library-media personnel, and teachers or faculty from the same institution attending as a group.
- 4 UEN Security Working Group recommends in-person workshops to raise awareness and bring the team together, with follow up throughout the year. Follow up would occur through web site resources, workshops by request, monthly C Forum meetings to address training issues, and monthly Security Conference Calls to address technical issues.

- 5 The in-person workshop is planned as a two-day event in March. The agenda will include one or two keynotes to heighten awareness of the issues, time for people with like-jobs to meet and view resources/ideas for their area, and time for institution teams to meet and plan strategies for their institution. Day two will be for technical people to get tools and resources to help them at the local level.
- 6 Follow up activities will occur for the administrators through the UEN Steering Committee and subcommittees, for the technical personnel through monthly security calls hosted by UEN Security group, and for the staff development personnel through monthly Content Forum meetings. Resources will also be shared via listservs and a security resources web site.
- 7 The UtahSAINT web site will be expanded to include training resources for end users (this could also reside with UEN professional development).

Other ideas we discussed

- Developing a statewide curriculum or qualifier for users of the network.
- A statewide effort next year to promote the idea of digital citizenship in cooperation with state ITS, libraries, TV, etc. this could be a grant project and also include working with legislators and local governments.

Informational reports from the Peer to Peer Working Group and the Technical Services staff involved with implementation of Arbor Networks are included in Attachment A and B.

Recommendation

It is recommended that members of the Steering Committee endorse the mission and work projects outlined by the Security Working Group and charge them to move forward with implementation.

TAB 10 ATTACHMENT A

PEER 2 PEER WORKING GROUP INFORMATIONAL REPORT

Expectations and Recommended “Best Practices” For Educational Institutions

Issue

With the rapid increase in the amounts of bandwidth being made available to end-users of the Utah Education Network, issues surrounding the use of Peer-to-Peer networks become significant concerns. Slow WAN links have long acted as natural barriers that served to protect the backbone and other network users from excessive utilization, both legitimate and illegitimate. With the implementation of GL3, however, these barriers are being removed increasing the vulnerability of the network to rogue LANs and compromised hosts. Also of concern are:

- Sharing activities that violate copyright laws, and open schools to possible legal repercussions.
- Usage of peer-to-peer (P2P) networks to download pornography and other prohibited content, either intentionally or accidentally.
- Inadvertently sharing sensitive material through improper P2P client configuration.
- Inadvertently downloading viruses, trojans, spyware or other software that can bypass normal security barriers and compromise networks.
- Excessive use of bandwidth and other network resources.

Background

The UEN Steering Committee has adopted a File Sharing Policy which aims to protect network resources from unacceptable uses which violate copyright laws, misappropriate resources for excessive recreational or personal uses, or otherwise impinge on other legitimate traffic.

Due to the wide variety and heterogeneous nature of connected institutions and end-users, defining a “one-size-fits-all” method of enforcing this policy would be impossible. Therefore, the goal of this document is to define the expectations placed upon these institutions and provide a list of best practices to enable the institutions to fulfill the expectations.

Expectations

Effective bandwidth control and enforcement of the UEN P2P policy requires that connected institutions work in partnership with UEN. This partnership places certain expectations on both UEN and each connected institution. Specifically:

UEN will:

- Monitor and report gross misuse of bandwidth.
- Create and provide curriculum for K-12 students about safe Internet usage.
- Provide technical support to connected institutions to assist them in dealing with P2P and other bandwidth abuse issues.

Connected institutions will:

- Define an Acceptable Use Policy (AUP) that regulates the use of file sharing that violates copyright laws or disrupts legitimate network traffic. AUPs should list specific rules and remedies. Accompanying documentation should also be available that clearly and explicitly informs users about file sharing policies.
- Implement a user education program to show users risks associated with the use of P2P, including legal liability, security issues, identity theft, possible increases in spam, etc.
- Implement a method of monitoring local networks to see that AUPs are enforced. At the very least, all organizations should have the ability to monitor top talkers and usage on known P2P ports. Where possible desktops should be monitored for P2P client usage and/or restricted from participating in P2P networks.
- Define a procedure for response and mitigation. Specifically organizations must:
 - ◊ be able to respond to copyright violation notifications by quickly locating and removing offending servers and content.
 - ◊ implement a method of shaping, throttling, blocking or otherwise restricting the impact of P2P usage on Internet bandwidth.

Best Practices

AUPs

Each connected institution should have an Acceptable Use Policy that is read and accepted by all users. AUPs should have wording which bans any usage that violates copyright laws or has an excessive impact on the network. Since an AUP defines policies and enforcement procedures, it must be approved by personnel in a position to make it enforceable.

An ideal AUP would not only provide the institution with an enforcement tool but also educate the user about which types of network uses should be avoided. Many institutions, however, have AUPs that are intentionally left vague so as not to limit

their effectiveness. In these cases, an accompanying document, such as a FAQ, should be made available which lists detailed do's and don'ts, specifically outlines monitoring and enforcement policies, and provides users with an easily understood tutorial to network usage rules.

User Education

All users should be educated not only about an institutions network usage policy, but also about problems and issues related to the usage of P2P networks. Many users would avoid using these applications if they knew about the security and bandwidth impact issues. Education programs could include:

- Poster campaigns
- Tutorials, FAQs and other documents
- Internet safety classes and presentations
- Require users complete short online tutorial and quiz before their accounts are activated

Monitoring

At the very least all institutions need to be able to monitor for excessive bandwidth users, and for traffic destined to commonly used P2P ports. The capability to scan workstations for those that have P2P applications installed may be a longer-term solution as P2P clients are continuously becoming more difficult to detect.

Mitigation and Response

Since the two major components of the acceptable policy are legality and bandwidth utilization, all institutions must have a plan in place to quickly respond to and correct any issues related to either. If a complaint is received (or monitoring detects a problem), the offending host must be able to be found and dealt with quickly to minimize the impact it has on other network users.

Institutions should also consider bandwidth throttling and shaping technologies to provide instantaneous, full-time protection against bandwidth issues.

Conclusion

It is the responsibility of UEN and all connected institutions to work together to reduce the risks inherent with the use of P2P networks.

TAB 10 ATTACHMENT B

TECHNICAL SERVICES SUBCOMMITTEE INFORMATIONAL REPORT

Date: December 6, 2004

Issue

Implementation of Arbor Networks (www.arbornetworks.com) Denial of Service attack monitor

Background

The UEN Security office is pleased to report on the success of the Arbor Networks denial of service attack monitor. Since its installation this application has detected 596 moderate to severe attacks both in and outbound from the UEN networks.

The quick notification of anomalous activity has allowed UEN to take decisive actions to protect the network. As a result of the Arbor Networks application only one disruption of network traffic extending beyond a few minutes has been observed.

The UEN Security office continues to find exceptional value in this product, and we are continuing to add value by providing better incident reporting into the tools used by the Network Operations Center in monitoring the health of the network.

We are beginning a second phase of implementation that will allow UEN to automatically send alerts to UEN customers when an attack is affecting their portion of the network. As a side note, IP Re-addressing will become a large factor in the overall success of this phase.

Information

- Denial of Service attacks continue to rise in frequency
- Arbor is performing as necessary to give quick and accurate information, allowing UEN to effectively deal with DoS attacks.

Recommendation

No recommendations at this time.

PUBLIC EDUCATION ADVISORY COMMITTEE REPORT - DISCUSSION

Issue

Public Education Advisory Committee Meeting Update

Background

The PECC Committee in their last meeting discussed and reviewed the following:

- 1 eMedia - We reviewed the status of this forthcoming Digital Media Service. The committee understands the delays in the project but look forward to this new service and believe it will be very useful for educators at all levels.
- 2 Pioneer Library Advocacy - The committee is very satisfied with efforts of UEN staff on this project, particularly the collaboration on training for all entities -- Higher Education, Public Education and Libraries. The committee feels this outreach will really help on promoting Pioneer Library and increasing its usage, particularly by students. Go Pioneer!
- 3 UEN Web site - The UEN K-12 educator pages are vital for teachers to assist them in effectively using online resources in teaching and learning. The committee is particularly pleased at the outreach that has been made to USOE curriculum specialists. The goal is to continue making this an easy Web site (one-stop shop) to find online resources that are correlated to the Utah State Core Curriculum.
- 4 The committee reviewed the status of the following four resources supported by UEN and USOE:
 - a The Online Archive Service - Primarily used by districts that are implementing electronic portfolios with new teachers.
 - b my.uen- This continues to be an excellent tool for teachers to be able to create an easy Web site to share class information and curriculum resources.
 - c MyEDesk - Several districts are using this tool developed by SESC for teacher Web sites. The teachers in the eMints project, that is supported by a Federal grant, are also using this tool to support teaching and learning.
 - d UTIPS (Utah Test Item Pool Service) - This new tool developed by SESC for the USOE to assist teachers with formative assessment in Language Arts, Math and Science is being very well received.

The PECC recommends that UEN give strong support to all of these resources. They all help to make teachers more effective.

The following items were discussed by the PECC and they determined that there should be further discussion by the ISS (Instructional Services Subcommittee and the UEN Steering Committee:

- 1 There needs to be further clarification on the committee process. Leadership responsibilities, job descriptions, the work-flow and approval process all need to be better defined. An example: How should staff move forward on new projects, tools and resources. Before any new project begins, should the PECC and ISS need to approve them? Currently there is no clear process.
- 2 The need for a single-user log-in (LDAP Services) to make easy access for teachers to both UEN resources and other resources developed for USOE by other entities. There has been much discussion about this service over the past few months but no resolution. We suggest the ISS and Steering Committee further discuss this and give clear direction to staff on this issue.

Recommendation

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.

INSTRUCTIONAL SERVICES SUBCOMMITTEE

T A B 12

**HIGHER EDUCATION ADVISORY COMMITTEE
REPORT - DISCUSSION**

IP VIDEO PROJECT REPORT - DISCUSSION

Issue

A great deal of activity has occurred with the IP Video project. The IP Video Steering Team met November 18, 2004 and has summarized their recent activity in the report below. UEN staff are making an effort to call the project by its industry name, Interactive Video Conferencing (IVC) and a general Web site has been developed at (www.uen.org/delivery/ivc.shtml) to explain IVC (Attachment C).

Background

IVC Site Migration

By the end of August 2004 approximately 44 legacy EDNET video sites were converted to IVC. New installations are scheduled through July 2005 based on current funding and personnel levels. A list of these sites is included under this tab.

Training by UEN Local Services Representatives and Instructional Delivery Services (IDS) support staff is occurring at a rapid pace. The first major IVC event of the semester, the Utah High School Activities Association Rules Clinic, involved more than 50 locations in a mix of legacy EDNET sites, IVC sites, UENSS and Internet video streaming. The event was a great success thanks to careful engineering and planning.

MCU Bridge and Management Software

UEN has purchased two multi-point connection units (MCU Bridge) for the Dolores Doré Eccles Broadcast Center and USU. Installation of these bridges is essential for the backbone of the IVC system. The first installation at the Dolores Doré Eccles Broadcast Center was completed well ahead of schedule.

The management software test will conclude March 1, 2005.

Project Funding

IVC conversion and backbone installation are occurring through a combination of Federal E-Rate funds, Grants, and legislative allocations. UEN has been awarded two beneficial grants for this project, the NITA/PTFP Non-Broadcast from the U.S.

Department of Commerce and the National Telecommunications Association for \$111,416 and the USDA Distance Learning Grant for \$209,000.

Priorities and Next Steps

The IP Video Steering Team has approved the training approach under development. The IP Video technical team is focused on evaluation of the MCU Bridge and associated hardware and the management software. The IP Video Instructional team is focused on updating training materials as well as IVC demonstration projects.

Recommendation

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.

