

# Utah Education Network Steering Committee

October 15, 2004

**UTAH EDUCATION NETWORK  
STEERING COMMITTEE**

**A G E N D A**

OCTOBER 15, 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 - December 17, 2004

Technical Services Subcommittee Meeting - December 17, 2004

UEN Steering Committee - December 17, 2004

Instructional Services Subcommittee Meeting - February 18, 2005

Technical Services Subcommittee Meeting - February 18, 2005

UEN Steering Committee - February 18, 2005

*Please place these materials in your Steering Committee Binder.*

## FY 2006 BUDGET REQUEST - ACTION

### Issue

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The FY 2006 legislative budget request requires approval by the UEN Steering Committee. UEN staff has worked on the planning and development of this year's request in cooperation with UEN stakeholders. The Steering Committee held a preliminary discussion of the budget priorities in August. The UEN budget request will be presented to the State Board of Regents on October 19, 2004. Because the deadline for submission of preliminary budget requests to the Governor's Office of Policy and Budget (GOPB) was September 27, 2004, the request has already been submitted to the Governor's Office.

### Background

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Economic conditions in the state for this year are much improved over the past few years. Following an economic downturn that led to significant budget reductions for all state agencies, the state economy is showing signs of a slow, modest recovery. Analysts are projecting that a substantial amount of one-time funding will be available for state appropriations.

### Major FY 2006 Budget Issues

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#### **Priority 1: Salaries**

There have been no significant salary adjustments for UEN employees the past three years. Unless larger-than-average increases are provided, we are confident that a number of key UEN staff members will be hired by private businesses.

We propose that \$120,000 in ongoing funds be allocated to retain key UEN staff with critical skills that are highly sought in the private sector. If we fail to retain the talented network personnel whose salaries are currently significantly lower than private sector peers, there will be negative consequences throughout the Network. In addition, the importance of greater than average cost of living increases must be a focus in our budget presentations to the Governor and the Legislature.

## **Priority 2: Conversion of One-Time Funds to On-Going**

### Technical Services Network Capacity and Reliability

For the past two years, the legislature has provided ongoing or one-time funding to undertake the GeoMax backbone installation, several rural Ethernet projects, the GL3 project and the Qwest-UEN GeoMax Phase II projects. These projects are completed, or are under contract with local telecommunications providers and will be finished by the end of the current fiscal year. It is therefore critical that the one-time appropriation of \$400,000 we received in FY05 be converted to on-going funds to pay the on-going contract obligations entered into by UEN in FY05.

### Enterprise-Level Projects

UEN requests conversion of \$140,000 in one-time funds during the current fiscal year to on-going funds in FY06 for essential enterprise-level network projects. As we explained to the legislature during the last session, one staff position and software maintenance contracts are now being paid with that revenue source. It is essential that we receive an ongoing revenue source to replace the one-time funds.

## **Priority 3: Network Capacity, Reliability & Security**

UEN has completed approximately two-thirds of the most dramatic network upgrade in eight years by working with Qwest and several rural telephone companies. These projects are increasing network backbone capacity throughout the state to a high-speed networking architecture, and should accommodate the growth of network traffic for the next 20 years.

All higher education institutions, except CEU, are now connected to the UEN backbone with Gigabit capacity fiber connections. A project to connect CEU to the GeoMax backbone is underway and should be completed in the next few months. At the end of June 2005, 73% of all public education district offices (29/40), 57% of all secondary schools (170/300) and 33% of all elementary schools (157/469) in the state will have high-speed Ethernet broadband network connectivity. This is a total of 327 schools (43%) statewide.

Our discussions across the state with technology directors, district superintendents, Technical Services subcommittee members, and other UEN stakeholders indicates a strong consensus that UEN's highest priority should be to provide high-speed Ethernet connectivity to the remaining districts and schools over the next two to three years.

To provide the over 442 remaining public secondary and elementary schools and 11 district offices with high-speed Ethernet broadband network connectivity, UEN will request legislative appropriations (both one-time and on-going) over two years. In FY 2006, UEN is requesting 50% of the one-time funding required, \$5,000,000. These funds would be leveraged with approximately \$10,000,000 in federal E-Rate funding. The project will also require an increase of on-going state appropriations of

\$800,000 to be leveraged with approximately \$1.6 million in on-going federal E-Rate reimbursements.

On Friday, October 1st, the Utah State Board of Education endorsed this request when it adopted the FY2006 Utah State Office of Education budget request. \$5,000,000 one-time and \$800,000 on-going funding to UEN is included in the State Board of Education budget request. Special thanks are owed to Patti Harrington, Ray Timothy and Patrick Ogden for their support so this important project could be included in the USOE FY 06 request. We are also discussing this proposal with Utah School Superintendents Association and the Utah School Boards Association to raise awareness of the importance of this project and to seek official endorsements of this project from each association.

#### **Priority 4: Pioneer Online Library**

UEN requests \$500,000 of ongoing funds to enhance the Pioneer Online Library collection.

The demand for Pioneer Library resources has increased steadily since it was established nearly ten years ago. The budget used to acquire public education resources for the library has remained flat for the past five years. This request will be combined with requests from the public libraries and academic library consortia to enter into new contracts which will provide new technologies and collections. By leveraging the public funds for Pioneer Library, the library consortia will significantly reduce costs to the state and to partner institutions. This request will allow UEN to continue to provide equal access to critical library and reference resources in rural schools and communities.

#### **Priority 5: Conversion of EDNET to IP-based Videoconferencing Technology**

UEN received \$240,000 in one-time funds during the current fiscal year to begin the conversion of the outdated EDNET system to an Internet-based videoconferencing system. Major progress has been made on the first phase of this project. Since spring, 45 EDNET classrooms (about one-quarter of the classrooms in the EDNET state network) have been converted to IP-based videoconferencing technology. Two high-capacity IP video MCU bridges have been installed at the Eccles Broadcast Center and at Utah State University. We have been informed during the past three weeks that UEN has been awarded two grants totaling \$320,315 from National Telecommunications Information Association (NTIA) and the Rural Utilities Distance Learning and Telemedicine program. These grants will pay for installation of 11 videoconferencing classrooms in several high schools, a charter school, and higher education centers. The grants also pay for three additional IP video MCU bridges at Salt Lake Community College, the Uintah Basin Applied Technology College and CEU San Juan Campus. The one-time state funds will serve as match for these federal funds.

UEN is requesting \$800,000 in one-time state funding to continue the second of three phases in this project. We will continue to seek matching grant programs to leverage any state appropriation.

### **Priority 6: Enterprise-level Technology Support**

UEN requests \$260,000 in one-time funding for enterprise level technology support. UEN provides a growing number of Web-based tools for public and higher education. Examples include Pioneer Online Library, lesson plans, curriculum search and filtering. Measured by the frequency of access to these tools, usage has increased more than 100% annually for the past several years. One major Web service is being added this year, a digital asset management system which we are calling eMedia (see Tab 26 for an overview of the service). We are confident that it will prove to be a powerful tool that will transform the way faculty and students will find and use all kinds of learning materials.

UEN is participating in the second year of a pilot project with USHE colleges and universities to evaluate an online learning management system. Because of the success of that pilot project, we expect that by the end of the current year, UEN will be hosting the learning management systems of 4 of the USHE institutions. The USHE FY 2006 budget request includes \$1.5 million in on-going funds to pay licensing, equipment and maintenance and staff support to pay for a permanent learning management system. UEN will need to 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. Specifically, we estimate that one-time costs for UEN will be \$530,000 and ongoing costs will be \$370,000. Although the funds for this project are included in the USHE FY 2006 request, it may be wise for the UEN-specific costs to be also be itemized in the UEN request.

### **Priority 7: Public Telecommunication Utility Costs (KUED, KUEN, EDNET and KUER)**

Due to federal government mandates by the FCC, KUED-TV and KUEN-TV are now required to operate both analog and digital transmitters until at least 2007. This has resulted in increased operating costs to both stations, as the digital transmitters use almost twice the amount of electricity as the analog facilities. For many years, the University of Utah has paid the electrical utility costs to operate key transmission sites for the public broadcasting entities. Due to budget constraints, the University of Utah can no longer bear these costs. The four affected agencies are requesting an on-going legislative appropriation of \$127,000 to pay for the recurring monthly utility costs of electricity to operate transmission and translator equipment for statewide service.



**Table 1: Summary of FY 2006 Budget Requests**

<b>Item</b>	<b>On-Going</b>	<b>One-Time</b>
Retain Key UEN Staff (Personnel)	\$120,000	
Conversion of one-time funds to on-going		
Network Reliability, Capacity and Security	\$400,000	
Enterprise-Level Technology Projects	\$140,000	
Network Capacity and Reliability	\$800,000	\$5,000,000
Pioneer Online Library	\$500,000	
EDNET Conversion		\$800,000
Enterprise-Level Technology Support		\$260,000
Learning Management System (USHE)	\$370,000	\$530,000
Utility Costs Translator Sites	\$127,000	
<b>Total</b>	<b>\$2,457,000</b>	<b>\$6,590,000</b>

## Recommendation

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It is recommended that the UEN Steering Committee review and approve the FY 2006 budget request totaling \$2,457,000 on-going funding and \$6,590,000 one-time funds.

## UEN SECURITY REPORT - DISCUSSION

### Issue

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This is an update on progress of the UEN Security Group.

### Background

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During its August 2004 meeting, then UEN Steering Committee approved formation of a Security Group, comprised of representatives from the UEN Steering Committee, Instructional and Technical Service Committees and other key stakeholder groups. This group will make recommendation to the UEN Technical and Instructional Sub-committees and the UEN Steering Committee regarding security and end user training issues.

The first committee meeting has been scheduled for November 2, 2004. The committee will be jointly chaired by Ray Walker and Rick Gaisford. During the November meeting, committee members will begin to plan a Security Summit, as well as formalizing their committee structure, membership and action items.

In addition, a new Web site has been established at [www.uen.org/is/security.shtml](http://www.uen.org/is/security.shtml). The site holds documents developed through previous summits and security working groups. As the Security Group increases its activity, the site will continue to develop.

### Recommendation

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This is an information item. No further action is required of the Steering Committee at this time.

## WEB SERVICES SURVEY - ACTION

### Issue

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UEN is conducted an online survey about personalized Web services.

### Background

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Steering Committee members may recall that one project outlined in the FY05 Strategic Plan is to “Conduct a needs analysis and then design and implement personalized Web services.” As part of this analysis, an online survey has been developed and distributed through various meetings, conferences and teacher workshops. A copy of the survey is included in Attachment A.