TAB 13 ATTACHMENT A

UEN IP SITE MIGRATION AND INSTALLATION REPORT

UEN IP SITE MIGRATION AND INSTALLATION REPORT SUMMER 2004					
SITE/LOCATION	TYPE	COMMENTS/NOTES	SITE/LOCATION	TYPE	COMMENTS/NOTES
Altamont HS-1	SIMPLE	COMPLETE	Milford HS	SIMPLE	COMPLETE
Altamont HS-2	SIMPLE	COMPLETE	Monticello HS	SIMPLE	COMPLETE
Bear River HS	COMPLEX	COMPLETE	Monument Valley HS-A	COMPLEX	CIB Grant/COMPLETE
Box Elder HS	COMPLEX	COMPLETE	Monument Valley HS-B	SIMPLE	CIB Grant/COMPLETE
Carbon HS	SIMPLE	COMPLETE	Navajo Mtn-1	COMPLEX	CIB Grant/COMPLETE
Delta HS	SIMPLE	COMPLETE	Navajo Mtn-2	SIMPLE	CIB Grant/COMPLETE
Dixie HS	SIMPLE	COMPLETE	Park Valley HS	COMPLEX	COMPLETE
Duchesne HS-1	SIMPLE	COMPLETE	Springville HS	SIMPLE	COMPLETE
Duchesne HS-2	SIMPLE	COMPLETE	Tabiona HS-1	SIMPLE	RUS/USDA Grant/COMPLETE
Dugway HS	SIMPLE	COMPLETE	Tabiona HS-2	SIMPLE	RUS/USDA Grant/COMPLETE
East Carbon HS	SIMPLE	COMPLETE	Tintic HS	SIMPLE	
Granger HS	COMPLEX	COMPLETE	USU Moab DCE-A	COMPLEX	
Grantsville HS-1	SIMPLE	COMPLETE	USU Moab DCE-B	SIMPLE	
Grantsville HS-2	SIMPLE	COMPLETE	USU Murray DCE-A	COMPLEX	
Grouse Creek HS	SIMPLE	COMPLETE	USU Murray DCE-B	SIMPLE	
Hillcrest HS	COMPLEX	COMPLETE	USU- Tooele DCE	COMPLEX	
Juab HS	SIMPLE	COMPLETE	Weber State University	COMPLEX	
Lake Powell School	SIMPLE	refer to Halls Crossing below	Wendover HS	SIMPLE	
Lone Peak HS	SIMPLE	COMPLETE	West Desert School	SIMPLE	
Manilla HS-A	SIMPLE	minor finish work to be done	White Horse HS	SIMPLE	
Millard HS	SIMPLE	COMPLETE			
NEW IP NETWORK DEVICES: IP GATEWAYS AND MCU BRIDGES					
DEVICE MNEMONIC	DEVICE TYPE/USE	DEVICE MNEMONIC	DEVICE TYPE/USE	DEVICE TYPE/USE	DEVICE TYPE/USE
CEU-GW-A	MULTI-EVENT GATEWAY	SUU-MILFORD-GW	DEDICATED GATEWAY	CEU-GW-A	DEDICATED GATEWAY
CEU-GW-B	MULTI-EVENT GATEWAY	UBATC-GW-A	MULTI-EVENT GATEWAY	CEU-GW-B	MULTI-EVENT GATEWAY
CEU-GW-C	MULTI-EVENT GATEWAY	UBATC-GW-B	MULTI-EVENT GATEWAY	CEU-GW-C	MULTI-EVENT GATEWAY
DATC-GW-A	MULTI-EVENT GATEWAY	UBATC-GW-C	MULTI-EVENT GATEWAY	DATC-GW-A	MULTI-EVENT GATEWAY
DATC-GW-B	MULTI-EVENT GATEWAY	UBATC-GW-D	MULTI-EVENT GATEWAY	DATC-GW-B	MULTI-EVENT GATEWAY
DATC-GW-C	MULTI-EVENT GATEWAY	USU-GW A	MULTI-EVENT GATEWAY	DATC-GW-C	MULTI-EVENT GATEWAY
SANJUAN-GW-A	MULTI-EVENT GATEWAY	USU-GW-B	MULTI-EVENT GATEWAY	SANJUAN-GW-A	MULTI-EVENT GATEWAY
SANJUAN-GW-B	MULTI-EVENT GATEWAY	USU-GW-C	MULTI-EVENT GATEWAY	SANJUAN-GW-B	MULTI-EVENT GATEWAY
SANJUAN-GW-C	MULTI-EVENT GATEWAY	USU-GW-D	MULTI-EVENT GATEWAY	SANJUAN-GW-C	MULTI-EVENT GATEWAY
SLCC-GRANGER-GW	DEDICATED GATEWAY	USU-GW-E	DEDICATED GATEWAY	SLCC-GRANGER-GW	DEDICATED GATEWAY
SLCC-GW-A	MULTI-EVENT GATEWAY	UVSC-HEBER-GW	DEDICATED GATEWAY	SLCC-GW-A	DEDICATED GATEWAY
SLCC-GW-B	MULTI-EVENT GATEWAY	UVSC-LONEPEAK-GW	DEDICATED GATEWAY	SLCC-GW-B	DEDICATED GATEWAY
SLCC-GW-C	MULTI-EVENT GATEWAY	UVSC-SPRINGVILLE-GW	DEDICATED GATEWAY	SLCC-GW-C	DEDICATED GATEWAY
SLCC-HILLCREST-GW	DEDICATED GATEWAY	UVSC-TINTIC-GW	DEDICATED GATEWAY	SLCC-HILLCREST-GW	DEDICATED GATEWAY
SNOW-DELTA-GW	DEDICATED GATEWAY	UVSC-WESTDES-GW	DEDICATED GATEWAY	SNOW-DELTA-GW	DEDICATED GATEWAY
SNOW-JUAB-GW	DEDICATED GATEWAY	VERNAL-GW 1	DEDICATED GATEWAY	SNOW-JUAB-GW	DEDICATED GATEWAY
SNOW-MILLARD-GW	DEDICATED GATEWAY	TANDBERG MCU @ EBC	DEDICATED GATEWAY	SNOW-MILLARD-GW	DEDICATED GATEWAY
SUU-GW-A	MULTI-EVENT GATEWAY	TANDBERG MCU @ USU	MULTI-EVENT GATEWAY	SUU-GW-A	MULTI-EVENT GATEWAY

TAB 13 ATTACHMENT B

GRANT FUNDED/QUICK TURN IP VIDEO SITE/DEVICE INSTALLATIONS

GRANT FUNDED/QUICK TURN IP VIDEO SITE/DEVICE INSTALLATIONS 04-05				
PRIORITY	SITE LOCATION	TYPE	APPROX. DEADLINE	COMMENTS/NOTES
3	Bonneville High School	COMPLEX	5-Jun	RUS/USDA CEU Grant
2	CEU Red Mesa HS (AZ)	SIMPLE	May/June 2005	NTIA Grant, Part of new Codec evaluation
2	Center City School	COMPLEX	4-Nov	RUS/USDA CEU Grant
1	CEU Monument Valley HS (AZ)	SIMPLE	5-Jan	RUS/USDA CEU Grant
2	CEU San Juan Tech Sch (CO)	SIMPLE	May/June 2005	RUS/USDA CEU Grant
2	CEU San Juan Utah Campus	COMPLEX	May/June 2005	RUS/USDA CEU Grant
2	Cypress HS	COMPLEX	5-May	NTIA Grant
NA	Halls Crossing	SIMPLE	ASAP	CIB Grant, school closed, Lake Powell alt. site
2	Olympus HS	COMPLEX	May/June 2005	NTIA Grant
2	SLCC: Redwood Campus	COMPLEX	4-Nov	Part of new Codec evaluation
3	UBATC-A	COMPLEX	May/June 2005	UBAT, ATM OUT Project
3	UBATC-B	COMPLEX	May/June 2005	UBAT, ATM OUT Project
3	UBATC-C	COMPLEX	May/June 2005	UBAT, ATM OUT Project
2	UEN EBC CRUCR	COMPLEX	4-Nov	New Codec evaluation
2	Uintah High School	SIMPLE	May/June 2005	UBAT, ATM OUT Project
2	Uintah River School	SIMPLE	May/June 2005	RUS/USDA Grant
3	USU Roosevelt DCE-C	COMPLEX	May/June 2005	UBAT, ATM OUT Project
1	USU Tooele DCE	COMPLEX	4-Dec	USU New Codec evaluation (fund. commit)
1	USU Vernal B	COMPLEX	5-Dec	UBAT, ATM OUT Project
3	USU Vernal C	SIMPLE	May/June 2005	UBAT, ATM OUT Project
3	USU Vernal D	SIMPLE	May/June 2005	UBAT, ATM OUT Project
2	West Jr. High School	SIMPLE	May/June 2005	RUS/USDA Grant
NETWORK DEVICES				
PRIORITY	SITE LOCATION/DEVICE	TYPE	APPROX. DEADLINE	COMMENTS/NOTES
3	SLCC HUB: TANDBERG MCU	BRIDGE	May/June 2005	NTIA Grant
3	UBATC HUB: TANDBERG MCU	BRIDGE	May/June 2005	USDA Grant
3	San Juan HUB: TANDBERG MCU	BRIDGE	May/June 2005	USDA Grant

TAB 13 ATTACHMENT C

INTERACTIVE VIDEO CONFERENCING WEB SITE

The screenshot shows a web browser window with the title "Interactive Video Conferencing - Utah Education Network". The address bar contains the URL "http://www.uen.org/delivery/ivc.shtml". The browser's search bar is set to "Google". Below the browser window, the website header features the "UTAH EDUCATION NETWORK" logo, a search box, and a "SEARCH UEN" button. The main content area is titled "Interactive Video Conferencing" and includes a "Frequently Asked Questions:" section. The first question is "What is Interactive Video Conferencing?", followed by "What is UEN doing with IVC?", "What are the educational uses of IVC?", "What kind of equipment do you need?", "Where can I find Interactive Video Conferencing Events?", and "Where can I learn more?". The second question is "What is Interactive Video Conferencing?", which is answered with a paragraph explaining IVC as two-way video and audio communication supported by a computer network or digital phone line. The third question is "What is UEN doing with IVC?", answered with a paragraph stating that UEN has supported IVC through its EDNET infrastructure. A paragraph follows explaining that EDNET is an analog system being replaced by a digital network. The fourth question is "What are the educational uses of IVC?", answered with a paragraph citing a 2003 report from the U.S. Department of Education. A paragraph then lists the benefits of using IVC. The fifth question is "What kind of equipment do you need?".

Interactive Video Conferencing - Utah Education Network

UEN http://www.uen.org/delivery/ivc.shtml

Google

UTAH EDUCATION NETWORK

SEARCH UEN

UEN Homepage Go

Interactive Video Conferencing

Frequently Asked Questions:

- What is Interactive Video Conferencing?
- What is UEN doing with IVC?
- What are the educational uses of IVC?
- What kind of equipment do you need?
- Where can I find Interactive Video Conferencing Events?
- Where can I learn more?

• **What is Interactive Video Conferencing?**
Interactive Video Conferencing (IVC) is two-way video and audio communication supported by a computer network or digital phone line that facilitates interaction between people in two (point to point) or more (multipoint) locations, creating a virtual classroom or conference room.

• **What is UEN doing with IVC?**
Utah Education Network (UEN) has supported interactive video conferencing through its EDNET infrastructure.

EDNET is an analog system built on a separate network. Working with Utah school districts and higher education institutions, UEN is changing its video teleconferencing services to run on the same digital network that data and other Internet applications traverses. By doing so, users will find greater efficiencies and functionality. UEN has outlined a multi-year process for converting its analog EDNET system to IP-based Interactive Video Conferencing.

You can learn more about this differences by viewing a UEN PowerPoint overview.

• **What are the educational uses of IVC?**
A 2003 report issued by the U.S. Department of Education says enrollment in virtual learning programs has doubled in the last five years. Many, if not most, students today have the option of taking at least one online or IVC course before they graduate from high school, and post-secondary programs report substantial growth in their IVC and online offerings.

There are many benefits of using IVC:

- Increased access to educational resources
- Flexibility for the learner
- Equity in opportunities for both teachers and students
- Valuable interchange with the outside world

• **What kind of equipment do you need?**

INTERACTIVE VIDEO DEMONSTRATION PROJECTS - ACTION

Issue

At their meeting on November 18, 2004, members of the IP Video Steering Team approved a demonstration project to grant video field trip scholarships to Utah K-12 classrooms from January through June 2005. Members of the Public Education Advisory Committee approved the project at their meeting on November 19, 2004. The purpose of the project would be to build awareness of IVC as an educational tool beyond its typical uses for courses and administrative meetings. The following report outlines the project and requests Instructional Services Subcommittee approval to move forward with implementation.

Background

Working with Utah school districts, UEN proposes a series of Virtual Field Trip scholarships be offered for Utah K-12 schools to participate in one-time events through Interactive Video Conferencing systems. In the project, UEN would contract with a national Virtual Field Trip provider called ID Solutions. District Trainers who are part of the Content Forum group will be asked to identify teachers in their area who can integrate the trip into their curriculum and have the equipment and ability to participate in an event. A draft of the IVC scholarship call for proposals, along with sample events, is included (Attachment A).

IVC trips are offered nationally, and typically range from \$100 to \$500 per event. By contracting with ID Solutions, trips can be purchased in bulk for a significantly reduced rate, and can be distributed equitably throughout the state. The objectives of the project are to build awareness of the uses of IVC, develop models that Utah museums, libraries, and similar organizations can use to design their own trips and gain feedback from educators and students through post-field trip evaluations.

Interactive Video Conferencing events offer:

- Increased access to educational resources
- Flexibility for the learner
- Equity in opportunities for both teachers and students
- Valuable interchange with the outside world

Recommendation

It is recommended that the Instructional Services Subcommittee approve the IVC Demonstration Project.

TAB 14 ATTACHMENT A

VIDEO CONFERENCING SCHEDULING PROTOCOL WITH IDS SOLUTIONS - DRAFT

DRAFT

Utah Education Network IP Video Demonstration Projects Videoconferencing Scheduling Protocol with IDSolutions: January through June 2005

Call for participation

UEN is offering scholarships for virtual field trips conducted over IP Video delivery systems. This project is intended to build awareness of the educational capabilities of IP Video technology. Virtual Field Trips are valued at \$100-\$500 and support the Utah Core Curriculum in a variety of areas, such as the science of sports, discussions with children's authors, career education, and world celebrations. Participating sites must apply using the process outlined below, and have IP Video capabilities at their school or a nearby school where they'll take students. Teachers who participate are also expected to complete a post-trip evaluation survey. To learn more, visit the IP Video Web site at UEN [URL] or email *resources@uen.org*.

- 1 Utah Education Network will send out a memo to Content Forum members each month advertising the availability of IDSolutions Content Series programs and directing teachers to the UEN IP Video web site. C Forum members will distribute the monthly advertisement to eligible classroom teachers. Eligible sites should have IP Video capabilities and approval from their site network administrator.
- 2 Teachers requesting an IDSolutions Content Series program (or other IDSolutions' partner program listed in the monthly IDSolutions' e-mail blast), must download and complete the UEN Virtual Fieldtrip Scholarship Request Form. This is a brief document that lists who is signing up for the program and how the program supports classroom curricula. This is a clickable form that can be completed quickly and printed out for the administrator's approval. Six scholarships (3 elementary, 3 secondary school) will be awarded each month to cover the program costs.
- 3 Once teachers have secured their site administrator's approval and signature, this form needs to be faxed or mailed to Laura Hunter at Utah Education Network. UEN will select schools based on the following criteria:
 - a Teacher's explanation of the educational reasons for the event
 - b Geographical diversity (covering a large part of Utah)
 - c Balance of elementary, middle, and secondary schools
 - d C Forum member endorsement

- e Availability of UEN service rep and/or C Forum member to assist with the conference if needed
 - f Equitable distribution of funds
- 4 Once your request has been approved by Utah Education Network, you will receive an e-mail confirmation from UEN, along with the link to schedule the program with IDSolutions. It is the teacher's responsibility to register for the program on the IDSolutions' online registration site.
 - 5 If there are any schedule conflicts for the requested program, Corrine Jakacki from IDSolutions will notify both the teacher and UEN so alternative arrangements can be made.
 - 6 Once the videoconferencing connection is scheduled with IDSolutions, Corrine Jakacki will send out an e-mail confirmation to the teacher, the site technical contact and UEN. The confirmation will have connection information, as well as information about the supplemental resource packet, if applicable, for the scheduled program.
 - 7 The local C Forum member and UEN Service Rep will be notified as trips are scheduled so they can make arrangements to attend if the teachers need additional support.
 - 8 At the conclusion of the event, teachers will be required to submit a post-IP Video Field Trip evaluation form online.

Sample Events offered through the UEN Video Conferencing Field Trips project:

Careers in Forensic Science

Presented By: Dirk Shaw - Marion County Crime Lab

Event Date/Time: 01/06/05 9:00 AM - 10:00 AM EST

For years, they were the unsung heroes of law-enforcement. Now, they're featured in a number of television series! That's right; we're talking about forensic scientists. Get to the truth behind one of the most interesting careers in crime-solving. You'll meet Dirk Shaw from the Marion County Crime Lab as he explains the rules, the science, and the background for this important job.

Recommended grade level is 6th - 12th. Class size for interactive sites is limited to a 30 student maximum. Resource packets with pre/post activities will be sent out to all participating sites prior to the event.

Careers in Toy Design

Presented By: Deon Nuckols

Event Date/Time: 11/15/04 9:00 AM - 10:00 AM EST

No matter who you are, you have a favorite toy. But have you ever wondered where toys actually come from? We'll answer that question with the help of artist and toy

designer Deon Nuckols! Deon has worked on toys like Star Wars, Batman and Spider-Man and his inside perspective will show students how a toy takes the journey from concept to design and crafting to the shelves. Students will join in by creating some toy ideas of their own!

Recommended grade level is 6th - 12th. Class size for interactive sites is limited to a 30 student maximum. Resource packets with pre/post activities will be available to all participating sites prior to the event.

The Business of Professional Sports - A Career Program

Presented By: Amanda Coffey- Marketing/Group Ticket Sales and Andy Miller - Game Operations

Event Date/Time: 11/29/04 9:00 AM - 10:00 AM EST

Who hasn't dreamed of one day being a professional athlete? While only a chosen few can make the Big Dance, it's entirely possible for students to go on to an exciting career in the world of sports. In this program, we will journey into the world of professional sports as we meet personnel from the Indiana Pacers and learn more about the wide world of sporting jobs. We'll take a look at the Pacers' business structure and discover what types of positions go into making an NBA or WNBA basketball franchise successful. Then we'll focus on the Entertainment and Ticket side of the Sports Industry as we meet with individuals from these two departments.

This 60 minute program is available on the following dates and times:

The Bone-ay Show

Presented By: Katie Cartilage & Matt Marrow

Event Date/Time: 01/19/05 10:00 AM - 10:45 AM EST

In The Bone-ay Show, students will meet hosts KATIE CARTILAGE and MATT MARROW who'll lead them through the program. They'll learn about bone fitness and safety from The Bone-ay Show guest, BONEY BANKS, creator of Tae Bone--the newest fitness craze that's sweeping the nation. In the "BONES AT HOME" segment, domestic guru MARTHA STERNUM will talk about "bone culture" and show your students how they can spice up their home and classroom in her segment, "Take those skeletons out of the closet, it's time to redecorate!" Students will then help MARTHA design a lovely "Day of the Dead" centerpiece using an ordinary cow skull and fresh flowers. Finally, BNZ News personality TOM BROKENJAW will keep students up to date on the events of the day in his special reports.

Year of the Rooster - A Look at Chinese New Year

Presented By: East Asian Studies Center, Indiana University

Event Date/Time: 01/31/05 9:00 AM - 9:45 AM EST

Happy New Year...in February? That's right; it's time for Chinese New Year, a beloved occasion that marks the turning of the Spring Festival with 15 days of

celebrations. Your students will learn about traditions that stretch back to 2600 B.C., and how the varied days of the festivals contain their own special customs and events. And of course, everyone will learn about “the animals that hide in your heart”: the influential signs of the Zodiac from the Chinese Lunar Calendar. It's a time of food, fun, and fond recollections for one of the planet's most important cultures.

Journey into the Past: An Author's View

Presented By: Lynn Rymarz

Event Date/Time: 11/03/04 10:00 AM - 11:00 AM EST

Have you ever written a story and wondered what it would be like to have it published? Join children's historical writer, Lynn Rymarz as she discusses the process of researching, writing and submitting an article for a magazine publication. Rymarz, author of such articles as “Miss Liberty Takes Her Stand” and “Justice for All” will use samples of her own work, as well as your students work as the basis for this program. Through activities in the supplemental resource packet, students will be encouraged to write a story in the historical genre. During the program, the participating sites will have the opportunity to share some of their stories.

PIONEER LIBRARY PROMOTION - DISCUSSION

Issue

A summary report of the recent Pioneer Library Advocate workshops has been prepared as an information item. The report contains: 1) a description of objectives and accomplishments, 2) an overview of the recent Pioneer Library Advocate workshops, 3) feedback received from workshop participants, 4) activities Pioneer Library Advocates are planning and have done already, 5) a description of the “Next Steps.”

Background

Pioneer, Utah’s Online Library has become an ever-increasing valuable online resource since it started eight years ago. While we are now recording over 2 million searches a year, we know that the wonderful potential of Pioneer Library is not yet realized. Over the past six months a plan to further increase the awareness and utilization of Pioneer Library statewide was developed. A key component of this plan has been the collaboration with USOE, UEN, Independent Schools, UALC and Public Libraries.

Pioneer Library provides electronic information resources to the students, teachers and citizens of Utah. Created in 1996 through the combined efforts of Utah’s public libraries, higher and public education, state government and the Utah Education Network, Pioneer Library provides access to resources that would otherwise be too expensive for each partner to offer.

The Pioneer Library consortium has leveraged their funding to license the best general reference databases possible. The partners currently share three electronic library resources including EBSCO, SIRS and Deseret News Archives.

Recommendation

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.

TAB 15 ATTACHMENT A

PIONEER LIBRARY ADVOCATE WORKSHOP SUMMARY REPORT

Pioneer Promotion Objectives

- 1 Pioneer partners would identify Pioneer Library Advocate (PLA) within their organizational infrastructure by Fall, 2004.
Accomplished: Pioneer Library Advocates were identified statewide within each community where a workshop was held. At every workshop there were representatives from each of the Pioneer partners who attended.
- 2 Work together as Pioneer partners to determine the kinds of duties that the PLAs may perform. Each partner would determine the specific duties that the PLA may perform within their organizational infrastructure.
Accomplished: The members of the subcommittee identified the types of duties or activities that the Pioneer Advocate may perform, which may include, serve as local liaison, identify & respond to needs, conduct or set-up presentations, distribute promotional materials, participate with advocates (network), share progress & feedback.
- 3 Work together as Pioneer partners to determine the support functions that need to be in place for their organization and/or all of the organizations involved for the PLA to be successful.
Accomplished: The members of the subcommittee determined that the following support functions would be needed in supporting the Pioneer Advocates including, developing promotional items such as bookmarks, brochures and pencils, developing a Web site with support functions that would assist them as Advocates such as downloadable instructional materials and a network of other Advocates, and providing training support from the partners such as State Library and UEN trainers.

Pioneer Advocate Workshop Overview

Eleven Pioneer Advocate workshops were conducted from October 12 to November 5. The table below provides an overview of the date, the city, the host-institution, and how many participants attended each workshop:

Date:	Location:	Institution:	Participants:
October 12	Logan	USU	17
October 13	Salt Lake City	SLCC	18
October 14	Ogden	WSU	8
October 19	Blanding	CEU-San Juan	6
October 20	Price	CEU-Price	9
October 21	Salt Lake City	SLCC	16
October 26	Orem	UVSC	18
October 27	Vernal	USU Branch	9
November 3	Richfield	Snow South	12
November 4	St. George	DIXIE	12
November 5	Cedar City	SUU	7
			132

Workshop Feedback

At the end of each workshop we requested feedback from the Pioneer Advocates. Here are some of the comments we received:

What were the most useful parts of the workshop (the more specific the better)?

- Know that there are three groups of people that will benefit from Pioneer – Academic, Public Libraries, and K-12.
- Great overview.
- PowerPoint.
- Chance to network with other organizations.
- Understanding others' resources.
- Appreciated the extensive handouts.
- Concept that I can contribute and make a difference by sharing what I know about Pioneer.

- Promotional materials.

What were the least useful parts of the workshop (the more specific the better)?

- Sometimes I get tired of PowerPoint – but it was an effective visual of the campaign strategy.
- Specific definition of roles as I already was aware. However, reviews are always good.
- Presentations too short for each subject.
- So much information.
- Moving too fast through web sites.
- DVD was fun but not necessary.
- Pom poms.
- I would have liked more explanation of the different databases.

We welcome your comments and suggestions (the more specific the better):

- Needs to be longer so we can ask more questions.
- Have time to follow along on computers while lecture is being given.
- Consider adding the following to Pioneer: 1) biographies, 2) CQ Researcher, 3) Literature Resource Center.
- Do more collaborating.
- As a public librarian I hadn't understood the "shared" and "not shared" resources on Pioneer. This was an important concept for me – how to access and what can be accessed.
- Thanks for bringing this workshop to us!
- I think it would be nice to have school and local library staff workshops separate.
- Having a Web page and e-mail list will help keep the momentum

Pioneer Advocate Activities

At each of the Workshops the Pioneer Advocates were asked to complete a "Planning Worksheet" and identify the activities that s/he would be able to do to promote awareness and utilization of Pioneer. Here are some of the plans submitted by the Advocates:

Academic Libraries

- Conduct or arrange for a Pioneer presentation at a staff meeting within the library.

- Place bookmarks in the library reference area, learning/writing centers, and bulletin boards.
- Conduct a Pioneer presentation at the College Winter Conference in February.
- Submit a Pioneer article to the University's student newspaper.
- Setup a display at career day in the Spring time.
- Invite high school classes for a visit and training.
- Distribute Pioneer promotional items at faculty meetings or at the "Lunch Bunch" meetings.
- Show Pioneer to College classes that schedule library visits.
- Report Pioneer usage statistics to administrators

Public Libraries

- Place promotional items in the Provo City Library, Children's Department display case by November 4th.
- Work with technical services to add Pioneer links of interest to the Provo Library's Children's page.
- Place Promotional items in the Internet Research Area and library desks.
- Place a Pioneer link on the library's homepage.
- Conduct a Pioneer presentation at the library board meeting in February.
- Conduct a Pioneer class for the public in February.
- Place Pioneer items with the Centro de Hispano.
- Publish a Pioneer article in the Reference Staff Newsletter.

K-12 Libraries

- Place Pioneer promotional materials in the 61 media centers within the district.
- Conduct a Pioneer demonstration and hands-on workshop for media coordinators in January.
- Submit Pioneer article to the PTA newsletter and town newspaper.
- Conduct a Pioneer presentation at the monthly librarians meeting.
- Conduct a Pioneer presentation at Faculty meeting/in-service.
- Announce and share at Independent School Meeting to be held in November.
- Setup a Pioneer workshop at the Independent School Meeting for January.
- Offer parent training.

Community Organization - Utah Family Centers

- Place Pioneer items on brochure table, bookmarks on desks, pennants on walls.
- Provide Pioneer materials at parenting classes throughout the year.
- Pass out materials at PTA meetings.
- Feature Pioneer in the January newsletter.
- Conduct a Pioneer presentation at the County Human Services Council
- Place Pioneer link on the Utah Family Center web site.
- Place on VISTA meeting agenda.

Pioneer Advocates have since been reporting their activities via an online activity report form. Here are some of the activities that the Pioneer Advocates have already done since the conclusion of the workshops:

- Presentation on Pioneer.
- Discussed need for in-service on Pioneer at every school.
- Showed basics of the site as well as discussed the Pioneer campaign & the advertising items.
- Gave superintendent a few banners and pencil.
- Posted bulletin board and materials for distribution (bookmarks etc).
- Showed the new promotion campaign and talked about the need for more coordination between the schools and our local library to promote Pioneer.
- Gave out a “To Go” box as well as other materials.
- Added a direct link to K-12 Pioneer on all library computers and changed the web page to Pioneer.

As part of the Pioneer campaign a variety of Pioneer promotional items were produced. An online “Order Form” was developed for Pioneer Advocates to request materials as need to help them. Approximately 40 requests have already been submitted for promotional items which we are currently filling. These promotional items include:

- Bookmarks
- Pencils
- Pencil Pennants
- Golf Pencils
- Golf Pencil Container
- “To Go” Boxes
- Go Pioneer! Stickers

- Fortune Cookies
- Large Pennants (blue)
- Large Pennants (yellow)
- Tri-Fold Tent Card
- Business/Calling Card

Next Steps

The following items are those steps that will be taken next with respect to promoting Pioneer Library:

- To develop a web site to provide continued support for the Pioneer Advocates around the state. This web site would include:
 - ◇ Links (e.g., order form for promotional items, activity form for reporting promotional activities).
 - ◇ List of Pioneer Advocates statewide for networking purposes.
 - ◇ Downloadable instructional materials that Pioneer Advocates may be able to use to assist teachers, student, or patrons in using online resources.
 - ◇ Downloadable articles that could be published in local newsletters or newspapers.
 - ◇ Monthly pioneer usage statistics.
 - ◇ Pioneer Advocate listserv.
 - ◇ Other resource materials as needed by Pioneer Advocates.
- Investigate the publishing of the Pioneer Advocate Resource Manual as a resource for librarians statewide.

TOP 25 WEB SERVICES REPORT - DISCUSSION

Issue

Top 25 Web Services Report for July 2003 – June 2004.

Background

At the end of each month UEN's Web services department uses WebTrends software to generate Web statistic reports. These reports provide a lot of data, including which of UEN's Web pages and Web services receive the most visitors. We use this data to help us with project planning and decision-making.

You can find an updated Web Services Report each month at www.uen.org/ueninfo

The Top 25 Web Services for July 2003 – June 2004. can be found in Attachment A.

Here are a few noteworthy trends:

- The K-12 Pioneer Library page and Higher Education Pioneer Library page have received the most visitors during fiscal year 2004. (Note: we received this data from the Pioneer Library vendors.)
- UEN Lesson Plans are second to Pioneer Library in popularity.
- The UEN Web site received over a half million visitors during the months of March, April and May 2004.
- The number of visitors decreases nearly in half during July and August.

Recommendation

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.

TAB 16 ATTACHMENT A

TOP 25 WEB SERVICES - JULY 2003 - JUNE 2004

	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	TOTAL
K-12 Pioneer Library	1												2,060,698
Higher Ed Pioneer Library	2												1,804,486
Lesson Plans	3	73,632	75,682	144,827	170,485	163,513	118,671	169,606	182,206	196,718	180,107	100,283	1,753,435
Activities	4	69,140	25,184	51,911	67,630	69,305	46,267	56,650	63,455	81,460	78,526	69,140	780,487
UEN hosted Newsletters	5	21,106	29,661	57,598	56,354	55,659	44,550	60,046	65,058	75,177	66,137	57,702	619,036
Themepark	6	15,591	13,138	27,970	36,840	35,897	25,495	30,429	32,748	38,870	33,452	34,471	346,985
my.uen	7	11,700	18,135	11,675	13,189	25,006	19,752	31,982	33,410	41,161	51,691	42,729	319,910
Public Pioneer Library	8												317,911
Utah Core Curriculum	9	5,743	8,295	10,982	12,959	11,598	7,931	12,084	11,905	13,117	22,387	29,087	173,962
UEN Curriculum Search	10	1,140	8,309	12,744	13,079	11,545	7,020	13,426	12,670	13,818	13,282	11,777	130,785
Virtual Tours	11	6,057	5,087	8,628	9,643	9,391	6,433	9,388	9,286	11,541	10,339	10,172	102,981
Weather Report	12	3,558	3,428	5,599	7,319	7,597	5,449	6,884	7,324	9,142	7,576	6,437	74,055
KULC/UEN-TV listings	13	4,009	5,428	5,343	4,812	5,722	6,187	7,578	4,966	6,644	7,009	7,019	71,228
Utah Collections Multi. Ency.	14	2,421	2,306	4,007	4,098	4,904	4,589	4,673	4,787	7,859	5,498	3,956	52,326
School and District info	15	3,220	4,115	4,622	4,525	3,313	2,860	4,338	3,941	4,407	3,744	3,544	45,626
EDNET info	16	2,422	2,433	3,222	3,129	3,261	2,977	3,747	3,511	4,049	3,661	3,510	39,420
Rubric Tool	17	1,922	1,880	2,923	3,224	3,279	2,479	3,471	3,635	4,323	4,468	4,083	38,662
Utah Centennial Studies	18	1,945	1,932	3,139	3,467	3,107	2,255	3,402	3,593	4,242	3,486	3,253	36,249
UEN Prof. Development	19	2,548	2,316	3,262	2,598	2,064	2,571	3,082	2,835	3,593	3,289	4,311	35,851
2002 Olympics Education	20	1,510	1,646	2,266	2,860	2,349	1,836	2,853	3,247	3,600	3,005	3,972	35,688
Utah Counties	21	720	788	1,533	1,411	1,765	1,884	3,532	4,204	4,751	4,554	5,085	32,674
CACTUS Access	22	1,792	2,363	2,226	2,143	1,722	1,380	2,684	2,128	2,687	2,410	2,807	26,955
Shadow a Swan	23	1,490	1,203	1,979	2,519	2,675	2,080	1,961	2,000	2,451	2,219	1,996	24,400
Utah Instructional Television	24	1,620	1,668	2,344	1,647	1,754	2,003	2,372	1,539	2,526	2,374	2,067	23,992
Utah's Stream Connections	25	855	723	1,571	1,628	1,301	1,071	1,173	1,766	1,489	960	1,150	15,798
													TOTAL
													8,963,600
UEN.org (includes most resources above)		223,316	241,463	412,054	469,842	458,545	352,068	457,791	476,344	554,030	517,811	534,195	365,708
													5,063,167

GEOGRAPHIC INFORMATION SYSTEM (GIS) - DISCUSSION

Issue

This is an overview of the Geographic Information System (GIS) Initiative for Utah K-12 Public and Private schools.