The purpose of the survey is to find out what users want most in a personalized education Web page. This will help determine priorities with the resources we have available for the project. Approximately 160 respondents have completed the survey. The survey will be open until February 2005.

Survey: Personalized Web Services for Educators

[www.surveymonkey.com/s.asp?u=80361548325](http://www.surveymonkey.com/s.asp?u=80361548325)

Additional research into industry practices and research from university focus groups will also be included in this analysis phase.

### Recommendation

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It is recommended that committee members encourage the constituent groups they represent to take part in the Web services survey by visiting the web site listed above.

# TAB 22 ATTACHMENT A

## WEB SERVICES SURVEY

Survey: Personalized Web Services for Educators  
<http://www.surveymonkey.com/s.asp?u=80361548325>  
 Survey: Personalized Web Services for Educators [Exit this survey >>](#)

We are conducting a survey with Utah educators to find out which web page features are most important and valuable. Thank you for contributing your thoughts.

**1. Your Role: (Check all that apply)**

Elementary school teacher  
 Secondary school teacher  
 College / University Faculty  
 College / University Student  
 Preservice Teacher  
 Technology Trainer / Professional Developer  
 K-12 School Administrator  
 College / University Administrator  
 District / Regional Service Center / State Employee  
 Other (please specify)

**2. Your School & District or Institution:**

**3. How important are these web page features?**

	Important	Somewhat Important	Not Important	No Opinion
a. Post notes / announcements for students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Post notes / announcements for parents / community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Post assignment information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Access your district's Student Information System	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Upload documents and files	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Publish your own calendar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Post links to the core curriculum you teach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Post links to USOE approved lesson plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Post links to USOE approved Web sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Post links to lesson plans <b>you</b> have created	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. Post links to web resources <b>you</b> have created	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. Customize web page look and feel (color, themes, and / or personal graphics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. Create and post a quiz, test, or online poll	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. List Internet sites as favorites or bookmarks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
o. Post discussion forums / threaded discussion board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
p. Post links to TIPS test you have created	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
q. Post links to your district or school web site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4. List other features you find important:**  
 r.   
 s.

**5. Use the letter for an item above to rank the top 4 most important services. (Ex: #1 h)**

#1   
 #2   
 #3   
 #4

**6. Do you currently publish educational materials on the Internet?**  
 Yes  
 No  
 If yes, describe how they are published:

**7. Optional Contact Information (Complete if you are willing to be contacted to offer additional input.)**

Name:   
 Email Address:   
 Phone Number:   
 Your favorite Web site:

**Next >>**

## PIONEER LIBRARY ADVOCATE PROGRAM - DISCUSSION

### Issue

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Pioneer Library advocates are promotional partners throughout the state. They will convene in a series of workshops this fall. Information about the workshops and a sample agenda are included in Attachment A.

### Background

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The Pioneer Library Subcommittee, comprised of the Utah State Office of Education, Utah Academic Library Consortium, Utah Education Network and the Utah State Library Division, has developed a campaign to increase awareness and utilization of the Pioneer Library resources. The theme of this Pioneer Library promotion campaign is “Go Pioneer!” Pioneer Library Advocates have been selected from the ten academic institutions, all 40 school districts, and 23 public libraries. Over a four-week period, eleven workshops will be conducted as follows:

- October 12th (Tuesday) - Logan (USU)
- October 13th (Wednesday) - Salt Lake City (SLCC)
- October 14th (Thursday) - Ogden (WSU)
- October 19th (Tuesday) - Blanding (CEU - San Juan Campus)
- October 20th (Wednesday) - Price (CEU)
- October 21st (Thursday) - Salt Lake City (SLCC)
- October 26th (Tuesday) - Orem (UVSC)
- October 27th (Wednesday) - Vernal (USU Branch Campus)
- November 3 (Wednesday) - Richfield (Snow South Campus)
- November 4 (Thursday) - St. George (Dixie College)
- November 5 (Friday) - Cedar City (SUU)

The Pioneer Library Advocate is a liaison for the school district, public library, or academic institution to receive and distribute materials about Pioneer Library. This person could also facilitate a number of activities such as faculty presentations within their respective organization. The half-day workshops will be conducted cooperatively with presenters representing K-12, Public Libraries, and Academic

Libraries. Promotional materials include: bookmarks, brochures, golf pencils and a container, a pennant that would fit on a regular sized pencil, a large pennant, a tri-fold brochure with information on all three partners, a “To Go” box with a “Go Pioneer” sticker on the side, and fortune cookies. This campaign will continue through the current school-year.

## Recommendation

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This is an information item. Committee members are invited to participate in the workshops if they choose. Please contact Rick Cline at [rcline@media.utah.edu](mailto:rcline@media.utah.edu) to register in advance.

# TAB 23 ATTACHMENT A

## PIONEER LIBRARY ADVOCATE WORKSHOP AGENDA - DRAFT

October 12th – November 5th

- 8:30 – 9:00 am Continental Breakfast  
Pioneer Library Resource Table (Supplemental Materials)  
Registration
- 9:00 – 9:10 am Welcome (Hosting Academic Librarian)  
Housekeeping items
- 9:10 – 9:45 am Introduction to Workshop (Rick Cline)  
Overview of Pioneer Library  
DVD presentation/Group Discussion: Collaboration
- 9:45 – 10:30 am Shared Online Resources (15-min. - UEN Trainer)  
EBSCO, SIRS, & Deseret News Archives  
Unique Online Resources:  
Academic Libraries (10-min. – Acad. Representative)  
Public Libraries (10-min. – PL Representative)  
K-12 School Libraries (10-min. – K-12 Representative)
- 10:30 – 10:45 am BREAK
- 10:45 – 11:15 am Go Pioneer! Campaign Introduction (Tamara Wharton)  
Pioneer Advocate Role  
Promotional & Support Materials
- 11:15 am– 12:00 pm Planning: What you can do with Pioneer Library (Rick Cline)  
Your organization  
Others (Academic, Public, K-12 Schools, and Community)

12:00 – 1:00 pm	LUNCH (provided on-site) Networking Evaluation of Workshop
1:00 – 2:00 pm	Pioneering on your own (This is your opportunity to explore Pioneer Library and/or other online resources on your own or with a mentor. We especially encourage those who are new to Pioneer Library to take advantage of this time to become familiar with these resources.)



## UTAH INSTRUCTIONAL TELEVISION AND RESOURCE GUIDE UPDATE - ACTION

### Issue

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The 2004-2005 Utah Instructional Television and Resource Guide has been mailed to Utah educators. Copies will be available for committee members at the October 2004 meeting.

### Background

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As part of our goal to provide access to quality education resources, UEN has produced another outstanding educational resource for Utah teachers and teacher education students. The 2004-2005 Utah Instructional Television and Resource Guide was mailed to schools in early October 2004. UEN schedules and broadcasts 11 hours of instructional television, selected to support the Utah Core Curriculum, each weekday. Most of the programs also include off-air duplication and generous digital rights.

The Guide includes sections on copyright, adult education resources, Web resources, professional development, Pioneer, Utah's Online Library, KUED productions for educators, Internet search strategies and other exceptional resources. Some notable features include:

- 33,000 copies of the guide were printed, 2,000 more than last year and the highest amount in the history of the Guide
- 26,630 copies of the Guide were directly mailed via U.S. Mail to each licensed staff member in Utah K-12 schools, including administrators, library-media personnel, counselors and alternative schools
- Previous distribution was by courier and willing staff members, took weeks, and was difficult to track. Direct mail with each person's name on the Guide cost only \$70 more (not including U.S. Postage).
- The guide includes 88 pages, the same as our previous two years.
- Full color ads for NewsByte, UEN K-12 Educator Web page and KUED are included.
- Guide partners include KUED and the Utah Instructional Media Consortium.
- The Guide is supported by a comprehensive Web site, *www.utahitv.org*, with catalog information, program schedules and a downloadable PDF version.

- Additional Guides will be distributed to Teacher Education programs and via workshop and conference presentations.

Producing the Utah Instructional Television and Resource Guide is a large effort requiring many hours from dedicated staff members. It's also a great example of our successful collaborative relationship with the Utah Instructional Media Consortium, KUED and several departments within UEN.

## Recommendation

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It is recommended that the Instructional Service committee commend those staff members involved in this effort and promote use of the Utah Instructional Television and Resource Guide in their own districts and institutions.

## PBS TEACHERLINE UPDATE - DISCUSSION

### Issue

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UEN and KUED are partners with PBS to bring high quality online professional development to Utah teachers through the PBS TeacherLine program. This report summarizes the results of the program in Utah. A course catalog with quotes from Utah educators will be distributed at the meeting.

### Background

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#### Highly Qualified Teachers

Teachers need good distance learning courses as an option in meeting highly qualified teacher requirements of NCLB. Utah has partnered with other western states to bring numerous courses to our educators through this program. PBS TeacherLine is funded through a grant from the U.S. Department of Education.

#### Course Content

PBS TeacherLine now offers more than 80 research-based courses for teachers at every grade level from pre-K to 12. Courses in math, reading, technology integration, and teaching strategies qualify for credits at many colleges. Best practices for integrating technology into the curriculum are embodied in every course:

- Assuring research-based instructional design
- Delivering standards-based content from recognized experts in the field
- Blending in-person and online instruction geared towards educators in the classroom
- Creating learning communities
- Modeling best teaching practices with classroom video segments
- Providing authentic tasks with real-world applications
- Selecting best teacher resources such as lesson plans and essential questions

PBS TeacherLine courses have been developed in association with the following nationally recognized curriculum and professional development organizations:

- International Society for Technology Education (ISTE)

- National Council of Teachers of English
- National Council of Teachers in Mathematics
- Mid-continent Research for Education and Learning (MCREL)
- Education Development Center
- Concord Consortium
- University of Indiana

PBS TeacherLine courses are the first fee-based courses that UEN has offered. Participants pay \$150 per course. Each course takes about 8 weeks to complete. Participants move through the course material in student cohorts, providing a good interactive experience. Local educators trained by PBS, facilitate courses to enrich and inspire learning and create challenging classroom scenarios.

**Program Impact in Utah**

- Since January 2002 to the present KUED/UEN has been granted \$225,000. \$95,000 of that amount was granted for the 2004-2005 TeacherLine fiscal year.
- 311 educators have completed PBS TeacherLine courses.
- 82 individuals are currently registered for Fall 2004 courses representing a more geographically disperse group than in past quarters. The course fee for the 82 participants was paid for through various grant funding.