Background

The Utah State Office of Education, ESRI, AGRC, and the Utah GIS Alliance have worked to introduce GIS (technology into the Public Education process. There is a statewide site license of ESRI's ArcView software available to all Public and Private K-12 school districts in the State of Utah. Procedures have been developed that will allow access to County and State-wide geographic data by every school district. This software is available for both PC and Mac platforms.

The Utah GIS Alliance is made up of members from Urban and Rural Districts, UEN Professional Development staff, and GIS professionals from federal, state, county, and city government.

Professional development is a key component to our GIS implementation. Before a school can receive the ArcView software site license, two or more teachers from the same school must attend a two-day CACTUS-approved GIS training course on how to integrate GIS into the curriculum. The training includes modeling of lessons that can be tied to core curriculum, a data CD containing spatial shape files that can be used in ArcView, and a data CD containing aerial photography of the school's county.


Please refer to Attachment A, B and C to learn more.

Recommendation

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.


TAB 17 ATTACHMENT A


GIS PROGRAM INFORMATION - POWERPOINT



GIS Program Utah K-12 Schools

“Geographic Information System”



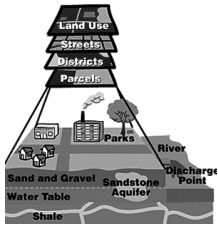


Background

- In March 2003, USOE awarded a \$ 22,000 grant to the Utah GIS Alliance.
http://www.myledesk.org/users/46/GIS/Handouts-Materials/utah_gis_proposal3_19_03.pdf
- Site licenses for ArcView 3.3 and ArcView 9 GIS software are available for all Utah public and private schools.
(See attachment GIS Program for K-12 Schools)
- GIS Software and data sets are distributed after teams of teachers attend a two-day GIS training.

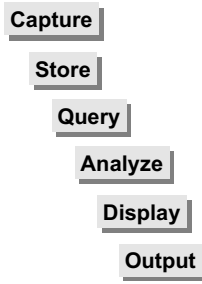
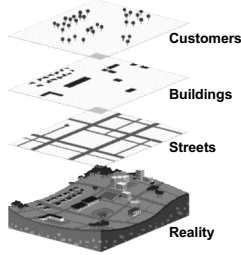
What is GIS? Organizing spatial data

- A GIS works with thematic layers of spatial data

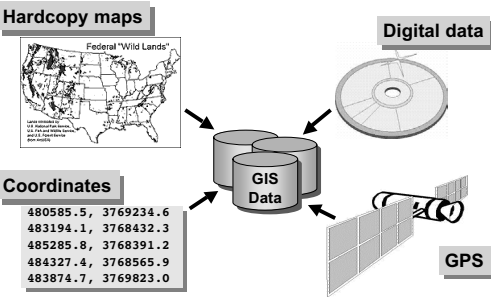


- Answer questions by comparing different layers of data

GIS functions

Capturing data



Hardcopy maps

Digital data

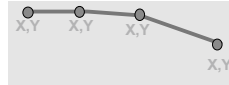
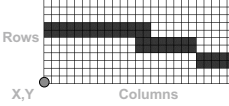

Coordinates

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485285.8,	3768391.2
484327.4,	3768565.9
483874.7,	3769823.0


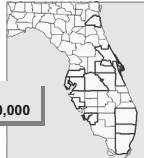
GPS

Storing data


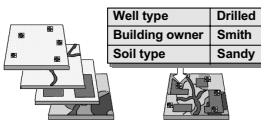

- Vector formats
 - Discrete representations of reality
- Raster formats
 - Use square cells to model reality

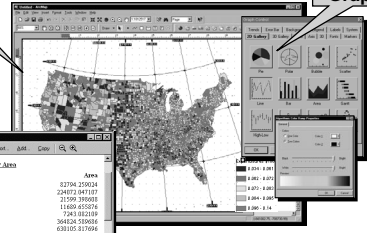

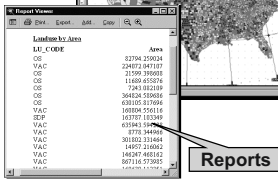
Query

- Identifying specific features
 
- Identifying features based on conditions
 

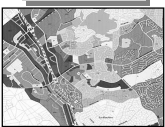



Analysis

- Proximity
 
- Overlay
 
- Network
 

Display

- Maps
 
- Graphs
 
- Reports
 

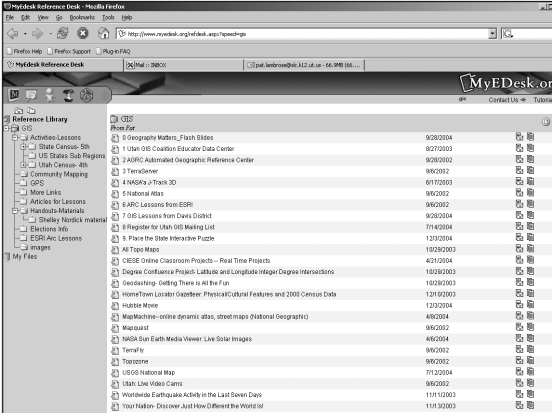
Output

- Paper map
 
- Internet
 
- Image
 
- Document
 

GIS Data

Resources and Support

- MyEdesk GIS Materials and Web Sites
<http://www.myedesk.org/refdesk.aspx?speed=gis>
- Utah Coalition for Geographic Information Systems Education
<http://www.edtechsupport.net/gis/>
- Utah Geographic Information Council
 – Mentors and Professional Support
http://www.ugic.info/Mentoring_Program.html
- Automated Geographic Reference Center
http://agrc.utah.gov/agrc_sgid/sgidintro.html



UCCISE
Utah's Condition for Geographic Information Systems Education

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Map: Includes "Landsat Image Courtesy of Utah State University" and "Data provided by State of Utah, Automated Geographical Information System".

UGIC - Mentoring Program
Utah Geographic Information Council

UGIC Mentor 2004

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UGIC Educator Mentoring Program

Education - [Please Click Here](#) | GIS Professionals - [Please Click Here](#)
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UGIC would like to introduce the UGIC Educator Mentoring program. This program has been designed to help K-12 educators link up with GIS professionals in a mentoring relationship.

The Utah State Board of Education, ESRI, AGRC, and the Utah GIS Alliance have worked to introduce GIS technology into the Public Education process. Arrangements have been entered that will eventually allow the placement of ESRI ArcView software on the teaching computer systems (classroom and computer lab systems) in all Public and Private K-12 school districts in the State of Utah. Procedures are also being developed that will allow access to District and possibly State wide geographic data by every school district. However, as you may be aware educators are currently being directed to purchase a new computer program at their own expense with all of the GIS concepts and standards with no additional support and not be a benefit to anyone. Therefore, UGIC would like to provide a list of GIS professionals who would be willing to mentor both educators and the GIS activities within a school district.

To be a member of the mentoring program, we ask that you agree to the following conditions:

UGIC educator mentors will agree to:	GIS educators will agree to:
Provide professional contact information (preferred phone number), available contact time frame, email address, and preferred school district(s) which will be placed into an online UGIC Teacher Mentor Program data base. This data base would be available on the UGIC website.	Attend an ArcView Training session that is offered at the State or School District level and fulfill any other requirements necessary to obtain the ArcView site license for their school.
Allow educator(s) to contact them for:	Have the ArcView software installed and attempt to resolve questions first by using the ArcView help application and training session materials.

Hot News

"The application of GIS is only limited by the imagination of those who use it."
- Jack Dangermond

GIS Education Links

- ESRI Geographic Methods to K-12 Education
- GIS Education Resources
- USOC GIS in Education
- AG State GIS in Education

Ugvc Utah Geographic Information Council

Home | Site | News | Search | Links

MWD & GIS Data

State Online Services | Agency List | Business.utah.gov | Search Utah.gov | GO

UTAH AGRC
Automated Geographic Reference Center

SGID & GIS Data

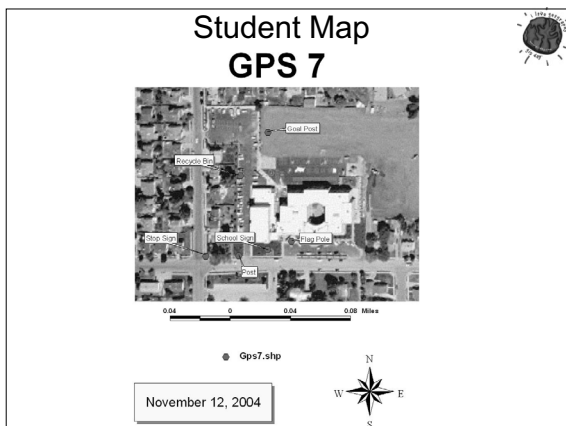
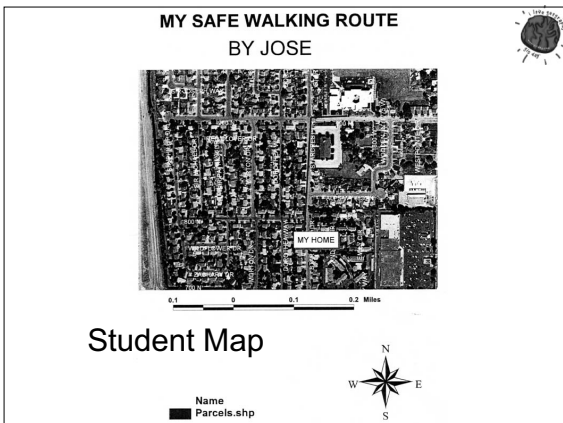
- SGID & GIS Data
- GIS Training
- GIS Services
- GIS Coordination
- Internet Maps

SGID: Utah's Statewide Geographic Information Database

- Digital Orthophoto Quads (DOQs)—Black & White Aerial Photography
- National Geospatial Intelligence Agency (NGA)—Color 1 Foot Aerial Photography
- National Aerial Imagery Program (NAIP)—Natural Color Aerial Photography
- Digital Raster Graphics (DRGs)—Scanned USGS Topographic Maps
- Digital Elevation Models (DEM)—Elevation Values
- National Elevation Dataset (NED)—Elevation Values
- Download Help for SGID Data sets
- SGID Interactive Map
- Download SGID GIS Data—Shapefile Index, by Geographic Extent (na883)
- Download SGID GIS Data—Personal Geodatabase Index, by Geographic Extent (na883)
- SGID Users Guide (PDF File) Download Adobe Reader
- SGID Disclaimer
- BRCSS Software
- Other GIS Data Links
- Metadata Explorer—Search the SGID
- AGRC FTP Site

SGID Disclaimer

The Utah Automated Geographic Reference Center (AGRC) is currently in the process of updating its GIS data. The data associated with some of these files, however, has not been updated for a number of years, and may be inaccurate in places. The AGRC provides no warranty, nor accepts any responsibility or liability, for any inaccurate or incomplete data associated with these files. For complete data documentation please refer to the metadata available on this site.



Questions?

Comments

Cartoon character of a boy thinking.

Ugvc Utah Geographic Information Council

TAB 17 ATTACHMENT B

ARCVIEW GIS TWO-DAY WORKSHOP

October 18 and 25, 2004

Location: Milton Bennion Hall

Credit: 1 Semester Hours

Time 8:30-4:00

Time:	GIS Day 1: Exploration & Creation
8:30 - 10:20	<p>Welcome & Community Building Geo Activity</p> <p>Introduction & Expectations</p> <p>Spatial Inquiry: Thinking Geographically (see handout)</p> <ul style="list-style-type: none"> ○ Complete KWL for GIS ○ Brainstorm Geographic Skills ○ Map Activity (Topo & Aerial Base Maps: Compare/Contrast) (see handout) <p>What is GIS?</p> <ul style="list-style-type: none"> ○ ESRI Video Clip & Flash Movie ○ Exploring GIS Concepts (PPT) <p>GIS/IMS on the Internet (Internet Mapping Sites- see handout)</p> <ul style="list-style-type: none"> ○ Utah GIS Coalition Educator Data Center ○ AGRC ○ Microsoft Terra Server ○ NASA's J-Track 3D
10 Min Break	
10:30 – 11:00	<p>Introduction to GIS</p> <ul style="list-style-type: none"> ○ National Atlas (Layers, Zooming In & Out, Legends, Keys)
11:00 – 12:00	<p>Introduction to ArcView - Aerial Base Map Activity</p> <ul style="list-style-type: none"> ○ ArcGlobe Movie ○ ArcView Basic Navigation ○ Let's map the route from East High to Milton Bennion Hall ○ Classroom Application- Have students map their safe walking route from home to school.
Lunch 12:00 – 1:00	
1:00 – 2:00	<p>Quick Start Project – Preview to explore navigation concepts</p> <ul style="list-style-type: none"> ○ Activities to use with students ○ Colorado River and Mississippi Drainages ○ Extensions, Exporting jpgs and Adding to other documents
Stretch Break	
2:30 – 3:45	<p>GIS Inquiry Lessons</p> <ul style="list-style-type: none"> ○ Mapping Our World- Module 2- Science Focus ○ Exploring Europe- Math Focus
3:45 – 4:00 Homework	<p>Asking Spatial/Geographic Questions (see handout)</p> <p>Begin Planning Elements of your GIS Project/Lesson/Activity (see Handout)</p> <p>Refer to Assessment handout</p>

Time:	GIS Day 2: Creation & Project Planning
8:30 - 10:30	<p>Welcome</p> <p>Q&A</p> <p>Pony Express Challenge</p> <ul style="list-style-type: none"> ○ Ghost Riders Power Point ○ Let's Build an ArcView Project from Scratch <p>Note: Dianne Smith's Ghost Riders Power Point is in the folder called Class Handouts-Materials when you speed dial gis at the home screen of MyEdesk.</p>
10 Min Break	
10:40 – 11:30	Pony Express Challenge continued
11:30 – 12:00	GIS Project/Lesson/Activity Elements Planning Time
Lunch 12:00 – 1:00	
1:00 – 2:00	<p>ESRI Arc Lessons, Davis GIS Lessons, & UEN Lesson Plan Tool</p> <ul style="list-style-type: none"> ○ Previewing GIS Lessons Written by Teachers
Stretch	
2:30 – 4:00	<p>Work time to plan and build your own activity</p> <p>What support is available?</p> <ul style="list-style-type: none"> ○ Join GIS Listserve at http://lists.uen.org/mailman/listinfo/gis <p>Distribute ArcView 3.3 Software and Data Sets</p> <ul style="list-style-type: none"> ○ Installing software and data cds. <p>Closure and Complete Workshop Evaluation</p> <ul style="list-style-type: none"> ○ Evaluation online at http://www.uen.org/development click on course evaluation link.
Homework	<p>Teach a GIS activity, lesson, or project to your students before Friday, December 3, 2004.</p> <p>In a reflective paper answer the following:</p> <ol style="list-style-type: none"> 1. Describe the activity, lesson, or project. 2. What worked? 3. What didn't work? 4. What did my students and I learn from the activity? 5. What types of assessment did I use? 6. Next steps...What are my plans for using Spatial/Geographic Inquiry and GIS tools in the future? <p>Email your reflective paper to Pat Lambrose at pat.lambrose@slc.k12.ut.us no later than Friday, December 3, 2004.</p>

TAB 17 ATTACHMENT C

GIS PROGRAM FOR K-12 SCHOOLS

What is it

A GIS or Geographic information system is a new technology designed to show spatial relationships between everyday objects. The information that can come from a GIS can be depicted in maps, used in tables, or presented in reports. There are tables with information associated with the objects that can be analyzed for problem solving. Maps can be made to depict the solutions to these problems. Use of a GIS as a teaching tool or a learning tool can enhance the classroom environment by allowing the student or teacher to use cutting edge technology to learn about the problems of the 21st Century.

How do you get

There is a statewide license for the GIS software, ArcView, which can be acquired from the Board of Education's, technology department. This application can loaded on to all students and teachers computers in any school, public, private, or charter. To receive this software two teachers from a school must take a two day UEN approved training on how to use the software within the classroom. The training includes lessons that can be tied to core curriculum, disk containing spatial data that can be used in the GIS, and aerial photography of the schools county. This software is available for both the Windows or the Macintosh computers.

There is also a more robust GIS software, ArcGIS ArcView 9 available through the Board. This application is more intense, allowing for more analysis and exploration of data, but it does require more personal education. This application only works on a high powered PC (Windows). There are presently no UEN sponsored trainings available for this software. There are classes presented at the State's Automated Geographic Reference Center (AGRC). Information pertaining to these classes is available at http://agrc.utah.gov/agrc_gistraining/gistrainingintro.html. There are special rates for these rates for teachers. For more information call Cindy Clark at 801-537-9201 for more information.

When are the ArcView training workshops?

Here is a listing of when the UEN sponsored training workshops are schedules. For more information about upcoming workshops visit www.edtechsupport.net/GIS/calendar.htm

ArcView GIS (12th Grade US Government & Citizenship "Mapping the Political Front" Teachers)

Instructor - Dianne Smith & Brandon Thacker

Location: Davis School District Integration Lab (Administration Building)

Date: November 1st, 2004

Time: 8:15 - 3:45

Register: Call Jayna Rice @ (801) 402-5211

GIS Projects (Follow Up)

Instructor - Pat Lambrose

Location - University of Utah, Milton Bennion Hall, Room 202

Date: November 22nd, 2004

Time: 8:30 - 4:00

Register: UEN

ArcView GIS (5th, 8th, & 11th Grade American History Teachers)

Instructor - Dianne Smith & Brandon Thacker

Location: Davis School District Integration Lab (Administration Building)

Date: November 22nd & December 1st, 2004

Time: 8:15 - 3:45

Register: Call Jayna Rice @ (801) 402-5211

How Do I Get Help?

The Utah Geographic Information Council (UGIC) is the organization of professional GIS people. Mentoring program has been created allowing teachers and students to work with these professional on a one on one basis. Those professionals registered on the UGIC Mentoring site at www.ugic.info/Mentoring_Program.html, are willing to work out problems with the software, how to teach students and teachers GIS, and to help with projects that can be tied in with core curriculum.

TAB 17 ATTACHMENT D

GIS PROGRAM - DESERET MORNING NEWS ARTICLE

View this newspaper article with images online at:

<http://deseretnews.com/dn/view/0,1249,595102345,00.html>

Tuesday, November 2, 2004

Mapping out learning

Technology is giving Utah students a new perspective

By Erin Stewart

Deseret Morning News

Students in Utah are looking at themselves from a whole new perspective — from space.

That new vantage point has students like sixth-grader Jake Strobel, 12, getting to school early and skipping recess to glean a few more moments with a laptop computer and a satellite image.

“It's just so fun getting on a computer. It's better than recess,” Strobel said as he opens a satellite photo of West Valley's Hillsdale Elementary School.

Bob Manley, a sixth-grade teacher at Hillsdale, said Strobel isn't the only Utah student trading in his free time for computer time. Students and teachers throughout Utah are getting hooked on the latest satellite technology using Geographical Information Systems (GIS) to pinpoint locations from space.

That technology is now hitting Utah school districts through a statewide grant, allowing students to become mapmakers from start to finish using geographic coordinates and state data.

In Manley's class, one student creates a map revealing that a fault line runs directly underneath his classroom. Across town at Salt Lake City's Escalante Elementary School, fifth-grader Luis Lee creates a safe walking map showing how to get from his house to school.

“You can go to places that you've never been to and tell your mom how to get there,” Lee said. “We can look all around the state and see where we are.”

The GIS technology is gaining steam in Utah's education system with teachers and students using state coordinate data to create authentic maps, said Pat

Lambrose, teacher facilitator for Salt Lake School District. The growing interest, she said, is largely because the mapping software can be used in virtually every subject.

“It's not just about the technology, it's the higher level of thinking that GIS requires,” she said. “It's definitely geography, but it's also language arts, math, problem solving. It's everything. “

Incorporating the high-tech software into those everyday lessons has become Manley's main concern since he started teaching his sixth-graders how to make maps of everything from Egyptian pyramids to the sound waves emanating from a Mount St. Helens eruption.

During math lessons, Manley's students use map scales to determine the distance between two locations and then convert that mileage into feet, meters and inches.

In social studies, his students look at a map of the Pony Express and then layer on a contour map of the United States to show how mountain ranges determined the mail's route.

“This isn't an extra; this isn't an add-on,” he said. “It's just like having a chalkboard. It's a tool to help kids learn.”

The benefits of using GIS mapping as part of the curriculum also extend beyond education basics, Manley added. Many of his students are more confident, speak more in class and are more engaged in lessons since using the mapping technology.

“It's a feeling of accomplishment. They can get on a computer and make something from start to finish,” he said.

Manley even plans to take his students up to Alta's Albion Basin to collect their own data using handheld Geographical Positioning System units. The students will then be able to help Alta officials with an ecological mapping project in the watershed area.

One of the most unique aspects of the technology for Manley is that students are using the same software as GIS professionals, not a a dumbed-down child version. That knowledge puts his students at an advantage in a marketplace where many companies have a GIS pro on staff, he said.

“We are giving a life skill to these kids. We're giving them some training. We're giving them a future,” he said.

Cindy Clark, a database administrator for the Utah Automatic Geographic Reference Center, has been working with teachers like Manley by introducing GIS mapping into Utah classrooms. Clark even hopes to create a special high school diploma certifying students who have GIS training.

Clark estimates only about 30 percent of Utah schools are now regularly using GIS technology. She hopes more teachers will catch on and realize the software is not just one more “high-tech glitz,” but is a learning tool for 21st-century students.

“Students are more visual now. They can relate to a subject that uses the same technology that is up to date with them,” she said.

Clark added that the best part about GIS is that it's free. The system would normally cost about \$1,000 per school, but a statewide grant with software creators

allows every public or private school to get a free copy. The only condition is that two teachers from the school attend a two-day GIS training session hosted by the Utah Education Network.

Lambrose heads up that GIS instruction, travelling around the state to give each district the opportunity to get the software in its schools.

The hardest part in garnering teacher interest, she said, is that many teachers feel stuck in a testing-centered era. Lambrose said those teachers think they can't juggle one more new thing along with stricter testing mandates.

“But some teachers see the vision that if they use these spatial, visual tools, their test scores will raise,” she said. “It's authentic learning. It's not spoon-fed.”

Lambrose said she hopes more teachers do join the GIS effort so the technology can become a standard part of core curriculum across Utah. That goal may be a few years down the road, but she said it's definitely within reach.

“Public education has diminished some of that curiosity, and I see this as re-igniting the spark,” she said. “The kids are hungry, they want more.”

View this newspaper article with images online at:

<http://deseretnews.com/dn/view/0,1249,595102345,00.html>

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UEN-TV SERVICES UPDATE - DISCUSSION

Issue

UEN has heard very positive feedback about the call sign change in September. Programming changes are underway to assure that the educational mission of UEN-TV continues to drive use of this valuable resource. This informational report is an update on programming, scheduling and digital TV.

Background

Since converting call signs to KUEN in September 2004, there has been increased interest in the television programming and services available through the Utah Education Network. Viewer support staff report calls from new viewers and others who are recognizing the tie between the UEN logo on the Web site and the UEN logo on their television.

Programming

Spring semester programming has been scheduled, and is included in Attachment A. UEN-TV staff participated in several media preview conferences this fall to view and acquire programming that fits with our mission. The K-12 Instructional Television block, licensed by the Utah Instructional Media Consortium, now has programs that have all been produced in the last five years. The *2004-2005 Utah Instructional Television and Resource Guide* was distributed to Utah K-12 teachers in the fall.

There are 28 telecourses from Higher Education scheduled for the spring semester. The courses come from UVSC (10), U of U (12) and SLCC (6). These courses run from 5:00 p.m. to midnight. The courses are dated – most were produced over eight years ago and enrollments continue to be at a plateau since the increase of online courses during the last three years. UEN is working with the institutions to gather data on production dates and use of the courses in order to make recommendations for fall semester scheduling next year.

Scheduling

We are seeing an increased demand for lifelong learning and how-to programs targeted toward adults, as well as workforce preparation and GED programs. Lifelong learning and how-to programs include learning a language, painting, cooking, quilting, scrapbooking, gardening and piano. Programs targeted for adult learners include TV411 for pre-GED basic skills, Workplace Essential Skills, English

as a second language, adult literacy and GED preparation. The morning exercise block has also been heavily promoted through the Utah Division of Aging Services and has a regular viewer following.

During spring semester, UEN-TV will be working with telecourse providers as well as organizations that support adult learners to tie broadcast resources to the needs of these target groups.

Digital TV

UEN is exploring several options for projects using the Digital TV signal. At present, UEN-TV multicasts a parallel of its analog signal, and a 24/7 Annenberg/CPB channel with high school and general education courses. UEN-TV has submitted a grant to the Corporation for Public Broadcasting to datacast educational media to Youth in Custody centers located throughout the Wasatch Front. This project, in conjunction with the Utah Division of Juvenile Justice Services and the Utah State Office of Education, would provide needed access to educational media for court-ordered individual education plans. UEN is also exploring with Utah State University, the ability to broadcast courses in Spanish from the University of Mexico. While these discussions are preliminary, it's encouraging to see new applications of the digital signal for meeting educational needs in Utah.

Recommendation

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.

TAB 18 ATTACHMENT A

UEN-TV SCHEDULE - SPRING 2005

	U	M	T	W	H	F	S	
12:00 AM :30	(Repeat) Human Anatomy	Lifelong Learning Programs and Transmitter Maintenance once per month	Foundations for Algebra 0950-UVSC	(Repeat) Human Anatomy	Foundations for Algebra 0950-UVSC	(Repeat) Human Anatomy	Foundations for Algebra 0950-UVSC	
1:00 AM :30	(Repeat) Intro to Visual Arts		(Repeat) General Biology	(Repeat) World History	(Repeat) American Film	(Repeat) Infancy & Child.	(Repeat) US Constitution	
2:00 AM :30	(Repeat) Conceptual Astronomy			(Repeat) Fitness for Life	(Repeat) Performing Arts	(Repeat) Introduction to Sociology		
3:00 AM :30	(Repeat) Intro to Statistics			(Repeat) Abnormal Psych			(Repeat) Gerontology	
4:00 AM :30	Instructional Television Blockfeed					(Repeat) American Civilization		
5:00 AM :30								
6:00 AM :30	Gardening Gina D's						Teachers Professional Development	
7:00 AM :30	The Shapias Toy Castle Comfy Couch	GED UofU Newsbreak Classical	Workplace SLCC Newsbreak P Yoga	GED English Classical	Workplace Painting P Yoga	GED English Classical		
8:00 AM :30	Real Wheels	Sit & Be Fit	Body Electric	Sit & Be Fit	Body Electric	Sit & Be Fit		
9:00 AM :30		Instructional Television Blockfeed						
10:00 AM :30								
11:00 AM :30								
12:00 PM :30	Workplace Essentials							
1:00 PM :30	GED Connection							Math- College Algebra 1050-UVSC
2:00 PM :30	BioEng/Science w/o Walls 1510-U of U	Scrapbook Sewing	Crafts-Kids Arts	Crafts	Quilting	Crafts Redwall		
3:00 PM :30	US Economic History 1740-SLCC	Gardening Paint! Paint!	Arts Literacy	Piano Guy Cooking	Painting TV 411			Intro to Humanities 1100-SLCC
4:00 PM :30	UT. Business	Intro Algebra UVSC-0990	Introduction to Sociology 1010-UVSC	Intro Algebra UVSC-0990	Abnorm Psych 3400-U of U	Intro Algebra UVSC-0990		
5:00 PM :30	General Biology 1010-UVSC	General Psychology 1010-UVSC		Psych Infancy-Childhood 1220-UofU	Anthropology-Social & Cultural Anthro 1010-UVSC	Intro to Statistics 3000 UofU	History Western Civilization 1020-UofU	
6:00 PM :30			Gerontology 3050-UofU	Poli Science/US Constitution 4790-U of U				Physics/Conceptual Astronomy 1270-SLCC
7:00 PM :30			World History 1050 U of U	Intro to Human Anatomy 1090-UVSC	Philosophy/Ethics & Values 2050-UVSC	Intro to Human Anatomy 1090-UVSC	History/American Civilization 1700-SLCC	Intro to Human Anatomy 1090-UVSC
8:00 PM :30	Fitness for Life 1050-SLCC	The Performing Arts 1730-UofU		Intro to Human Anatomy 1090-UVSC		Intro to the Visual Arts 1010-U of U		
9:00 PM :30	American Film & Culture 3210-UofU			Micro/Macro Economics 2010/2020-UofU				