Alpine	23
Jordan	1
Washington	2
Beaver	1
Kane	1
Weber	1
Box Elder	1
Morgan	3
Electronic H.S.	1
Cache	1
Nebo	6
Private	1
Daggett	
Ogden City	2
Charter	2

Davis	10
Park City	3
Relicensing	3
Duchesne	3
Salt Lake City	5
Granite	0
Uintah	1

Utah PBS TeacherLine Fall Courses:

- Count on It: Number Sense for Grades K-5
- Developing Algebraic Thinking, Grades K-2
- Developing Algebraic Thinking, Grades 3-5
- Understanding Linear Functions in Grades 6-8
- Teaching Narrative & Expository Comprehension, Grades 1-3
- Teaching with WebQuests, Grades K-12

The subject area PBS TeacherLine courses have enabled individuals to strengthen their skills while opening the door to a variety of resources. The challenging but rewarding courses empower and strengthen educators' confidence in teaching weaker subject areas. Likewise, the self reflection and sharing of personal insights are invaluable and aid in the development of high-quality lessons for the classroom.

The PBS TeacherLine online courses have provided a flexible format for educators seeking relicensing and HOUSSE points. A top priority is increased awareness within districts across the state reaching individuals who are seeking low-cost subject area professional development, as well as district purchases.

To learn more about the courses, visit [www.uen.org/development/teacherline](http://www.uen.org/development/teacherline) or contact Renee Willemsen, [rwillemsen@uen.org](mailto:rwillemsen@uen.org) or 801-585-9726. For national course information visit [www.pbs.org/teacherline](http://www.pbs.org/teacherline)

## Recommendation

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

**eMEDIA DIGITAL MEDIA SERVICES  
UPDATE - DISCUSSION****Issue**

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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 4 weeks.

**Background**

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UEN has installed an advanced web video encoding and management solution for use by K-12 and higher education institutions. This system, a combination of the Virage video encoding system and the TeleScope digital asset management software, allows educators to search, preview and download rich media (such as video) learning objects for use in their classes.

**Project Update**

Originally scheduled for pilot testing in September, the eMedia service encountered technical delays throughout late August and September. An obscure configuration problem during installation of the TeleScope software led to days of troubleshooting. The issue was identified and resolved with assistance from North Plains software engineers.

Early in September, in order to meet requests from the UIMC, we added additional encoding hardware to the Virage video encoding system. The additional encoders caused conflicts with the installed system and required significant troubleshooting with Virage engineers. The encoder conflicts now seem to be resolved and we are ready to begin processing the videotapes provided by the UIMC.

The bright side of the delays is that we've had additional time to develop a better metadata profile for the system that incorporates and merges important existing metadata standards from Dublin Core, IEEE LOM, IMS, MARC and the Public Broadcasting Core. A well crafted metadata profile promotes interoperability with other library and media management systems.

Throughout October UEN TOC staff will receive training on the Virage system and begin digitizing the UIMC videos. Select educators will help UEN identify short educational video segments that can be used to target specific topics in teaching.

UEN staff will continue refining the system configuration and preparing for pilot testing to be done throughout Quarter 2.

## **Recommendation**

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

## QUARTER 1 PROGRESS REPORT ON FY 2005 STRATEGIC PLAN - DISCUSSION

### Issue

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

### Background

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A great deal of activity occurred for Instructional Services projects during July, August and September 2004. Major accomplishments are summarized in Attachment A. A full copy of the strategic plan is available online at [www.uen.org/ueninfo](http://www.uen.org/ueninfo).

### Recommendation

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



# TAB 27 ATTACHMENT A

## FY 2005 STRATEGIC PLAN UPDATE

**Goal 1. - Maintain and expand a robust, reliable, and secure high-speed network connecting every public school, college, university and library in Utah.**

Objective 1. Increase network speed, reliability and capacity, especially in rural areas.

Objective 2. Maintain and update data and microwave networks.

Objective 3. Increase Internet capacity

Objective 4. Provide a variety of network access and delivery options to stakeholders.

Objective 5. Increase security throughout the network.

Objective 6. - Support IP Video, other delivery technologies and future technologies.

- During this quarter more than 40 IP video sites have successfully implemented or migrated to a production level of service. These include migrated legacy EDNET sites as well as brand new locations. These 40 sites include have been involved in regular EDNET programming since the start of the fall, 2004 semester. Barring some “new technology” learning curves, unfamiliarity and some apprehension about the new equipment events have gone reasonably well.
- Training and orientation efforts are always ongoing. This quarter, however, found IDS service reps, field engineers, and Video Ops staff training every day on the operation of the new IP equipment as well as training about hybrid events which included the legacy EDNET equipment and UENSS equipment. There were approximately 20 teachers and 60 facilitators trained in 17 school districts. These districts included San Juan, Grand, Carbon, Duchesne, Uintah, Washington, Juab, Wayne, Tintic, Millard, Iron, Piute, Alpine, Salt Lake, Box Elder, Granite, and Tooele.
- MCUs and Management System - We have recently installed and are currently testing in a semi-production mode new Radvision MCU IP Video bridges, one at USU in Logan and one at EBC. Each bridge’s functionality is being tested with the new TMS IP Video Management System. TMS is simultaneously being tested for its functionality with the IP video end sites, and the Radvision bridges and other

network devices. Update system software has been installed which has resolved many of the functionality and compatibility issues we were facing. The server on which this software runs has been rebuilt and updated at the same time improving access, security, and functionality.

- Firewalls – The single most pervasive issue that we have faced with the implementation of IP Video Services in the EDNET production environment is the access (or rather the lack of access) allowed for the IP video traffic through local district and/or school firewalls. UEN and the stakeholders anticipated that this would be an issue, and worked to try and develop an operational standards document to proactively and preemptively address this issue. Even with those efforts though, we still experience sporadic yet frequent problems in 2-way IP video traffic through firewall devices. UEN would like to thank all of the Network Administrators around the state for working with us on these access issues. It is usually the case that once the necessary changes are made it is a minimal issue for future events.

#### Objective 7. Provide technical leadership and staff/stakeholder development.

**Goal 2. - Aggregate and deliver a suite of high quality educational resources for students, educators, staff, and administrators that are determined by our stakeholders to be best provided at a statewide level.**

#### Objective 1. Web design and maintenance.

- Completed systems installation, configuration, and began encoding for the digital media project.
- Created and disseminated user survey for Web services.
- Completed the Create a PDF service.
- Implemented HTML modifications to the “What’s On” page on UEN-TV.
- Began work with online interface for the electronic simulation “Lunaventure” from SLCC and USOE.
- Deleted 1,500 duplicate educator registrations from the database.
- UEN Public Information assisted Web Services in graphic design of selected uen.org pages.

#### Objective 2. Pioneer Online Library.

- Added eight new databases to Pioneer Online Library, completed contracts for private schools and home use.

- Increased Pioneer Online Library training resources and planned Advocacy outreach program.
- Ran Pioneer Online Library articles and ads in the Education Association newsletters.
- UEN Public Information provided public relation and communication assistance with the launch of the “Go Pioneer!” (Pioneer Library Advocacy) program.
- Design of the “Go Pioneer!” logo and oversaw production of “Go Pioneer” promotional items. UEN Public Information will continue to design and oversee production of additional items in Quarter 2.

Objective 3. TECH CORPS and Intel PC Recycling.

Objective 4. Provide resources aligned to academic disciplines and curricula.

- Added 200+ educational links correlated to the Utah Core Curriculum.
- Uploaded 2 new sites for USOE curriculum areas, designed one site, updated and maintained 10.
- Design and production of the annual Utah Instructional Television and Resource Guide (Final print and online production and distribution in Quarter 2).
- Communicated with educators regarding curriculum and other resources, tools, events and professional development opportunities through the News section of the UEN Home page.
- Launched new Utah Educators monthly electronic newsletter. This new electronic newsletter provides better newsletter tracking and maintenance.

Objective 5. Increase opinion leaders’ and influence makers’ approval of distance education services supported by the Utah Education Network collaboration.

**Goal 3. - Deliver distance learning classes and programs offered by public and higher education that use reliable, real-time and broadcast quality videoconferencing technologies.**

Objective 1. WebCT Vista.

Objective 2. IP Video.

- Working with IP Video Instructional Sub-Team to design and develop Distance Education training materials for “Best Practices for Faculty & Facilitators.”

- USU's IP pilot with Special Ed continues. In a USU/UEN partnership, we have been able to fund the upgrades of the majority of the original sites. There are plans for the room upgrade on the Logan campus. The USU Doctoral program in Education has added IP sites.

### Objective 3. Distance Learning Administration.

- EDNET is currently running an average of more than 130 pre-scheduled events and classes each day on the system with even more utilizing local and point to point IP video connections. Of these 130+ events more than 35% are "hybrid" events that involve both EDNET and IP sites and in some instances include an uplink component to UENSS for a third successfully blended technology. There are 30 satellite events each day.
- The IP Video Project's Instruction Services Sub-team has redirected its efforts toward Training and Best Practices for Instructors and Facilitators. The committee is composed of higher and public education teachers, trainers, instructional technologists, etc. Best practices training guidelines and web resources will be made available to all via UEN.
- Additional Distance Learning Administration completed items are listed under Goal 1, Objective 6.

### Objective 4. Satellite.

- A major emphasis was placed upon scheduling and bridging events during the quarter. There were no new satellite equipment installations since all delivery systems are migrating to IP video. However, all the existing satellite sites received a maintenance visit and/or additional training updates. UENSS is beginning to develop a 3 year replacement plan for the uplink equipment

## **Goal 4. -Build the vitality and scope of UEN broadcast services.**

### Objective 1. Research, Branding, and Outreach.

- Changed the call sign to KUEN and launched new branding campaign UEN-TV for Thinkers.

### Objective 2. Programming.

- Reformatted ITV blocks, eliminated programs older than five years.
- Participated in national media market and SatScreen program preview events.

Objective 3. -Build Adult Education services and programming.

Objective 4. Administrative.

Objective 5. Technical.

**Goal 5. - Provide professional development opportunities to improve the quality of K-20 instruction and assure effective implementation of technology in teaching.**

Objective 1. Professional development services linked to best practices.

- Developed and prototyped three video tutorials with new software.
- Updated online Pioneer Online Library workshop material to reflect new databases.
- Completed 8 three day ITC workshops for 184 participants; 3,864 hours.
- Conducted three sessions with faculty re: UEN resources, scheduled four additional sessions.
- Conducted Leadership Forum for 14 administrators.
- Recruited 15 new Technology Integration Academy participants seeking endorsements.
- Eliminated USU NSDL project – USU no longer needed our support.
- Significant training activities provided this quarter allowed for a continual update of training materials. Adjustments, additions, deletions, were made to adapt the training to the people and equipment who were in need. Blending and providing materials and resources for best practices on 3 delivery systems has begun in earnest and will continue into the year.

Objective 2. Professional development administration and reporting.

- Completed training lab remodel with new ceiling, lighting, carpet and paint.

Objective 3. Deliver professional development grant projects.

- Completed Intel Teach to the Future workshop for 41 educators.

Objective 4. UEN Staff professional development.

- UEN staff participated in numerous IP training workshops provided by staff, various vendors, and at manufacturers. Testing and evaluation of new equipment

and new programming software required intensive time and training so that UEN could make the best recommendations to stakeholders.

- Extensive staff attendance at NECC and Rural Schools Conference

**Goal 6. - Strengthen educational technology governance at the state, regional and local levels through improved coordination and cooperation among UEN's stakeholders.**

Objective 1. Improve coordination with UEN Steering Committee, subcommittee, and advisory committee members.

- Steering Committee and Sub-Committees – schedule set for entire year. Timelines determined for submission and dissemination of materials
- Designed print and online versions of Steering Committee and subcommittee materials.

Objective 2. Request new state funding for the highest priority needs of the Network, and maximize the benefit of state tax funds through increased support from external grants and other revenue sources.

- Supported Executive Director and Chief Financial Officer in preparing FY 2005 budget documents.

Objective 3. Increase revenue from grants and E-Rate reimbursements.

- Began preparations for Year 2005 Training
- Collected CIPA forms from all school districts
- Worked with State Legislative Auditor on E-Rate issues
- UEN staff attendance at Train the Trainer in Washington, D.C.
- KUEN-TV received a federal grant award of \$111,416 from US Department of Commerce National Telecommunications Information Administration (NTIA) Non-Broadcast Distance Learning fund for expanding state IP video distance education services to Olympus High School and Cyprus High School in Granite School District as well as Center City Charter School in Salt Lake City. The grant will help pay for installation of an IP video (MCU) bridge at the Salt Lake Community College hub location which will eventually service over 25 schools as well as purchasing the classroom equipment needed at the 3 secondary schools. The grant required a 50% match. The entire project is projected to cost \$222,832.

**Goal 7. - Be accountable to our stakeholders by measuring, tracking, and reporting performance and satisfaction with UEN-provided services.**

Objective 1. Report on plan progress with quarterly updates to the UEN Steering Committee.

Objective 2. Report monthly statistical analysis of usage of uen.org, my.uen, Pioneer Library, EDNET, UENSS, and other UEN programs and services.

- Reported monthly Web statistics online.
- A majority of the school districts have received reports demonstrating UEN support. Network Usage includes current circuits, their utilization, the bandwidth, availability and down time. The Network Service Report provides a list of the monitored devices and copies of all the incident tickets that have occurred within a month. The Network Service Summary shows the service and funding provided by UEN to the schools in a district. The EDNET Site Utilization report provides the number of events and the types of events which are being delivered to the various EDNET, IP, and UENSS sites in the district. The Instructional Services Report details the districts' use of Web resources, Pioneer Online Library, the numbers of Professional Development classes and participants, and outlines any new projects that will affect the district. These reports are being delivered in personal meetings with the Executive Director and the District Superintendent and others.

Objective 3. Report on pilot-tests of new delivery systems, technical experiments, and product trials.

Objective 4. Solicit and report findings from informal and formal feedback on services.

- Participated in meetings with USOE staff, Curriculum Directors, Higher Education Advisory Committee, Public Education Advisory Committee, Continuing Education Deans/Directors, Pioneer Library Committee, Utah Instructional Media Consortium, Utah Academic Library Consortium, WebCT Vista Administrators, Content Forum, IP Video Teams, UEN Instructional Services Subcommittee and UEN Steering Committee.

Objective 5. Research and disseminate white papers on timely issues.

Objective 6. Use existing, secondary and primary research to establish baseline for PR audience awareness, usage, and perceptions.

Objective 7. Establish Public Information and communication value through ROI (Return on Investment) and ROG (Return on Goals).



**INSTRUCTIONAL SERVICES SUBCOMMITTEE**

**T A B 28**

**ADVISORY COMMITTEE REPORTS - DISCUSSION**

**Public Education – Rick Gaisford**

**UEN Instructional Services Higher Education Advisory Subcommittee Report**

The reconstituted UEN Higher Education Subcommittee met September 21, 2004. The committee reviewed its charges, reviewed UEN's organizational structure and had introductory discussions on a number of topics from professional development and faculty technology training to IP Video.

One outcome from this initial meeting will be the creation of two surveys to be disseminated through the committee to each USHE campus. The purpose of the surveys is to gather baseline data on higher education's interest in faculty technology training and its use of digital assets in instruction. The surveys should provide valuable feedback to UEN on ways the network can partner with and/or support higher education.

The committee will meet five or six times per year. The next committee meeting is scheduled for November.

Committee Charge: The purpose of the committee is to periodically review the UEN instructional services as they pertain to higher education and when appropriate make advise and make recommendations to the UEN Staff and Instructional Services Committee. The Instructional Services Committee then reports to the UEN Steering Committee.

Committee Members:

Geoffrey Brugger	SLCC
Kevin Cummings	UCAT/DATC
Mike Freeman	UVSC/UALC
Cyd Grua	OCHE
Laird Hartman	WSU
Laura Hunter	UEN
Cameron John	USU
Mike King	CEU
Wayne Peay	UofU/UALC
Tony Pelligrini	SUU
Sidney Peterson	USU
Lynne Schrum	UofU
Weldon Sleight	USU
Gary Wixom	OCHE

## SPECIAL PROJECTS AND REGIONAL PRIORITIES - ACTION

### Issue

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Total funds available for the FY 2005 Special Projects budget have now been finalized and a proposed list of non-Ethernet projects to be completed is ready for review and approval of the Technical Services Subcommittee.

### Background

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The Special Projects budget has now been finalized as a consequence of transferring available carry forward funds into the budget. It will total \$1,219,070 and is slightly higher than last year's amount (\$1,212,182).

Through a series of retreats, regional T-forum meetings and Technical Services Subcommittee meetings, the prioritization of regional and statewide projects has been refined. The latest version of the Regional Priorities spreadsheet was presented to the Steering Committee at the August meeting and the attached lists of Ethernet and non-Ethernet projects reflect the most recent pricing and prioritization.

Ethernet and other special projects should be considered separately. The Legislature allocated \$400,000 specifically for Ethernet projects. An additional amount of \$176,135 was carried forward to fund Ethernet projects planned in FY 2004 that are underway but not yet completed. The Subcommittee should discuss the timing of the projects proposed to be completed in FY 2005. Additionally, UEN staff must analyze the scope of projects that can realistically be addressed with the available budget.

The non-Ethernet projects will be addressed with remaining funds available in the Special Projects budget. UEN staff have evaluated projects submitted by regional T-Forums, and are recommending that projects costing \$500,000 should be completed in FY 2005.

If the Technical Services Subcommittee supports the prioritization proposed in the non-Ethernet project list, remaining funds equal to \$142,935 is available for additional Ethernet projects or regional priorities. We recommend that UEN staff work with our stakeholders over the next 6 weeks to analyze the Ethernet circuit requests against a budget of \$400,000 to \$543,000.

It must be noted that revenues available to proceed with Ethernet projects are one-time, not an ongoing source. Our success in securing this funding as ongoing during the 2005 legislative session is essential for our future plans to provide Ethernet capacity connections at all schools in the state. Timing of the Ethernet projects is

also an issue. Should we wait until after the Legislative session to proceed with additional Ethernet projects, or should we move forward immediately, even though ongoing funding is uncertain?

Attachment A and B are the proposed lists of projects to be undertaken during the current year.

## Recommendation

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It is recommended that the Technical Services Subcommittee complete its review and then approve the list of non-Ethernet projects to be completed in FY 2005. It is further recommended that the subcommittee have initial discussions of potential Ethernet projects, whether all remaining Special Projects funding be committed to those projects, and when we should proceed with those projects.