UEN-TV TELECOURSE SCHEDULE

SPRING 2005

Telecourses	Institution	Day	Time	Repeat Day	Repeat Time
Anatomy 1090 ~ Intro to Human Anatomy	UVSC	MWF	9:00-10:00pm	<i>UWF</i>	<i>12:00-1:00am</i>
Anthropology 1010 ~ Social/Cultural Anthro	UVSC	H	6:00-9:00pm		
Arts 3210 ~ American Film & Culture	UofU	U	11:00-12:00am		
Arts 1010 ~ Introduction to the Visual Arts	UofU	F	10:00-12:00am	<i>U</i>	<i>1:00-3:00am</i>
Arts 1730 ~ Performing Arts	UofU	M	10:00-12:00am	<i>H</i>	<i>1:30-3:30am</i>
Bioengineering 1510~ Science w/o Walls	UofU	U	2:00-4:00pm		
Biology 1010 ~ General Biology	UVSC	U	6:00-9:00pm	<i>T</i>	<i>12:30-3:30am</i>
Comm 1010 ~ Elements of Effective Comm	SLCC	S	7:00-9:00pm		
Comm 1500 ~ Intro to Mass Communication	UVSC	S	9:00-12:00am		
Economics 2010/20 ~ Micro/Macro Eco	UofU	W	10:00-12:00am		
Economics 1740 ~ US Economic History	SLCC	U	4:00-5:30pm		
Family/Consumer 2621 ~ The Whole Child	UofU	S	5:00-5:30pm		
Health 1050 ~ Fitness for Life	SLCC	U	10:00-11:00pm	<i>W</i>	<i>2:00-3:00 AM</i>
Gerontology 3050 ~ Gerontology	UofU	T	8:00-9:00pm	<i>F</i>	<i>5:00-6:00am</i>
History 1700 ~ American Civilization	SLCC	H	9:00-12:00am	<i>S</i>	<i>3:00-6:00 AM</i>
History 1020 ~ Western Civilization	UofU	S	5:30-7:00pm		
History 1050 ~ World History	UofU	U	9:00-10:00pm	<i>W</i>	<i>1:00-2:00am</i>
Humanities 1100 ~ Intro to the Humanities	SLCC	S	3:00-5:00pm		
Math 0950 ~ Foundations for Algebra	UVSC	THS	12:00-1:00am		
Math 0990 ~ Introduction to Algebra	UVSC	MWF	5:00-6:00pm		
Math 1050 ~ College Algebra	UVSC	S	12:00-3:00pm		
Philosophy 2050 ~ Ethics & Values	UVSC	T	9:00-12:00am		
Physics 1270 ~ Conceptual Astronomy	SLCC	F	7:30-9:00pm	<i>U</i>	<i>3:00-4:30am</i>
Political Science 4790 ~ US Constitution	UofU	W	7:00-9:00pm	<i>S</i>	<i>1:00-3:00</i>
Psychology 1010 ~ General Psycholgy	UVSC	M	5:30-9:00pm		
Psychology 3400 ~ Abnormal Psychology	UofU	H	5:00-6:00pm	<i>W</i>	<i>2:30-3:30am</i>
Psychology 1220 ~ Infancy & Childhood	UofU	W	6:00-7:00pm	<i>F</i>	<i>1:00-2:00am</i>
Sociology 1010 ~ Intro to Sociology	UVSC	T	5:00-8:00pm	<i>F</i>	<i>2:00-5:00am</i>
Statistics 3000 ~ Intro to Statistics	UofU	F	6:00-7:30pm	<i>U</i>	<i>4:30-6:00am</i>

SPECIAL PROJECTS BUDGET - ACTION

Issue

The Technical Services special project budget was partially reviewed and approved during the last Steering Committee meeting. Two items were deferred until December: (1) determining the allocation for \$100,000 in the non-Ethernet portion of the budget, and (2) making initial determinations regarding Ethernet projects.

Background

Non-Ethernet Projects

In October, the Steering Committee agreed to allocate \$540,000 toward completion of non-Ethernet special projects. It was agreed that a further recommendation would be made regarding \$100,000 available for other non-Ethernet projects. After assessing alternatives, we propose that the following projects be supported:

- \$40,000 for Service Center Generators
- \$20,000 for Cyber Corps support
- \$40,000 for Router Replacement

It is proposed that each service center receive \$10,000 to support the installation of generators at those facilities. The estimated cost of providing an adequate generator is \$15,000 per site. Each Regional Service Center would be required to provide a \$5000 match to complete this project.

SEDC has been responsible for securing EETT grant funds to extend the Cyber Corps project to schools in other regions. The EETT grant maximum has been reduced for the next year. Consequently, SEDC is faced with dropping some schools from Cyber Corps or find alternate funds to offset a grant deficit of nearly \$60,000. SEDC has determined that all participating schools can be retained by requiring each to provide a \$1000 match, and has requested that the remaining \$20,000 gap in funding be offset by UEN. UEN has been supportive of this project for the past 4 years and we recommend that UEN support Cyber Corps with \$20,000 from the special project budget.

There is presently \$60,000 available in the special project budget for replacement of obsolete routers. These funds have been spent and there are still several routers that

must be replaced. We recommend that the remaining \$40,000 be directed to this area.

Ethernet Projects

The Utah Legislature allocated \$400,000 in one-time funds in the FY2005 UEN budget to support the installation of Ethernet circuits for eligible schools. Appendix A provides a cost comparison to determine what portion of the \$400,000 would be used to support the GeoMax Phase 2 project. GeoMax Phase 2 is a Qwest/UEN joint project that will place Ethernet circuits in 155 schools. Seven of these locations are SLCC sites and SLCC is responsible for covering the cost. UEN is directly responsible for 118 of the GeoMax Phase 2 sites at secondary schools or district offices. Elementary school circuit costs will be paid by the local districts.

Three scenarios are provided in the analysis, assuming three different project start dates. In each scenario, 10 sites are assumed to be installed January 2005. These sites are all 7 SLCC locations and a limited implementation for participating districts that include the new Weber District Office, the new Sevier District Office and the New Granite District Office.

The three scenarios assume May, April and March implementation starts for the remaining site installations. Qwest would prefer starting implementation of the other sites in March. The analyses show that regardless of the start date, \$400,000 is adequate to cover FY2005 costs. After all sites are implemented, costs will stabilize.

There are two major obstacles which complicate committing to a project start date at this time. The first is that the \$400,000 was allocated by the legislature as one-time funds. Our FY 2006 budget request proposes converting this amount to an ongoing funding stream. We hesitate to begin implementation of these Ethernet Circuits until the Legislature acts on our request.

The second issue is related to E-rate funding. Because the School Library Division (SLD) has been ordered to change accounting procedures, E-rate commitments have been delayed. We received notification two weeks ago that the first UEN contracts were approved by SLD, but the Qwest contract was not one of the approved contracts. Until we receive a commitment from SLD on the Qwest contract, it is premature for us to proceed with most of the 155 sites.

There are other projects that are not analyzed here. These are related to contracts with All West Communication and Gunnison Telephone. The GeoMax analysis indicates that these other projects can be accomplished with the current \$400,000 one-time allocation.

Recommendation

We recommend that the Technical Services Subcommittee and Steering Committee approve the 3 non-Ethernet special projects totaling \$100,000. We also recommend that beyond the 10 implementations planned to begin in January, that further actions on initiating installation of Ethernet circuits at sites be delayed until (1) we

are certain the \$400,000 legislative allocation is converted from one-time to ongoing funding, and (2) the SLD commits E-Rate funding for the Qwest/UEN GeoMax Phase 2 contract. Those two issues should be resolved by late February or early March. Once these two requirements are met we recommend that UEN move aggressively forward to complete the installation of all GeoMax Phase 2 sites and as many other Ethernet projects as can be accommodated with the current Special Projects Ethernet budget.

TAB 19 ATTACHMENT A

GEOMAX PHASE 2 COST ANALYSIS - DECEMBER 2004

May Ramp Up

	<u>New</u>	<u>UEN Resp</u>	<u>Total</u>	<u>Per Site</u>	<u>Total Monthh</u>	<u>Net E-rate</u>	<u>FY2004</u>	<u>FY2005</u>
2005 January	10	3	3	1,611.00	4,833.00	1,691.55		
February	0	3	3	1,611.00	4,833.00	1,691.55		
March	0	3	3	1,611.00	4,833.00	1,691.55		
April	0	3	3	1,611.00	4,833.00	1,691.55		
May	16	19	19	1,611.00	30,609.00	10,713.15		
June	5	24	24	1,611.00	38,664.00	13,532.40	31,011.75	
July	27	51	51	1,611.00	82,161.00	28,756.35		
August	19	70	70	1,611.00	112,770.00	39,469.50		
September	28	98	98	1,611.00	157,878.00	55,257.30		
October	20	118	118	1,611.00	190,098.00	66,534.30		
November		118	118	1,611.00	190,098.00	66,534.30		
December		118	118	1,611.00	190,098.00	66,534.30		
2006 January		118	118	1,611.00	190,098.00	66,534.30		
February		118	118	1,611.00	190,098.00	66,534.30		
March		118	118	1,611.00	190,098.00	66,534.30		
April		118	118	1,611.00	190,098.00	66,534.30		
May		118	118	1,611.00	190,098.00	66,534.30		
June		118	118	1,611.00	190,098.00	66,534.30		722,291.85

April Ramp Up

	<u>New</u>	<u>UEN Resp</u>	<u>Total</u>	<u>Per Site</u>	<u>Total Monthh</u>	<u>Net E-rate</u>	<u>FY2004</u>	<u>FY2005</u>
2005 January	10	3	3	1,611.00	4,833.00	1,691.55		
February	0	3	3	1,611.00	4,833.00	1,691.55		
March	0	3	3	1,611.00	4,833.00	1,691.55		
April	16	19	19	1,611.00	30,609.00	10,713.15		
May	5	24	24	1,611.00	38,664.00	13,532.40		
June	27	51	51	1,611.00	82,161.00	28,756.35	58,076.55	
July	19	70	70	1,611.00	112,770.00	39,469.50		
August	28	98	98	1,611.00	157,878.00	55,257.30		
September	20	118	118	1,611.00	190,098.00	66,534.30		
October		118	118	1,611.00	190,098.00	66,534.30		
November		118	118	1,611.00	190,098.00	66,534.30		
December		118	118	1,611.00	190,098.00	66,534.30		
2006 January		118	118	1,611.00	190,098.00	66,534.30		
February		118	118	1,611.00	190,098.00	66,534.30		
March		118	118	1,611.00	190,098.00	66,534.30		
April		118	118	1,611.00	190,098.00	66,534.30		
May		118	118	1,611.00	190,098.00	66,534.30		
June		118	118	1,611.00	190,098.00	66,534.30		760,069.80

March Ramp Up

	<u>New</u>	<u>UEN Resp</u>	<u>Total</u>	<u>Per Site</u>	<u>Total Monthh</u>	<u>Net E-rate</u>	<u>FY2004</u>	<u>FY2005</u>
2005 January	10	3	3	1,611.00	4,833.00	1,691.55		
February	0	3	3	1,611.00	4,833.00	1,691.55		
March	16	19	19	1,611.00	30,609.00	10,713.15		
April	5	24	24	1,611.00	38,664.00	13,532.40		
May	27	51	51	1,611.00	82,161.00	28,756.35		
June	19	70	70	1,611.00	112,770.00	39,469.50	95,854.50	
July	28	98	98	1,611.00	157,878.00	55,257.30		
August	20	118	118	1,611.00	190,098.00	66,534.30		
September		118	118	1,611.00	190,098.00	66,534.30		
October		118	118	1,611.00	190,098.00	66,534.30		
November		118	118	1,611.00	190,098.00	66,534.30		
December		118	118	1,611.00	190,098.00	66,534.30		
2006 January		118	118	1,611.00	190,098.00	66,534.30		
February		118	118	1,611.00	190,098.00	66,534.30		
March		118	118	1,611.00	190,098.00	66,534.30		
April		118	118	1,611.00	190,098.00	66,534.30		
May		118	118	1,611.00	190,098.00	66,534.30		
June		118	118	1,611.00	190,098.00	66,534.30		787,134.60

IP ADDRESS MANAGEMENT POLICY - ACTION

Issue

IP address management policy

Background

IP addresses are a fundamental component of the Internet and UEN network infrastructure. Every computer must be assigned a unique IP address to access the UEN network and other network services. The policies for IP address management are some of the most important to Internet and UEN users.

UEN administers a significant amount of IPv4 address space, assigned by ARIN (American Registry of Internet Numbers - *www.arin.net*) between 1990 and 1995. These addresses are used by all UEN customers who don't have their own ARIN-assigned addresses (all but a few school districts, most public libraries, all UCAT campuses).

There are no defined policies for allocating UEN IP addresses. UEN has historically assigned addresses to customers on an as-needed and ad-hoc basis and not according to any consistent allocation policy. This has led to serious address shortages in some school districts and whole regions of the state while other regions have huge surpluses.

Policy Issues

- Policies are needed for effective management of UEN IP addresses.
- Policies should be developed by/with the participation of the organizations that use addresses.
- IP Address allocation policies must support the mission of UEN.
- UEN should be an administrator of the policies.
- ARIN has developed an organizational structure and body of policy that could be used as a model.

Recommendation

It is recommended that the Technical Services Sub-Committee discuss this issue and form a working group to explore it further. The working group should recommend to

the Sub-Committee a structure for developing and administering policies to manage UEN-assigned IP addresses. The ARIN organization and its policies may serve as a model.

WEBCT VISTA TECHNICAL STATUS - DISCUSSION

Issue

This report provides technical support information regarding WebCT Vista.

Background

UEN is providing hosting and other services in support of the WebCT Vista project. WebCT Vista is a Learning Management System (LMS) that extends a course and its activities beyond the classroom enabling online learning and interaction. Students connect via the Internet to each other, their instructors, learning activities, shared research materials, library resources and even textbooks. Integration with campus administrative systems provides automated enrollment and grade reporting. Faculty supplement their teaching with powerful online tools, increasing contact between students, the instructor, fellow students and information.

For approximately 1-1/2 years, USHE has worked with UEN to pilot a centrally managed, locally controlled implementation of WebCT Vista in several colleges and universities throughout the state. All institutions have participated in the pilot project. CEU is migrating its online courses to WebCT Vista and plans to go live with this implementation in Spring 2005. It is anticipated that by Fall 2005, online and hybrid courses offered at Snow College and Dixie State University will be delivered to students using the UEN managed implementation of WebCT Vista.

A more detailed explanation of the technical support hosting role being performed by UEN is provided in Attachment A. This information is intended to help Steering Committee members understand the extent of UEN involvement and the value brought by UEN staff in support of this important statewide effort.

Recommendation

This is an information item. No further action is required of the Technical Services Subcommittee at this time.

TAB 21 ATTACHMENT A

UEN'S WEBCT VISTA INSTALLATION

1. What is WebCT Vista?

A Learning Management System (LMS) extends a course and its activities beyond the classroom enabling online learning and interaction. Students connect via the Internet to each other, their instructors, learning activities, shared research materials, library resources, and even textbooks. Integration with campus administrative systems provides automated enrollment and grade reporting. Faculty supplement their teaching with powerful online tools, increasing contact between students, the instructor, fellow students, and information. This interaction prepares the next generation for a workplace that is growing more “wired” by the day.

2. The “Pilot”

- a Installation was done in the fall of 2003.
- b The Pilot went “Live” for spring Semester 2004 in the first part of January.
- c USU and U of U were of the first to offer courses through the pilot.
- d The Pilot was to be for the length of two years. However, it is planned that CEU will have all of their WebCT Campus Edition Courses migrated to Vista and be hosted from the UEN Vista installation by spring 2005.
- e Many of the smaller schools will be following shortly after.
- f So the “Pilot” part of the Project Title will need to be removed shortly.

3. Questions about Vista?

4. Hardware System Architecture Design (See Diagrams)

- a The first 8 months:
 - i One Application Server
 - ii One Database Server
 - iii SAN storage for the DB Server
- b **Since August of 2004:**
 - i Two F5 Load balancing Switches with hardware SSL ability, and hot failover capability.
 - ii Two Application Servers
 - iii One Database Server
 - iv SAN Storage for DB Server

- c Future plans:
 - i Two F5 Load balancing Switches with hardware SSL ability, and hot failover capability.
 - ii Expand Application Servers to 4-5
 - iii Have cold standby Database Server
 - iv Storage on Demand SAN
- d Development environment
 - i Same as the Production but considerably LESS horse power.
 - ii No SAN storage.

5. Maintenance and Outage Dilemma

- a UEN NOC Outage Window
 - i Friday 11:00 PM
- b Institutions Desired Outage Window for Vista
 - i Sunday mornings 2:00 – 10:00 AM
 - ii Really they don't want any outages
 - 1 So, what about 7x24 service?

6. Statistics

- a The First Semester Spring 2004:
 - i Two Institutions:
 - 1 USU and U of U
 - 2 3 courses
 - ii UEN Professional Development
 - 1 3 courses
- b The Second Semester Summer 2004
 - i Four Institutions:
 - 1 BATC, UVSC, USU, and U of U
 - 2 6 courses
- c Third Semester Fall 2004
 - i Five Institutions:
 - 1 Dixie, BATC, UVSC, USU and U of U
 - 2 8 courses
- d Fourth Semester Spring 2005
 - i Six Institutions:
 - 1 CEU, Dixie, BATC, UVSC, USU, and U of U
 - 2 21 courses

e Throughput for 10/4/2004 to 12/3/2004.

i For utahlearning.uen.org

- 1 IN 18.2 GB
- 2 OUT 140.3 GB
- 3 451,700 connections

f Application Report per Institution and Group/Department

Group	Total Sessions	Average Session/s			
		Length	Per Day	Per Day Weekdays	Per Day Weekends
UVSC Pilot Group	10432	0:18:40	32	38	15
USU Instructional Technology	4815	0:13:14	14	17	9
U of U Educational Psychology	4276	0:12:27	14	16	8
U of U Special Education	17	0:04:44	1	1	0
U of U Teaching and Learning	419	0:15:35	7	9	2
UEN Professional Development	3168	0:17:11	13	16	14
Dixie ART	2473	0:16:53	22	26	15
BATC Business Department	119	0:11:58	3	3	0
BATC Custom Fit	96	0:08:53	1	1	1
BATC Drafting	18	0:03:43	1	1	1

Group	Active Day		Hour of Day	
	Most	Least	Most Active	Least Active
UVSC Pilot Group	15-Oct-04	24-Aug-04	9:00 PM - 10:00 PM	3:00 AM - 4:00 AM
USU Instructional Technology	13-Sep-04	21-Aug-04	6:00 PM - 7:00 PM	4:00 AM - 5:00 AM
UofU Educational Psychology	24-Feb-04	8-May-04	4:00 PM - 5:00 PM	3:00 AM - 4:00 AM
UofU Special Education	4-Feb-04	21-Apr-04	3:00 PM - 4:00 PM	11:00 AM - 12:00 PM
UofU Teaching and Learning	27-May-04	17-Jul-04	4:00 PM - 5:00 PM	7:00 AM - 8:00 AM
UEN Professional Development	17-Nov-04	26-Jan-04	2:00 PM - 3:00 PM	4:00 AM - 5:00 AM
Dixie ART	15-Oct-04	7-Dec-04	4:00 PM - 5:00 PM	3:00 AM - 4:00 AM
BATC Business Department	11-Nov-04	11-Oct-04	9:00 AM - 10:00 AM	8:00 AM - 9:00 AM
BATC Custom Fit	27-May-04	28-May-04	9:00 AM - 10:00 AM	11:00 PM - 12:00 AM
BATC Drafting	27-May-04	15-Apr-04	10:00 AM - 11:00 AM	1:00 PM - 2:00 PM

7. Benefits experienced

a Datacenter capabilities expanded.

i Load Balancing Switches

- 1 Able to benefit K12 Proxy Servers with on more out of pocket funds.
- 2 Ability to load-balance other Application as they come along.

ii We were forced to find better, fast, and easier to manage storage

- 1 Lead us to installing a Storage Area Network (SAN).
- 2 Still expanding the SAN's capabilities
- 3 More to come on this in February.

b Work with Weber State's Vista support staff

i Weber implemented Vista on a larger Scale

- 1 Weber is a head of UEN in the implementation cycle
- 2 We've learned from their experiences.

a Some good, Some Bad

3 We caught up with them and passed them in August.

4 Weber still has more classes.

c The unexpected

i Collaboration of the different Higher ED online education providers.

8. Questions and Answers

PIONEER LIBRARY SUPPORT - DISCUSSION

Issue

UEN NOC support for Pioneer Library Services

Background

Pioneer Library is one of most-used services provided through UEN. These resources are accessed millions of times each month by tens of thousands of students, teachers, and library patrons throughout Utah. Five companies provide the services that make up Pioneer Library. All vendors deliver these resources over the Internet from outside the UEN network. Pioneer Library is supported by UEN staff from both Instructional Services and Technical Services.

The UEN Network Operations Center (NOC) has been working recently with UEN Instructional Services to improve operational support for Pioneer Library. The NOC has established operational relationships with each Pioneer Library vendor. Processes for diagnosing technical problems are being developed and documented. The NOC is also working with the UEN Software Development group to implement proactive monitoring of Pioneer Library services. A class will be held at next month's Technical Summit to educate our stakeholders about the technical issues associated with administering and using Pioneer library resources.

Recommendation

This is an information item. No further action is required of the Technical Services Subcommittee at this time.

SAN JUAN CIB GRANT PROJECT - DISCUSSION

Issue

UEN is nearing completion of the first phase of the San Juan Community Impact Board (CIB) project, and has submitted a request for funds from the CIB to complete the second and final phase of this project.

Background

Phase one of the San Juan CIB project is near completion. This project included the implementation of a digital microwave network that now provides broadband services to Monument Valley High School, the Monument Valley Higher Education Center and Navajo Mountain High School.

IP video improvements were also part of this project. Since October the following sites have been upgraded to the Utah Education Network's complex and/or simple IP video class room design and are currently in production.

Monument Valley High School

- One Complex/Origination class room
- One Simple distance education class room

Monument Valley Higher Education Center

- One Simple distance education class room for CEU

Navajo Mountain High School

- One Complex/Origination class room installed
- One Simple site distance education room installed

The second phase of the San Juan CIB project is intended to upgrade the network at Montezuma Creek, Monticello, and Blanding school and higher education locations. As in Phase One, it will replace obsolete analog radios with high capacity digital microwave radios that will dramatically increase the network capacity of schools and higher education centers in those locations.

UEN and its partners, the San Juan School District, College of Eastern Utah, Utah State University, and the Southeast Utah College of Applied Technology are requesting funding for this second phase of the project through the Community Impact Board. The total cost of the project will be \$825,000. The proposal requests that half of the cost be provided in a grant from CIB, and that UEN and the other partners provide matching funds of an equal amount. The CIB will initiate its review and determine whether to fund the proposal beginning in January.

Recommendation

This is an information item. No further action is required of the Technical Services Subcommittee at this time.

E-RATE UPDATE - DISCUSSION

Issue

This is an informational report on the recent E-Rate Year 2004 Funding Requests.

Background

Wave 10, the first new wave of funding commitments for FY 2004 since the freeze began in August, was released on Friday, December 3, 2004. Funding in this wave for the State of Utah was \$6.7 million dollars. UEN's portion was \$3 million dollars for our statewide Internet service, non-WAN Qwest services, rural WAN applications (2nd year of contracts) and miscellaneous rural circuits. Total funding to date for the state is \$8.4 million dollars.

In the last legislative act of the 108th Congress, the Senate passed three high-profile telecommunications bills, one of which was a bill to exempt the Universal Service Administrative Corporation from accounting rules that critics say have disrupted E-Rate payments and could sharply increase consumers' monthly telephone surcharges. This is good news for E-Rate applicants, as we expect funding waves to resume back to their customary bi-monthly release.

Training

Approximately 25 school districts participated in the first round of E-Rate trainings for the upcoming Year 2005 funding year. There will be additional trainings beginning December 9, to continue until the close of the filing window. All of the districts continue to rely on weekly E-Rate newsletters for FCC policy changes, as well as assistance from the State Coordinator and the Local Service Reps.

Recommendation

This is an information item. No further action is required of the Technical Services Subcommittee at this time.

NETWORK RFP REPORT - DISCUSSION

Issue

Two Requests for Proposals are currently being evaluated to expand Internet capacity of the Network, and to provide far greater Ethernet capacity at schools that do not currently have adequate capacity.

Background

Internet RFP

The UEN contract with Sprint expires in May 2005. At that time, we anticipate that UEN will be able to install greater Internet bandwidth with approximately the same budget as we are currently spending. Installation of new Internet services often requires a 120-day lead-time. The E-rate filing window for next year closes in mid February 2005. For these reasons UEN has circulated an Internet Request for Proposal this fall. The vendor responses were due December 2, 2005.

There are two major objectives associated with this RFP. The first is to increase Internet bandwidth. The second is to assess the feasibility of placing Internet access at distributed sites throughout the state. Vendors have been asked to provide pricing for UEN PoPs other than EBC. UEN is now in the process of evaluating the responses and will make a decision by the end of December.

Ethernet RFP

UEN is interested in securing pricing for providing Ethernet services for all schools in Utah that do not currently have high capacity (100-1000 mbps) Ethernet connections. UEN staff has spend several months developing the Ethernet RFP. Vendors have been asked to provide Ethernet solutions at speeds of 100 Mbps and 1000 Mb/ps for secondary and elementary schools. Responses were due December 9, 2004. UEN will quickly evaluate the merits of these responses and anticipates issuing a best-and-final request from vendors.

Decisions must be made, contracts signed and E-Rate documents filed prior to the E-Rate filing deadline in mid February. UEN is dependent on legislative allocation of new dollars to fund these Ethernet circuits. Vendors have been notified of this requirement. A final report will be shared with the Steering Committee in the February meeting.

Recommendation

This is an information item. No further action is required of the Technical Services Subcommittee at this time.

MONTHLY SERVICE REPORT - DISCUSSION

Issue

The UEN Monthly Service Report (MSR) is now being sent to district superintendents, technology directors and other UEN stakeholders each month. This report briefly describes the purposes and value of that report, and future plans to provide a similar report to higher education stakeholders.

Background

UEN has been developing the Monthly Service Report (MSR) for the past eighteen months. UEN Software Development, NOC, and Engineering departments have collaborated to assemble network performance information into one network accessible location that is available to district technical directors and administration. Circuit performance, trouble ticket details, contact information and many other pieces of information are available through the MSR.

The MSR was initially tested with SEDC districts. Last summer distribution was expanded, first to SESC districts and then to the rest of the districts in the state. Mike Petersen and other UEN staff have been visiting with district representatives for the past few months to share MSR details. The report is a valuable tool for providing high level information about utilization, reliability, and network incidents. It identifies network devices within the districts that are most extensively utilized, and the level of reliability of those devices. It also allows district staff to review more detailed information at the specific incident or individual device level directly from the MSR.

Based on feedback from district staff, improvements will continue to be made in the report, it will be distributed more widely to other interested UEN stakeholders, and technical decisions will be made on the basis of the information provided through these reports.

UEN is beginning to adapt the MSR to meet the needs of USHE colleges and universities. USU has been chosen as an initial development site. USU staff will work with UEN to develop MSR requirements and expectations. Once an initial Higher Education MSR is developed and tested, other sites will be added.

The MSR is a dynamic report that can be modified through user input to meet the accountability commitments made to UEN stakeholders. These reports are available to Steering Committee members for review and comment.

Recommendation

This is an information item. No further action is required of the Technical Services Subcommittee at this time.

STEERING COMMITTEE BUSINESS MEETING

T A B 27

**REPORT OF THE INSTRUCTIONAL SERVICES
SUBCOMMITTEE - DISCUSSION**

The Instructional Services Subcommittee will report to the Steering Committee on items covered in the subcommittee agenda.

STEERING COMMITTEE BUSINESS MEETING

T A B 28

**REPORT OF THE TECHNICAL SERVICES
SUBCOMMITTEE - DISCUSSION**

The Technical Services Subcommittee will report to the Steering Committee on items covered in the subcommittee agenda.