# TAB 29 ATTACHMENT A

## FY 2005 REGIONAL PRIORITIES (NON-ETHERNET) - DRAFT

Project	Region	Priority	FY2005 Special Projects Budget Impact	Recommended
Weber - Move all services to new DO	WSU	1	-	
Weber - Establish link between two DO sites	WSU	1	-	
Jordan - New High School at the Jordan ATC	SLCC	1	-	
Tooele DO Move	SLCC	1	-	
Duchesne - UBTA construction and fiber to new DO	NUES	1	-	
GeoMax Phase II Incidentals	UEN	2	75,000	<b>75,000</b>
Machine Room fire suppression	UEN	2	68,000	<b>68,000</b>
Internet Router	UEN	2	45,000	<b>45,000</b>
GSR Spare	UEN	2	54,000	<b>54,000</b>
CUES Region spares (outlined in regional list)	CUES	2	35,000	<b>35,000</b>
Upgrade memory in CUES ICS box	CUES	2	500	<b>500</b>
Regional NMIS/statistics/monitoring pilot project	USU	2	-	
Get rid of all 2500 routers	USU	2	60,000	<b>60,000</b>
DATC - Internal wiring/network GigE	WSU	2	-	
Ogden - New router to replace current 72xx	WSU	2	-	
SLCC - Harden site with cooperation on installation of generator	SLCC	2	-	
Re-engineering basin circuit at UVSC Heber for better routing	NUES	2	-	
Remove remaining 2500 routers	NUES	2	-	
Backbone redundancy (SUU & Dixie to EBC)	SEDC	3	250,000	
Alternate PoP to the Internet	SEDC	3	60,000	
USU - Diverse/protected route/bandwidth	USU	3	60,000	-
Redundant data path for the SE region	SESC	3	400,000	
San Juan Media Center Generator	UEN	3	15,000	<b>15,000</b>
Snow Richfield Generator Replacement	CUES	3	20,000	<b>20,000</b>
NLR 10 Gig connection to Denver	UEN	4	-	
Repoint all Sevier District Circuits to the new DO	CUES	4	-	
Bandwidth - High speed services for Lake Powell School	SEDC	4	20,000	<b>20,000</b>
Bandwidth - Radio path for E-Valley	SEDC	4	175,000	
Bandwidth - Reliable high speed connection to Antimony	SEDC	4	50,000	
Increase bandwidth before the start of school	USU	4	-	
Box Elder 2500 router replacement	USU	4	-	
Davis - Geomax/Ethernet to all schools (July)	WSU	4	-	
Increased bandwidth between CEU and Salt Lake	SESC	4	-	
Upgrade of the D.O. connection at Grand	SESC	4	40,000	-
Upgrade DO connection at Emery	SESC	4	?	
Phase II of the San Juan microwave project	SESC	4	-	
Improved connectivity to Park City	NUES	4	-	
Logan - Router Upgrades	USU	5	?	
IP video upgrade of EdNet sites	SESC	5	-	
Arbor Networks	UEN	6	100,000	<b>100,000</b>
Security Training and tools for the districts	SEDC	6	2,500	<b>2,500</b>
Davis - deploy IDS and firewall to remote locations	WSU	6	-	
Improve communication between UEN TS and region	CUES	7	-	
WSU - Availability/Reliability to support 24/7 nature	WSU	7	-	
Continue support of the UEN Technical Summits	SESC	7	5,000	<b>5,000</b>
Implement QOS on circuits supporting H.323	CUES	8	-	
DNS and IP renumbering	SEDC	8	-	
Increased use of Internet2	USU	8	-	
Davis - VoIP to all schools by end of summer	WSU	8	-	
Davis - Deploy content engines for streaming media	WSU	8	-	
Davis - Manage Ethernet bandwidth at 22 sites	WSU	8	-	
WSU - Ednet video move to new Lamprose Hall	WSU	8	-	
Continue funding for regional UEN supported positions	SESC	8	-	
Timely rollout of new digital media system	SESC	8	-	
Hardening of the power at SESC	SESC	8	15,000	
SLCC - leverage resources through joint strategic planning	SLCC	8	-	
			<b>1,550,000</b>	<b>500,000</b>

# TAB 29 ATTACHMENT B

## FY 2005 REGIONAL PRIORITIES (INCREASED CAPACITY AND ETHERNET) - DRAFT

Project	Region
Geomax at Sevier District Office and CUES	CUES
E-rate Project: Gunnison High School	CUES
Erate Project: Gunnison Middle School	CUES
Erate Project: Wayne High School	CUES
Erate Project: Wayne Middle School	CUES
Erate Project: Juab High School	CUES
Erate Project: Juab School District Office	CUES
Turn-up GigE/Geomax service to existing FN schools	CUES
LSS service North Sevier Middle School	CUES
LSS service South Sevier Middle School	CUES
LSS service Red Hills Middle School	CUES
All West Gigabit connectivity	NUES
Bandwidth - Minersville	SEDC
Bandwidth - Escalante	SEDC
Bandwidth - Bryce Valley	SEDC
Bandwidth - Valley High	SEDC
Bandwidth - Enterprise High	SEDC
Bandwidth - Ethernet Services to Qwest Middle Schools	SEDC
Bandwidth - Ethernet services to Eskdale	SEDC
Bandwidth - Ethernet Services to FN Fiber Sites	SEDC
Elementary School connectivity	SEDC
Tooele DO Move	SLCC
Districts - Geomax deployment ASAP	SLCC
SLCC - Assist in Geomax deployment	SLCC
Incidental construction costs of Goemax installation	SLCC
Extend Geomax to Price and Tooele	UEN
Ethernet everywhere ASAP	USU
Box Elder - GigE to Box Elder HS	USU
Box Elder - Geomax/GigE to all possible schools	USU
Cache - Geomax to all possible schools	USU
Logan - Geomax to Logan HS and DO	USU
Logan - South Campus (alternate HS)	USU
Bridgerland ATC - Ethernet to Logan Campus	USU
Bridgerland ATC - Ethernet to Brigham City Campus	USU
Connection of districts through UVCN at UVSC	UVSC
Ethernet everywhere ASAP	WSU
Ogden - Ethernet to as many schools as possible	WSU
Ogden - Geomax to both DO locations	WSU

FY 2004 Approved Ethernet Projects	
Manti Telephone	\$26,346
UBTA-7 Additional sites	\$82,549
South Central (Panguitch)	\$5,528
South Central (Kanab)	\$14,468
Millard	\$22,000
Piute HS	\$15,244
West Desert	\$10,000
	\$176,135

## GL3 PROJECT OVERVIEW - DISCUSSION

### Issue

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GL3 Project Overview

### Background

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The UEN/Qwest GeoMax project, and its complexity, have been discussed by the Steering Committee several times. To better understand the complexity of GeoMax and the significance of current steps to increase capacity and reliability of the network backbone, additional information has been prepared by UEN's senior network engineer, Pete Kruckenberg. He will be prepared to lead a fairly detailed discussion about the project and to answer questions that members of the committee may have.

This information has previously been presented to a number of Stakeholder groups.


### Recommendation

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

# TAB 30 ATTACHMENT A


## GL3 PROJECT OVERVIEW PRESENTATION

  
UTAH EDUCATION NETWORK  
www.uen.org

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### Optical Networks, GigE and GL3


Utah Education Network

  
UTAH EDUCATION NETWORK  
www.uen.org

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### History of GL3


- 2001: GigE, IP, optical chosen as future network technologies
- 2002: Began vendor negotiations
- 2002: First optical/GigE links installed
- 2003: 1st GigE school district (Uintah)
- Fall 2003: Signed Qwest GeoMax contract
- Summer 2004: Began statewide deployment

  
UTAH EDUCATION NETWORK  
www.uen.org

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### What is GeoMax?


- Qwest product
- Optical extension cord
- DWDM-based: single fiber handles 64+ channels
- Based on Nortel Optera metro optical system
- Qwest manages all fiber, optical equipment
- Each GigE "circuit" is dedicated point-to-point
- Network built specifically for education

  
UTAH EDUCATION NETWORK  
www.uen.org

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### Other optical technologies


- Most rural projects are Ethernet-over-fiber
- Some DWDM, most are direct to dark fiber
- New research networks UEN connect to are fiber and DWDM
- Fiber, DWDM, GigE are increasingly a part of our future

  
UTAH EDUCATION NETWORK  
www.uen.org

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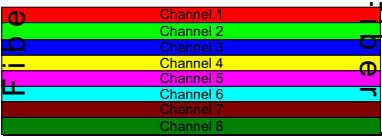
### Old vs New

T1, DS3, 100Mb, ATM	GigE, OC-48, 10GbE
X-over-Y-over-Z	IP-over-optical
Complex	Simple
"Cloud"	Physical point-to-point
Layers of failure points	One layer
SONET/TDM economies of scale	Ethernet economies of scale

  
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### DWDM: Dense Wave-division Multiplexing



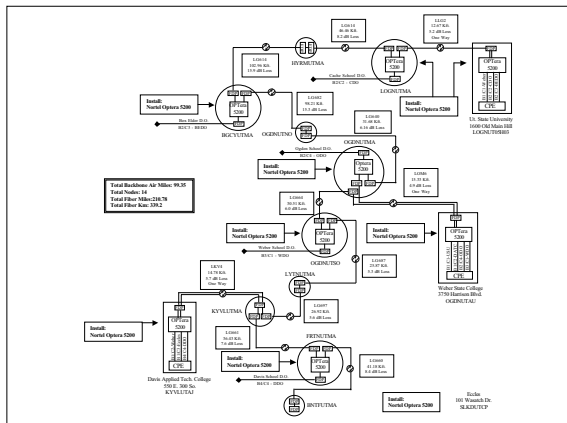


## DWDM: Dense Wave-division Multiplexing

The diagram illustrates DWDM technology. On the left, a Router (Optera) has five separate channels labeled Channel 1 through Channel 5. These channels are combined into a single fiber line labeled 'Fiber'. On the right, another Router (Optera) receives the single fiber line and separates it back into the five individual channels.

## DWDM: Dense Wave-division Multiplexing

This diagram shows a more complex DWDM setup. A central fiber line connects two Optera routers. A third router is also connected to the fiber line, demonstrating how multiple devices can share the same fiber infrastructure through DWDM.



## UEN GigE Roll-out

**GeoMax Phase 1 Backbone: summer 2004**  
 9 backbone PoPs: USU, WSU, DATC, EBC, SLCC, UVSC, Snow South, SUU, Dixie  
 11 district offices: Cache, Box Elder, Ogden, Weber, Davis, Salt Lake, Jordan, Granite, Alpine, Iron, Washington  
**GigE projects at 5 telcos at 25+ schools in 9 districts 2004**  
 UVCN: ~25 schools, 3 districts and UVSC  
**GeoMax Phase 2 Regionals (pending funding): FY2005**  
 ~ 155 secondary schools, additional DO's  
 Coordination with other intra-district/institution projects  
**Phase 3: (pending funding) 2006-ish:**  
 ~300 more GeoMax,  
 ~ 100 more outside Qwest region  
 UVCN, UTOPIA (11 cities)

## GL3: UEN's Next Network

Deploy backbone to support next 5+ years of UEN customer needs

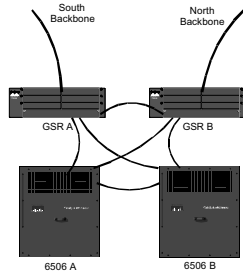
**GL3 must support:**

- increasing use of the network
- increasing reliance on the network
- research needs for network infrastructure innovation
- new applications

## GL3: Capacity to Grow

Initial deployment: 30+ times increase  
 Designed to grow to 10GbE  
 GSR 12404's (10's of Gb/s) replace 7200/7500's (100's of Mb/s)  
 Separate backbone, distribution functions  
 Support for distributed Internet/peering  
 Anticipates GigE+ to all UEN sites, Gb/s+ research needs

## GL3 Point of Presence (PoP) architecture

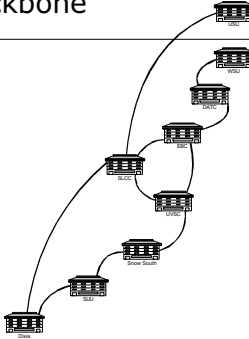


## GL3: Increased reliability



Dual GSR's and dual 6500's/3750's replace current single 7200/7500  
Ring topology routes around failures  
A/B architecture supports safer maintenance  
Backbone and customers are better protected

## GL3 Backbone



## GL3: Support for advanced applications



Initial GL3 deployment will support:  
IPv4, IPv4 multicast, IPv6 natively routed  
Jumbo frames: 9000-byte  
All at GigE speeds  
Multi-homed customer connections (with BGP)  
For next GL3 phase (~2006), we're exploring:  
MPLS for sub-second re-routes around failures  
MPLS Layer2 and/or Layer3 VPN's  
IPv6 multicast

## GL3 status



August 16: all PoP equipment installed  
USU, WSU, DATC, EBC, SLCC, UVSC, Snow  
South, SUU, Dixie  
Washington, Weber, Alpine, Iron, Ogden,  
Granite, Jordan, Box Elder, Salt Lake DOs  
completed  
Completing testing and internal training  
Start beta phase (4-6 customers) late Oct.  
Migration schedule to be set based on beta  
Spring 2005: complete migration to GL3

## GL3 Beta phase



Work out the kinks  
Internal phase: UEN learns to run the new network  
Customer phase: UEN learns to support customers on the new network  
4-6 customers will participate

## GL3 Migration phase



Much more complex than CVDS migration  
Will require extensive coordination  
Beta phase will determine migration schedule  
Coordination has started with most-affected customers

## The Future



UEN has joined National Lambda Rail  
Initial 10Gb connection to 40Gb research network  
Opens many new opportunities for Utah  
GL3 was built to support these kinds of services  
Goes live early spring 2005  
GeoMax will support 10GbE when needed (expected < 3 years)  
Next focus will be networks and technologies for greater optical-level control and flexibility

## NATIONAL LAMBDA RAIL AND WESTERN LIGHTS - DISCUSSION

### Issue

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The National Lambda Rail and Western Lights projects offer the potential of significantly increasing regional network capacity which UEN can utilize to support research universities, other educational entities in the state and state government.

### Background

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The 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.

UEN has been working with FRGP to define UEN's role in this project. Our staff are working with NLR engineers to develop operating procedures, engineering specifications, and address critical issues which could prevent completion of this project.

The NLR project is at least 6 months behind schedule. The delay has been caused by equipment procurement problems. Cisco is the major equipment provider. Cisco recently introduced a new high-end router line and has also made significant changes in some of the products that are being used by NLR in other parts of the network. Until these issues are resolved the project will remain on hold. UEN staff regularly meet with FRGP and CENIC representatives to remain current on new developments.

UEN is also participating in the initial planning stages of a cooperative effort that includes CENIC, FRGP, the State of Nevada and the Pacific Northwest GigaPop (PNGP). The project has been termed Western Lights. The major components of the project would be to connect Utah to the CENIC network in Riverside and Sacramento, California. We are now evaluating the cost and practicality of negotiating with our partners Irrefutable Rights of Use (IRU) to fiber from Salt Lake to Riverside, California.

The State of Nevada already holds IRUs for fiber between Sacramento and Salt Lake City.

CENIC is expert in setting up long-haul fiber and would purchase and install the necessary equipment.

UEN is exploring the possibility of participating in this partnership for three major reasons. First, it would provide Utah research universities badly needed high capacity fiber access to the major research institutions on the west coast and other western states. Second, it would provide all UEN network users far greater access to NLR in southern California and the Bay area along two completely separate routes. This removes a serious shortcoming of the current configuration of NLR. When NLR to Utah is established in the next several months, it will be a tail circuit with many single points of failure. Third, improved connectivity to California, Washington and Colorado would give UEN the ability to provide alternate Internet access by collaborating with these state networks. This could be done at very little additional expense to UEN and its stakeholders.

UEN staff are convinced that Utah educational and governmental entities would gain significant benefits from the Western Light partnership. We will work with CENIC to understand the total costs and other issues in this project.

## Recommendation

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This is an information item. No further action is required of the Technical Services Subcommittee at this time. However, UEN staff will keep the committee informed as new developments arise.

## QUARTER 1 PROGRESS REPORT ON FY 2005 STRATEGIC PLAN - DISCUSSION

### Issue

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First Quarter FY2005 Progress Report

### Background

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The FY 2005 Q1 report is attached to this document. Highlights for the 1st quarter are:

- Installation and configuration of the GL3 equipment.
- WebCT Vista upgrade.
- eMedia (Digital Asset Management) development and installation.
- Completion of IP Video site installations.
- Completion of the Ethernet project in Millard County.
- Tooele District Office move.
- Duchesne District Office installation.
- Statewide Monthly Service Report (MSR) distribution.
- Significant effort and progress on the San Juan CIB project.

The first quarter was very busy for UEN Technical Services. Field staff spent many days away from home installing video equipment and working on the San Juan CIB project. Much of our focus went to the GL3 project. Once complete, this will provide Gigabit data capacity along the main UEN backbone from Logan to St. George.

### Recommendation

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

# TAB 1 ATTACHMENT A

## FY 2005 STRATEGIC PLAN UPDATE

**Goal 1. - Maintain and expand a robust, reliable, and secure high-speed network connecting every public school, college, university and library in Utah.**

Objective 1. Increase network speed, reliability and capacity, especially in rural areas.

- Completed hardware installation for Phase One of the GL3 Project
  - ◊ All POP Cisco GSRS and 3750s
  - ◊ All district office Cisco 3750s
- Completed initial connectivity of GL3 Points of Presence (PoPs) and District Offices and tested these circuits
- Replacement of 30 Cisco 2500 routers progressed with only 4 sites pending
- The Millard School District's district wide upgrades have been completed with Frontier-Citizens.
- Manti Telephone's portion of South Sanpete School District's network upgrades have been completed.
- Network hardware upgrades to Cisco 3750 switches to schools and district offices in Duchesne and Uinta School Districts, plus a new Ethernet circuit was turned up to Fort Duchesne.
- Broadband connectivity to new Tooele District office and repoint of all district T1s to new DO.
- Broadband/OC3 turn up to Emery School District and new PTP T1 from Green River High School to Emery School High School.
- Bandwidth upgrade of UEN owned fiber from UEN's hub at the Grand Vocational Center to the Moab -USU Extension center from 10 MB Ethernet to Gigabit Ethernet.

*Q2 Looking Forward*

- Completion of GL3 and installation of Juniper Internet Routers
- Completion of the South Central and Central Utah Telephone projects
- Significant planning and initial implementation of GeoMax Phase II
- Completion of Sevier District Office move

Objective 2. Maintain and update data and microwave networks.

- San Juan CIB project is 80% complete.
  - ◊ Microwave paths currently up and testing are as follows
    - ◊ Blanding to Cedar Mesa
    - ◊ Cedar Mesa to Clay Hills
    - ◊ Clay Hills to Monument Valley High School

*Q2 Looking Forward*

- ◊ Completion of San Juan CIB project Phase I
- ◊ Preparation for presenting San Juan Phase II request to CIB

Objective 3. Increase Internet capacity

- Preparations for replacing the Sprint connection next summer.
- Continued participation in the UVCN project

*Q2 Looking Forward:*

- Circulating an Internet RFP to expand UEN capacity
- Developing the Western Lights proposal
- Continued work with The Quilt peering committee
- Participation with the NLR engineering efforts and preparation for NLR connectivity

Objective 4. Provide a variety of network access and delivery options to stakeholders.

- WebCT – upgraded from Vista 2.1 to Vista 3.0.2
  - ◊ Installed single application server to cluster Node Applications
  - ◊ Database Server Memory upgrade
- eMedia (Digital Asset Management System) development and installation.
  - ◊ Hardware purchased and installed
  - ◊ System software installed and configured
  - ◊ Video Encoding System setup and configured
- Macromedia Breeze Server for Tooele/SL ATCs
  - ◊ Tested on old hardware
  - ◊ Purchased and installed new server
  - ◊ Software installed and configured for new hardware
- UEN Professional Development Training Lab
  - ◊ All lab computers re-imaged



- ◇ Wireless access point installed
  - ◇ Started on specifications for new lab computers
- Annenberg Server Mirror
  - ◇ Installed and ready
  - ◇ Waiting on Annenberg staff to turn it up
- Developing and testing open LDAP authentication in cooperation with the UTIPS project
- Back-bone capacity improvements of 100 Mb Ethernet from EBC to CEU
- Back-bone capacity improvements for 200 Mb Ethernet from EBC to USU
- Monthly planning meetings with USU
  - ◇ Accomplished bandwidth needed for start of school
  - ◇ Resolved many existing issues with video
  - ◇ Started to get video and data folks from both UEN and USU talking and planning together
  - ◇ Participated in bringing USU folks together with Cache Valley initiative, UVCN, Utah Commix and others to start planning peering point/data center and community network catalyst to the Cache valley
- Pilot started with USU for Higher Ed. MSR development
- Monthly Service Report provided for the entire state in September with major improvements
- Assisted WSU at start of school with major outage(s) due to campus backbone problems, issues with dual entrances and BGP
- NUAMES Charter High School at DATC connected with GigE
- Held a state wide T-forum with Peer-to-peer as the focus. Peer-to-Peer working group formed
- Developed new network device interface description standard that is being implemented by the NOC
- Engineered environmental monitoring solution for our GL3 POPs
- Nebo DO brought up on 100 MB Ethernet
- Nine schools in Alpine district brought on GigE circuits to compliment existing 100 MB circuits

### *Q2 Looking Forward*

- Implement Enterprise Backup/Recovery System
- Replace/Upgrade UEN proxy/filtering servers.
- Upgrade UEN Mail Server
- Cisco Works Upgrade

- HP OpenView Server Upgrade.
- Completion of LDAP authentication project
- Extending GeoMax from UVSC to CEU

Objective 5. Increase security throughout the network.

- SSCP security track training held in August
- Continued updates posted on the Utahsaint.org web site
- Continued weekly conference calls
- Security site visits held at Snow College and SEDC
- Network vulnerability scanning and reports to stakeholders
- Installation and testing of Arbor Network software and a greater ability to track and defeat Denial of Service attacks

*Q2 Looking Forward*

- Install and configure redundant Checkpoint firewall for the UEN.org network
- Complete planning for spring 2005 security summit in conjunction with state ITS
- Continued security training and site visits
- Further development of the UEN Security working group

Objective 6. - Support IP Video, other delivery technologies and future technologies.

- Completed installation of over 40 IP Video classrooms
  - ◊ This project has spanned two quarters.
- New RADVision conference bridges for IP video installed at EBC and Utah State.
- Additional PRI turned up to audio conference bridge at EBC to support UENSS events and the additional demand for conferencing.
- Tandburg TMS installed

*Q2 Looking Forward*

- Further planning for future video implementation

Objective 7. Provide technical leadership and staff/stakeholder development.