STEERING COMMITTEE BUSINESS MEETING

T A B **29**

STEERING COMMITTEE MEETING MINUTES

UTAH EDUCATION NETWORK STEERING COMMITTEE

October 15, 2004 - 9:00 am

Members Present: Ray Timothy, Gary Wixom, Mike Petersen, Steve Hess, Glen Taylor, Ray Walker, Jon Crawford, Pat Lambrose, Wayne Peay, Ryan Thomas, Ron Barlow, Jeff Livingston, Darrell White, Kirk Sitterud, Senator Carlene Walker, Kim Marshall, Pat Rudd

Others Present: Laura Hunter, Jim Stewart, Larry Smith, Claire Gardner, Bill Kucera, Lisa Kuhn, Dennis Sampson, Gary Tingey, Rene Willemsen, Barry Bryson, Rick Gaisford, Cory Stokes

Welcome and Introductions

Gary Wixom welcomed everyone to the October meeting. Gary briefly explained the new format of the meetings and the creation of the new Security Group.

Committee of the Whole

Budget

The Committee of the Whole discussed the major Fiscal Year 2006 budget issues. Mike Petersen went through the budget summary, item by item. The budget request is ambitious. Because of the ongoing nature of the major pending projects UEN is required to present an aggressive budget if we wish to continue to make progress.

1. Salaries

Because there have been no significant salary adjustments in the past 3 years, our Priority 1 is a request that \$120,000 in ongoing funds be allocated to retain staff with critical skills which are sought in the private sector.

2. Conversion of One-Time Funds to On-Going

Priority 2 provides for the conversion of one-time funding to on-going funding in the area of Network Capacity and Reliability. In order to pay the on-going contract obligations it is critical that the one-time appropriation of \$400,000 we received in FY05 be converted. We are also requesting conversion of \$140,000 in one-time funds for essential enterprise level network projects.

3. Network Capacity, Reliability and Security

Priority 3 focuses upon increasing network backbone capacity throughout the state and accommodating growth of network traffic for many years. This is the 3rd year of an on-going project called GeoMax. UEN has a strong commitment to working with the telecommunications providers and others to complete this project and be able to provide high speed Ethernet connectivity to elementary and secondary schools. Senator Walker shared that in order to help the Legislators to understand this budget request UEN need to present a format that would explain the ramifications of either approving the funding or not. What would happen to a school if the money were not approved for the upgrade of the network? Ryan Thomas suggested that each Legislator receive a list of the schools in their districts which would be affected. It is important to note that the Utah State Board of Education endorsed this Priority 3 in its FY2006 USOE budget request. \$5,000,000 one-time and \$800,000 on-going funding to UEN is included in the State Board of Education request. UEN is also discussing this proposal with the Utah Schools Superintendents Association and the Utah School Boards Association to raise awareness of the importance of this request and to seek official endorsements. These funds will be leveraged with E-Rate funds to provide high-speed Ethernet connectivity to the remaining districts and schools (including elementary) over the next 2 to 3 years.

4. Pioneer Online Library

Priority 4 requests \$500,000 of on-going funds to enhance the Pioneer Online Library collection. This request will allow UEN to provide equal access to critical library and reference resources in rural school and communities.

5. Conversion of EDNET to IP-based Videoconferencing Technology

Priority 5 is a request for \$800,000 in one-time state funding to continue the second of three phases in the conversion of EDNET to IP-based videoconferencing technology. Major progress has been made on the first phase. Two high capacity IP video MCU bridges have been installed at Eccles Broadcast Center and at Utah State University. UEN has been awarded grants from the National Telecommunications Information Agency (NTIA) and the Rural Utilities Distance Learning and Telemedicine Program. The grants will cover costs of 11 videoconferencing classrooms in several schools. They will cover costs for 3 additional IP video MCU bridges for Salt Lake Community College, Uintah Applied Technology College, and

College of Eastern Utah San Juan Campus. The one-time state funds will be leveraged and will serve as match for these federal grant funds.

6. Enterprise-level Technology Support

Priority 6 requests \$260,000 in one-time funding to support enterprise-level technical support for Web-based tools for public and higher education. Part of this request involves the pilot project with USHE colleges and universities to evaluate an online learning management system. The USHE FY 2006 budget request includes \$1.5 million in one-time and \$1.5 million in on-going to pay licensing (Oracle), equipment and maintenance and staff support for a permanent learning management system. UEN will increase server capacity, expand its database license, and increase staff in order to be ready to support the increased demands that will come from this project.

7. Public Telecommunication Utility Costs (KUED, KUEN, EDNET and KUER)

Priority 7 has become a necessity due to federal mandates for KUED-TV and KUEN-TV. The University of Utah can no longer bear the operating costs for public broadcasting entities. UEN requests \$127,000 in on-going funding to pay for recurring monthly utility costs of electricity to operate transmission and translator equipment for statewide service.

Several corrections to the budget were passed out; there had been an error in the report that was posted on the Web. A motion was made to move adoption of the FY 2006 budget request totaling \$2,437,000 on-going funding and \$6,590,000 one-time funds. **THIS MOTION WAS PASSED WITH ALL VOTING IN FAVOR.**

Steering Committee Business Meeting

Instructional Services Subcommittee Report - Kirk Sitterud

Tab 22 – Web Services Survey

Kirk Sitterud talked about the survey Web site that has been established to find out what users want most in a personalized education Web page. To date 180 people have responded to this survey. The survey will stay open until February 2005 and we are hoping more educators will take the time to visit the Web site. To take the survey visit www.surveymonkey.com/s.asp?u=80361548325. (Sample of the survey can be found in Tab 22 Attachment A)

Tab 23 – Pioneer Library Advocate Program

The Pioneer Library Advocate is a liaison for the school district, public library, or academic institution to receive and distribute materials about Pioneer Library. Kirk advised that 3 workshops had been completed to date. A detailed list of the upcoming workshops can be found behind Tab 23 page 1. Kirk also talked about the promotional materials that are being introduced at these workshops. An invitation was extended to the committee members to attend any of these workshops.

Tab 24 – Utah Instructional Television and Resource Guide Update

Kirk reported that 33,000 guides have been mailed out to educators throughout the state. Kirk wanted to thank all of the staff members who were involved in the publishing and distribution of this guide. They did an outstanding job this year and should be commended for all of their hard work and efforts.

Tab 25 – PBS TeacherLine Update

Utah Education Network and KUED are partners with PBS to bring high quality online professional development to Utah teachers through the PBS TeacherLine program. Kirk shared some of the results with the committee members. To date 311 educators have completed PBS TeacherLine courses. Another 82 individuals are currently registered for Fall 2004 courses representing a more geographically diverse group than in past quarters. For a detailed list of participation by school district please see Tab 25 pages 2 and 3.

Tab 26 – eMedia Digital Media Services Update

Kirk reported that UEN is installing an advanced Web video encoding and management solution for use by K-12 and higher education institutions. Unfortunately they are about 4 weeks behind schedule in the deployment of this project and will continue the pilot testing of all the software and hardware involved in getting this project off the ground.

Tab 27 – Quarter 1 Progress Report on FY 2005 Strategic Plan

Kirk shared with the committee that Laura Hunter gave an update regarding the accomplishments and objectives for first quarter FY 2005 Strategic Plan. A detailed list can be found behind Tab 27 pages 3-10.

Tab 29 – Special Projects and Regional Priorities

Ryan Thomas went over the funds that were available for the FY 2005 Special Projects. The budget has been finalized and is ready for approval. A detailed list of non-Ethernet projects can be found on Tab 29 Attachment A. There is one correction to make to this detailed sheet and that is on the “Upgrade of the D.O. connection at Grand County”- this was recommended and changes the amount from \$40,000 to \$540,000. A detailed list of the Increased Capacity and Ethernet Projects can be found on Tab 29 Attachment B.

Ryan Thomas made a motion to adopt the regional priorities as reflected in Tab 29 Attachment A and B. **THIS MOTION PASSED WITH ALL VOTING IN FAVOR.**

Tab 30 – GL3 Project Overview

Ryan shared with the committee that Pete Kruckenberg gave an overview to the subcommittee so all would have a better understanding of this project. Ryan did an outstanding job in translating Pete’s overview to present to the Steering Committee. The project is an exciting one as it allows virtual connectivity to the network for all sites and creates redundant pathways. More detailed information on the overview can be found in Tab 30 Attachment A.

Tab 31 – National Lambda Rail and Western Lights

Utah Education Network has been working with CENIC (California’s version of UEN) and the Front Range GigaPoP (FRGP is Colorado’s education network) on the National Lambda Rail (NLR) project. When completed, a 10 GigE circuit will attach UEN to NLR in Denver, Colorado. Ryan reported that UEN is now evaluating the cost and practicality of negotiating with our partners Irrefutable Rights of Use (IRU) to fiber from Salt Lake City to Riverside, California. This would give us the capability of redundancy via a national level and not just within the state. This is not an inexpensive project for the up front costs, which would run approximately 6 million dollars, but the ongoing costs are fairly moderate and would run approximately \$500,000 per year.

Tab 1 – Quarter 1 Progress Report on FY 2004 Strategic Plan

This report reflects the fact that the Technical Services staff is moving forward very successfully on a number of projects. An update can be found in Tab 1 Attachment A.

Tab 2 – E-Rate Update – Discussion

Ryan reported that effective October 1, 2004 the E-Rate accounting system is now required to use the same standards as the rest of the Federal Government. There was

a short suspension period in the funding commitment letters being sent out. The commitments will be kept according to the most current E-Rate information. UEN has more than 7 million dollars worth of commitments out in the field.

Tab 3 – GeoMax Phase II Update

Ryan suggested we move through this section unless there were any questions. If you would like more background information on this subject it can be found in Tab 3.

Tab 4 – UEN Technical Summit

This is an announcement for the summit, which is open to all to attend. This will be the fifth summit that Technical Services will be hosting. UEN plans to hold this summit in Salt Lake City the first part of December. This summit will be filled with information and training that is valuable to the education community.

Tab 5 – Peer-To-Peer Working Group

Ryan reported that this group was established to assist each institution and school district/regional service center in developing a practical and long-term strategy to address this issue. More information regarding the File Sharing Policy can be found behind Tab 5 Attachment A.

Committee Materials

A final item discussed was distribution of Steering Committee materials. Members would like more time to review information prior to meetings. Would UEN try and get minutes and agenda items out 2 days earlier so committee members would have more of an opportunity to read and go through this material.

Pat Lambrose made a motion to start publishing the minutes of the Technical Services and Instructional Services subcommittee meetings in the Steering Committee materials. **THIS MOTION PASSED WITH ALL VOTING IN FAVOR.**

The goal is to get the agenda and materials out one week before the Committee meeting as a whole.

Steering Committee Minutes

A motion was made to approve minutes with corrections to add Ron Barlow and Pat Lambrose as attending the October meeting. **THIS MOTION PASSED WITH ALL VOTING IN FAVOR.**

The meeting was then adjourned until the next Steering Committee meeting, which will be held on December 17, 2004 at 9:00 a.m. at the Dolores Doré Eccles Broadcast Center.

(Please note that only the Minutes of the Instructional Services Subcommittee are included in the minutes for October 2004. There were no official minutes taken for the October Technical Services Subcommittee. Minutes of the Technical Services Subcommittee will be included beginning with the December 17, 2004 meetings.)

Instructional Services Subcommittee Meeting
October 15, 2004

Attendees: Kirk Sitterud (Chaired in absence of Linda Fife and Dick Siddoway), Gary Wixom, Cyd Grua, Rick Gaisford, Dale Bills, Pat Lambrose, Wayne Peay, Jeff Livingston, Jon Crawford, Weldon Sleight, Laura Hunter, Cory Stokes, Claire Gardner, Rick Cline, Renee Willemssen, Bill Kucera, Rich Finlinson

Minutes compiled by Leah Bryner

Web Services Survey – Karen Krier

UEN is conducting an online survey about personalized Web services. Karen Krier is gathering feedback from teachers regarding what they would like to see on UEN's Web site.

Wayne suggests Instructional Services (IS) extend invitation to librarians to participate in survey, IS agrees.

Action item – Encourage constituent groups to take part in the five minute Web services survey by visiting www.surveymonkey.com/s.asp?u=80361548325.

Pioneer Library Advocate Program – Rick Cline

Pioneer Library advocates are promotional partners throughout the state. They will convene in a series of workshops this fall.

Trainings are intended to help institutions become familiar with Pioneer Library and communicate with their users regarding the resource.

Action item – All committee members are welcome to attend a training. Contact Rick Cline at 801-585-0913 to schedule.

Utah Instructional Television and Resource Guide Update – Laura Hunter

The 2004-2005 Utah Instructional Television and Resource Guides have arrived, and have been mailed to Utah educators and PTA leaders.

Committee commends staff for putting the Utah Instructional Television and Resource Guide together.

Action Item – Committee recommends sending a copy to parents.

Action item — Utah Instructional Television and Resource Guide will be shared at next C-Forum meeting.

PBS TeacherLine Update – Renee Willemsen

UEN and KUED are partners with PBS to bring high-quality online professional development to Utah teacher through the PBS TeacherLine program.

Online Professional Development courses are open for enrollment, and registration information is posted on the Web site. There are several different courses in math and technology integration available right now.

In February, curriculum mapping courses will be offered.

A federal grant through USDOE pays for the course creation development and delivery, and different credit options are available. Depending on requirements, teachers can earn re-licensure points (no pay raise) or 5000 level SUU college credit, or USOE credit.

eMedia Digital Media Services Update – Cory Stokes

The eMedia service for encoding, indexing and delivering digital learning objects is almost ready for pilot testing with select educators. Delays have caused the project schedule to slip four weeks.

We hope to start piloting program by November 1, 2004. The past issues with video digitizing software should be resolved, and the system should be fully functional for all educators by Spring 2005.

The length of clips is 2 to 5 minutes. Clips will be reviewed for instructional content by educators selected by UEN cooperating with USOE specialists. Karen Krier is looking for tech-savvy librarians/retired librarians or curriculum specialists to review the instructional content.

Action item — If you have librarian/curriculum specialist recommendations for Karen, please email her at kkrier@media.utah.edu.

Quarter 1 Progress report on FY 2005 Strategic Plan – Laura Hunter

This report includes progress notes and accomplishments toward objectives for the first quarter of the FY05 Strategic Plan.

Claire Gardner, Bill Kucera and Laura Hunter are happy to answer any questions about the plan.

Action item — Pat Lambrose suggested minutes from Technical Services and Instructional Services Subcommittee meetings should be shared between groups. Minutes will be posted on Web site for review by both committees in advance of next meeting.

Action item — If committee members and co-chairs have items to add to agenda, contact Laura in advance of meeting to add items

Action Item — Pat Lambrose suggests specialists should rotate at PECC meetings, committee agrees.

Cyd Grua reported on Higher Education Advisory Subcommittee. She will be sending out two surveys next week.

Please note: detailed information and discussion of the issues are included in the materials prepared for the meeting. These materials are available online at www.uen.org/steering/html/materials.html. Please refer to them for additional reference.

STEERING COMMITTEE BUSINESS MEETING

T A B 30
OTHER