## E-RATE UPDATE - DISCUSSION

### Issue

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E-Rate Update

### Background

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Existing network circuits, new Ethernet projects that are scheduled for completion in late FY2005, and expanding Internet usage will require expenditure of an annualized amount greater than \$13 million by the end of this fiscal year. State funds will be adequate to pay approximately \$6 million, which means that federal E-Rate funds must make up the difference of about \$7 million.

The E-Rate program is under great scrutiny from Congress, the FCC and its participants. Recent articles from the national press have pointed out funding restrictions imposed by the FCC and abuses of the program. Obviously, UEN staff are watching these developments with great interest.

In September, Louise Tonin and three UEN technical staff members participated in a conference sponsored by the Schools and Libraries Division (SLD), which manages the E-Rate program. This is an annual training session intended to help state coordinators understand the many changes introduced by the FCC and the SLD. The conference was informative and will be used to assist us in developing our E-Rate strategies and in submitting our filings in the future. The SLD indicated it was initiating 1000 new on-site applicant visits during the next 12 months. There is a possibility sites in Utah will be affected. This is in addition to an aggressive whistle blower and audit program that is already in place.

Lack of clarity on both old and new rules remains one of the greatest sources of frustration to program participants. The recent hearings accentuate the need for a cooperative effort by UEN and our stakeholders. In the next month, Louise Tonin, State E-rate Coordinator, will be conducting training classes and follow-up sessions to assist in understanding the rules and filing E-Rate forms. This training is essential considering the increased scrutiny that the E-Rate program will receive from the FCC and SLD.

### Recommendation

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

## GEOMAX PHASE II UPDATE - DISCUSSION

### Issue

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GeoMax Phase II Update

### Background

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UEN entered into a contract with Qwest after the E-Rate filing period earlier this year. That contract calls for the installation of Gigabit Ethernet circuits at approximately 150 district offices, secondary schools and elementary schools in many districts in the Qwest service area.

Planning for and installing these circuits will take a great deal of coordination between UEN, Qwest and the school districts. Qwest must install fiber to many of these sites. In those cases, the district must provide conduit from the school machine room to the curb to meet the Qwest provided conduits and fiber. The cost for this work is averaging about \$7000 per locations, although the actual cost can vary greatly and in some cases be much more. UEN will also need to provide some incidental hardware and cabling once the fiber is in place.

UEN is planning three meetings, in the north, central and south areas of the state. These meetings will bring representative from Qwest, UEN and each district together to discuss costs, time frames and other issues. These meetings will provide an opportunity to identify concerns that district and school staff may have and to begin the planning process. We anticipate that the actual installations will be done over several months, running through next summer. The first installations will occur this fall. By working together with Qwest and district staff, we are confident that the overall length of this project can be shortened. Obviously, we all want to have these circuits installed and benefiting the student we serve in the Qwest areas as soon as possible.

### Recommendation

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

## UEN TECHNICAL SUMMIT - DISCUSSION

### Issue

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UEN is preparing to hold it's 5th Technical Summit.

### Background

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This technical summit is a service UEN has provided over the past three years. Administrators and technical personnel throughout the state gather together to learn and to train on network and technology related topics. The goal of the summit is to provide our partners with training and information they can use within their internal networks. These classes are taught by UEN personnel, UEN stakeholders and technology vendors.

UEN plans to hold this summit in Salt Lake City during the 1st or 2nd week of December. The conference will take place over 4 or 5 days and will be filled with information and training that is valuable to the education community. Some topics to be covered will be Network Security, GeoMax Layer 3 (GL3) implementation, Peer to Peer solutions, Linux training, Mail filters, Proxy servers and additional topics.

### Recommendation

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

## PEER-TO-PEER WORKING GROUP - DISCUSSION

### Issue

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Issues surrounding file sharing and the impact upon network resources continue to be a significant concern. Peer-to-peer file sharing often involves activities that are in violation of federal copyright laws and/or consume relatively large amounts of network resources in recreational activities that can preempt more vital or even mission critical applications from receiving adequate resources.

### Background

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Attachment A is the File Sharing Policy adopted by the Steering Committee in the December 2002 meeting. This document clearly defines the role UEN should play in monitoring and responding to the use of peer-to-peer applications on the UEN network. Based on this role, UEN has established a Peer-to-Peer Working Group to assist each institution and school district/regional service center in developing a practical and long term strategy to address this issue.

The goal of this working group is to identify potential solutions and determine what steps can be taken to gain the desired results. The working group will have a proposal formulated for review by the Steering Committee in December 2004.

The members of the working group are listed below, along with the entity they represent.

Troy Jessup	UEN
Barry Bryson	UEN
Pete Kruckenberg	UEN
Travis Groesbeck	UEN
Paul Lewis	Alpine School District
Rick Stallings	Logan School District
Marlin Mason	Snow College
Vern Wilson	NUES
Dave Huth	University of Utah

## Recommendation

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

# TAB 5 ATTACHMENT A

## FILE SHARING POLICY

### Issue

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The issue of file sharing and the impact upon network resources continues to be a significant concern. Peer-to-peer file sharing often involves activities which are in violation of federal copyright law and/or consume relatively large amounts of network resources in recreational activities which may preclude more vital or even mission critical applications from receiving adequate resources.

### Background

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As noted in previous Steering Committee meetings, a draft policy has been prepared and has been on the agenda of the Technical Services Subcommittee. Although it seems to be almost unanimously recognized that there is a serious problem that requires a logical and reasonable solution, the language to reach those objectives is still under consideration. Specific concerns have been raised regarding how the policy might obligate or expose institutions to legal liabilities associated with illegal activities which might be occurring utilizing network/institutional resources.

It was suggested that legal advice be obtained to assure that the policy did not unduly obligate or expose institutions to inappropriate liabilities under the law.

### Policy Considerations

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As the utilization of networks and network technologies continues to increase exponentially, there are some very difficult challenges associated with such an ubiquitous, robust, and powerful resource. Abuses are common and can run the gamut from innocuous nuisances to very serious violations of copyright, privacy, and misappropriation of services, resources, and/or funds.

One notable example of network usage that has now reached a point of significant concern is what is classified as 'recreational/personal use'. Because virtually any information or data that can be digitized is available via the Internet, enterprising individuals have found ways to access the data and download it to their computers. Most of them use software that is grouped into the category of 'file sharing'. Among the file sharing software options is a set known as 'peer-to-peer' (p2p) software. This software allows an individual to download information from any other computer any where in the world which is also running p2p software; and permits anyone else any where in the world to download any information from that individual's computer as well.

Although there are very legitimate reasons to share data and information using a p2p environment, most of the information that is being shared using p2p facilities is 'recreational/personal'. The problem is, as this network of users grows and the



amount of bandwidth that is being used expands, network facilities which are intended for other more important and legitimate uses become 'clogged'. Participation by all entities with the provisions and intent of this policy will help ensure that network's facilities will not suffer degradation resulting from inappropriate activities associated with the uses specified above.

## Issues and Considerations

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There are several considerations which must be addressed in examining this problem and potential solutions:

- 1 The Utah Education's Network's (Network) resources are funded by the Legislature for the purpose of providing support to the educational process.
- 2 The Legislature may not be able to provide sufficient funds to continue to meet the escalating need for additional capacity as was the case in FY 2003.
- 3 Much of the recreational use of the network is apparently related to, or involves copyright violations.
- 4 Traffic volumes associated with recreational use of the network have reached the level where it is necessary to address reasonable, equitable, responsible, and acceptable solutions.
- 5 Acceptable Use Policies must be the foundation for any long-term solution to be viable.
- 6 Public and higher education have somewhat different issues related to network use and standards.
- 7 There are at least four different network traffic types: Mission Critical, Educational/Informational, Research and Development, and Recreational/Personal. It may become necessary to prioritize network traffic according to these categories.
- 8 As noted, there are legitimate file sharing applications, however, a survey of all academic and administrative leadership on the University of Utah campus failed to identify a single valid or legitimate use of peer-to-peer file sharing software.
- 9 The implication is that peer-to-peer file sharing facilities within the network service only recreational/personal uses.
- 10 Under the Digital Millennium Copyright Act (DMCA) and Electronic Theft Act, network providers can be judged as complicit if they knowingly permit copyright violations to be facilitated by their network resources.

Additionally, it is important to note that the Network has an Acceptable Use Policy (AUP) related to public education, and that each of the school districts also have adopted an AUP which governs the use of the network by their students, teachers, administrators, and staff.

However, this is not the case with higher education. Because institutions of higher education value a significant level of academic freedom, there is a substantial level of reticence for those institutions to adopt stringent policies restricting the access to or

use of information. However, most of the institutions do have policies related to the violation of copyright provisions in the law; and the excessive use of facilities for activities not associated with the mission of the institution and/or the relatively direct pursuit of an education.

## **Solution Strategies**

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As noted, technical solutions can be implemented to restrict traffic via specific channels or ports that are most commonly used by present file sharing software. This is a very temporary solution at best because the channel/port designation can be easily modified as a 'work-around'. There are other technical options which permit the 'rationing' or 'limiting' of bandwidth to particular entities or locales (e.g., dorms, etc.).

Included under this tab is a copy of a modified policy statement including language recommended by legal counsel. Additionally, other recommended modifications which specifically address statements which previously indicated a requirement (will) have been changed to statements which permit more flexibility (may) have been included for review.

This draft will be presented to the Technical Services Subcommittee for their review and action in their 10/10/02 meeting. The Technical Services Subcommittee will report top the Steering Committee their recommendation to approve or continue review of the policy.

## **Recommendation**

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It is recommended that the Steering Committee adopt the recommendation of the Technical Services Subcommittee.

# FILE SHARING AND MISAPPROPRIATION OF NETWORK RESOURCES POLICY

October 11, 2002

## Policy Statement

It is the policy of the Utah Education Network that:

- I. Each institution and school district/regional service center, as well as other entities which utilize the Network's publicly funded resources should:
  - A adopt provisions within their institutional Acceptable Use Policy standards which:
    - 1 identify misappropriation of resources (i.e., excessive recreational, personal or commercial uses) as uses not consistent with those purposes identified as 'acceptable use',
    - 2 specify as 'unacceptable use' the use of file sharing software for the purpose of acquiring or sharing copyrighted material(s) in violation of the copyright owner's rights and privileges;
  - B Document monitoring procedures, wherein possible, the portions of the network for which they have direct responsibility might be monitored for traffic types (e.g., file sharing wherein in which copyright violations are evident, excessive recreational/personal, etc.) and volumes which would directly impinge upon appropriate and legitimate traffic;
  - C Identify take appropriate actions to resolve problems identified above. These actions should include, but not necessarily be limited to:
    - 1 notification to users violating copyright provisions or who are using excessive network resources;
    - 2 where continued abuses or copyright violations persist, network access should be disabled;
    - 3 in some instances, it may be necessary to 'rate-limit' the traffic volumes to groups of users (e.g., dorms, etc.) where substantial violations are occurring;
    - 4 identify/register server sites for which legitimate peer-to-peer file sharing has been recognized.
- II. UEN ~~will~~ may monitor the backbone traffic for security violations and for high volume uses which might imply excessive and inappropriate consumption of network resources, and will notify the institution and/or agency responsible for the user from which the traffic is originating;

**III.** UEN ~~will~~ may monitor the network's backbone for 'excessive' file sharing traffic and will provide notification to the institution and/or agency responsible for the users from which the traffic is originating;

**IV.** UEN will work cooperatively with the Network's institutional users to assure that network resources are utilized for the purposes for which they have been funded, and will assist institutions, and/or school district/regional service centers in implementing reasonable, equitable, responsible, and acceptable courses of action wherein persistent and/or egregious uses are identified. These courses of action may include, but are not limited to those defined in I-C above;

**V.** In order to preserve network reliability, security, viability, and/or stability, the Utah Education Network may be required to take certain actions (e.g., blocking of specific servers, routers, or the IP addresses of specific user machines). These actions will be taken as a 'last resort' and only after sufficient notification to the offending user. Additionally, any action will also be in accordance with the Network Connection Policy and Network Operating Agreements; and, wherein necessary, as an official action of the Executive Committee of the Steering Committee. These actions will only impact the excessive recreational/personal uses and/or instances where copyright violations have been clearly identified. These actions will not in any way impinge upon nor impact the mission critical traffic of any institution.

UEN's duties and responsibilities under this policy shall be limited to those expressly set forth herein. UEN shall not be responsible, and denies it has any duty, to monitor, detect, notify, take action, or otherwise govern the use and/or misuse of the network resources, other than those duties and responsibilities, if any, expressly set forth in the policy.

**STEERING COMMITTEE BUSINESS MEETING**

**T A B 6**

**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 7**

**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 **8**

## STEERING COMMITTEE MEETING MINUTES

UTAH EDUCATION NETWORK STEERING COMMITTEE

August 20, 2004 - 11:00 am

### **Business Steering Committee Meeting**

**Members Present:** Ray Timothy, Mike Petersen, Steve Hess, Glen Taylor, Ray Walker, Barbara White, Jon Crawford, Linda Fife, Bruce Christensen, Wayne Peay and Ryan Thomas

**Others Present:** Laura Hunter, Jim Stewart, Larry Smith, Claire Gardner, Bill Kucera, Lisa Kuhn, Dennis Sampson, Karen Krier, Cory Stokes and Rich Finlinson

### **Welcome and Introductions**

Ray Timothy welcomed everyone to the August meeting. He reported that Gary Wixom was unable to attend due to a death in the family. Ray also extended appreciation to Barbara White as she would be moving out of state to pursue a new position as the Chief Information Officer at the University of Georgia. She has been a great asset to this committee and will be greatly missed but we wish her well.

### **Committee of the Whole**

#### **Security**

Ray Timothy introduced the topic by noting that both subcommittees had discussed security issues in their separate meetings. He then asked subcommittee co-chairs Glen Taylor and Linda Fife for their reports.

Glen Taylor reviewed the key points from the Technical Services Subcommittee discussion. Some consideration was given to forming a new Security Subcommittee but the consensus was that it should be an agenda item for both subcommittees, there should be a permanent Security Subcommittee reporting to the Technical Services Subcommittee, and the membership of the Security Subcommittee should

be broadened to include representation from the Instructional Services Subcommittee. Taking these actions would enable both subcommittees to participate in addressing security and security training issues.

Wayne Peay expressed concern that security was a specific example of complications that can occur when the Instructional Services and Technical Services subcommittees meet at the same time. Mike Petersen reminded the Steering Committee that this issue was discussed at the last meeting and that a motion had been passed to approve the Steering Committee meeting schedule for the next year. The approved schedule includes holding the two subcommittee meetings at the same time prior to the general business meeting of the Steering Committee. He also suggested that issues that bridged both subcommittees should be addressed during a committee of the whole discussion that included members of both committees. It was recommended that the Committee of the Whole should be scheduled prior to the subcommittee meetings.

Wayne shared other security-related concerns, including the importance of reliability of the network and network devices, and the importance of educating end users on being responsible citizens when it comes to network security and services.

Linda Fife reported on Instructional Services Subcommittee discussions on providing end user training on security issues. The subcommittee identified five policy considerations recommended for implementation, which are described in Tab 3. She reported that the Instructional Services Subcommittee had approved a motion to adopt these policy considerations.

Ray Timothy asked, on the basis of the subcommittees' reports, how network security issues should be addressed. Should it be a separate subcommittee? Should it be a standing subcommittee within the Technical Services Subcommittee but have members from both subcommittees involved?

Barbara White reminded the Committee that considerable work has already been made on the issue of security. She requested that a summary be prepared showing what has been done to date on the security committee. That will be an agenda item for the next Steering Committee meeting on October 15th.

Ryan Thomas moved that: (1) subcommittee and steering committee meetings would be held as approved by the Steering Committee at the August 20, 2004 meeting, and that agenda items relevant to both subcommittees would be addressed during the Committee of the Whole, (2) a standing security subcommittee will report to the Technical Services Subcommittee and include members from both Instructional Services and Technical Services subcommittees. The motion was seconded and unanimously approved.

It was moved and seconded that Ray Walker replace Barbara White as the Technical Services co-chair of the new standing Security Subcommittee. Ray indicated his willingness to accept the assignment. The motion was unanimously approved. It was agreed that an Instructional Services representative would be identified and recommended as the other co-chair of the Security Subcommittee by the October Steering Committee meetings.



## **Fiscal Year 2006 Budget**

Mike Petersen reported that both subcommittees had discussions on potential FY 2006 budget proposals, and that the suggestions would be reflected in the budget request that will be submitted to the Steering Committee at its meeting on October 15. More detailed information on the budget can be found in Tab 17.

## **Instructional Services Subcommittee Report**

### **Update on Summer Projects**

Linda Fife highlighted instructional services accomplishments during the summer. One of the most challenging was to negotiate a Web host license from Oracle. This will enable UEN to deliver WebCT Vista courses for all USHE institutions as well as K-12 users. Linda briefly mentioned other completed projects. More detailed information can be found in Tab 4.

### **Resources for Teacher Education Faculty**

Linda Fife reported that the best uses of technology and best practices in technology for public educators are becoming increasingly important. Pre-service teacher education students indicate that they are not receiving adequate preparation in utilizing technology in the classes they will teach. University teacher education courses must increase their emphasis on the use of technology in teaching content in both elementary and secondary curriculum. UEN professional development staff members are anxious to receive input on the best ways to incorporate UEN resources into teacher education programs. Suggestions are sought and encouraged on outreach strategies, key people to meet with, message points, and organization of resources for presentation to faculty.

### **Progress Report on FY 2004 Strategic Plan**

Instructional Services accomplishments during the last quarter of FY 2004 were summarized in Attachment A of Tab 6.

### **Instructional Services Priorities: FY 2006 UEN Budget**

There had been an extended discussion of several instructional services proposals that should be included in the FY 2006 UEN budget request. More detailed information can be found in Tab 17.

### **IP Video Project Update**

The Instructional Services Subcommittee discussed the importance of increasing the UEN budget to continue the EDNET conversion project. It was agreed that Internet-

based videoconferencing technology will allow for more individualized instruction and virtual field trips for students in elementary and secondary schools. There are many other instructional activities that can benefit from this technology. A status report on the IP project can be found in Tab 8 Attachment A.

### **Instructional Services Subcommittee Reports**

The Higher Education advisory council has been reconfigured. They have scheduled their first meeting for the third week in September. The Public Education advisory council has not yet met but a meeting is scheduled soon.

## **Technical Services Subcommittee Report**

### **Special Projects and Regional Priorities Review**

Glen Taylor reported that UEN staff proposed the purchase of a network application called Arbor Network. It has the capability of detecting network intrusions that are intended to disrupt and slow down traffic on the network and to assure that prompt and effective responses are mounted. The subcommittee agreed to commit up to \$130,000 in the special projects budget over 2 years to pay for the application.

Ryan Thomas moved that the Arbor Network software program be purchased for approximately \$130,000, and that the cost be paid over two years. **THIS MOTION WAS PASSED WITH ALL VOTING IN FAVOR.**

Ethernet and non-Ethernet project priorities are still being finalized. Final recommendations will be provided at the next Steering Committee meeting.

### **GeoMax/GL3 Project Overview**

Pete Kruckenburg was prepared to give the Technical Services Subcommittee a technical overview of the significant changes that are being made in the Network through the GeoMax and GL3 projects. Because of a lack of time, it was agreed that the presentation will be posted on the Web for viewing and presented during the October subcommittee meeting.

### **Technical Services Priorities: FY 2006 UEN Budget**

The Technical Services Subcommittee discussed several technical services proposals that should be included in the FY 2006 UEN budget request. More detailed information can be found in Tab 17.

### **Summer Projects Update**

Glen Taylor reported that there was only a limited amount of time to discuss this topic during the subcommittee meeting. There is an informational update on the projects which can be found in Tab 14.

### **Quarter 4 Progress Report on FY 2004 Strategic Plan**

The Strategic Plan update is provided in Tab 15, Attachment A.

### **Minutes**

It was moved and seconded to approve the minutes of the Steering Committee meeting held on June 20th. Corrections to the last sentence of page 18-1 and the first paragraph of page 18-2 are reflected in the minutes posted on the Web. **THIS MOTION PASSED WITH ALL VOTING IN FAVOR.**

The next meeting is scheduled for Friday, October 15, 2004 at 9:00 a.m. at the Dolores Doré Eccles Broadcast Center.

***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](http://www.uen.org/steering/html/materials.html). Please refer to them for additional reference.***

**STEERING COMMITTEE BUSINESS MEETING**

**TAB 9**  
**OTHER**