Utah Education Network Steering Committee

October 19, 2007

Utah Education Network Steering Committee

Agenda

October 19, 2007

11:00 a.m.-
12:00 p.m.

Technical Services Subcommittee

U PCOMING M EETINGS

Steering Committee Meeting - December 21, 2007, 9:00 a.m.

Instructional Services Subcommittee Meeting -December 21, 2007, 11:00 a.m.

Technical Services Subcommittee Meeting - December 21, 2007, 11:00 a.m.

Please place these materials in your Steering Committee Binder.

TAB **27**

NEW STEERING COMMITTEE MEMBER - ACTION

Issue

Jeff Livingston has retired from Weber State University and from the UEN Steering Committee. It is recommended that Gail Niklason of Weber State University be approved to replace him.

Background

Jeff Livingston has recently retired from his staff position at Weber State University. Higher Education Co-Chair Gary Wixom is recommending that Gail Niklason replace Jeff, and Gail has agreed to serve on the Steering Committee.

Gail Niklason is Director of Online Education and eLearning at Weber State University. She previously served as Manager of Technology Services at Weber State. Gail is a doctoral student in the University of Wyoming Adult Learning and Technology Distance Education program where she is focusing her research on the efficacy of online learning. She has a master's degree in Business Information and Computing Systems from San Francisco State University and a bachelor's degree in Psychology from the University of Utah.

Recommendation

It is recommended that the Steering Committee approve Gail Niklason to serve a 4-year term on the UEN Steering Committee from August, 2007 through July, 2011. The nomination will be subject to final approval by Governor Huntsman.

TAB **28**

FY 2009 BUDGET REQUEST - ACTION

Issue

The FY 2009 UEN budget request requires approval by the Steering Committee before submittal to the Legislature for its consideration. UEN staff has worked on the planning and development of this year's request in cooperation with our stakeholders. Because the deadline for submitting budget requests to the Governor's Office of Policy and Budget (GOPB) was September 24th, UEN has already submitted a preliminary FY 2009 budget request to the Governor's Office.

Background

Utah's economic outlook has improved since the Legislature last acted upon revenue forecasts in February. Although strong revenue growth indicates a very healthy state economy, recent economic news nationally points to slower economic growth for the nation as a whole. The Utah economy however, is expected to continue to rank among the best in the nation during the current fiscal year.

The Legislative Fiscal Analyst is projecting revenue collections for FY 2008 will come in higher than previously expected. The Education Fund is expected to exceed the February target by $102 to $175 million. This is favorable for UEN because during the 2006 Interim, UEN evaluated its levels of effort and found that about 80% of its spending serves Public Education. Applying this proportion to UEN's base budget, the Legislature funded most of the FY 2008 budget from the Uniform School Fund and the remainder from the Education Fund. This change in the funding mechanism moves the UEN budget request for FY 2009 from under future statutory spending limitations applied to those entities receiving State General Funds.

Major Budget Issues for FY 2009

Salary and Benefits for UEN Employees

Funding is needed in FY 2009 for retention of crucial technical staff. Private firms continue to attract key personnel because salaries for technical staff are running below market. Additional funds will address market equity and technical staff retention needs.

Priority 1: Network Infrastructure Project

Increasing network bandwidth has been UEN's top strategic priority for the past several years. Consistent support from the Governor and the Legislature has assured significant progress in keeping up with that growth. State funding has been leveraged with Federal E-Rate reimbursements at a two-to-one ratio to upgrade Internet connectivity to high-speed Ethernet bandwidth capacity.

<u>Research Network</u>

Utah's research universities require a separate research network that is independent of the production network UEN manages for public and higher education. UEN must build a world class research network if our research universities are to be active participants in the cyber-infrastructure that is now being built nationally and internationally. In addition, expanded network capacity is needed to support the State's USTAR project. This will improve the interaction between researchers and educators located throughout the State's network of universities, colleges and applied technology centers and enhance the transfer of technology to existing companies that require access to cutting edge research.

For FY 2009, UEN is requesting $700,000 to deploy a research network between the University of Utah and Utah State University. Included in the figure is $500,000 in ongoing funds and $200,000 of one-time funding.

<u>Upgrade connectivity for elementary and charter schools and new secondary schools</u>

UEN is requesting funds to begin a three phase project to increase bandwidth at elementary schools and charter schools to 100 Mb/s service or greater. Some elementary schools now have comparable capacity to secondary schools, but about half lack the capacity and reliability to support the technology-intensive instructional improvements that are now being made in classrooms throughout the state.

Historically, UEN has had responsibility to connect secondary schools to the network and districts have been responsible to connect elementary schools to the nearest UEN hub. That arrangement has not assured that all elementary schools in the state will have the network capacity needed to support planned technology improvements in classrooms. The scope of this network infrastructure project is to ensure that circuit speeds for all 501 elementary schools, 58 charter schools and 100 new schools planned for the next four years are functioning at 100 MB/s or better. In FY 2009, the UEN budget request is intended to upgrade approximately 170 institutions.

Ongoing circuit charges are projected to cost $700,000 a year of ongoing state funds which will leverage $1.4 million federal E-Rate funds. Equipment and construction costs are more difficult to determine but are estimated at $500,000 one-time in the first year which will also be augmented by federal E-Rate funds on a two-to-one ratio.

<u>Network backbone expansion of core segments to 10 Gigabits/second</u>

The capacity of the network backbone will need to be increased selectively from 1 to 10 gigabits per second to support the growing traffic demands of our education partners. Our three network rings are now reaching sustained peak capacities of over 50%, so within the next year or two, speed and reliability will be degraded if capacity is not

increased. Institutional plans to locate disaster recovery and business continuity sites at the state's Richfield Data Center cannot be successfully implemented if UEN does not increase network backbone capacity of core segments to 10 gigabits per second.

The requested funding of $400,000 from Education funds for FY 2009 is needed to expand the network backbone capacity of core segments to 10 gigabits/second. For FY 2009, the request includes $200,000 in one-time funds for equipment purchases and $200,000 for ongoing expenses.

Priority 2: Technology-Rich Instructional Content

The requested funding of $820,000 for FY 2009 is needed to provide multimedia instructional resources in targeted high need areas: mathematics, world languages, and college courses. Course materials will be added to the UEN-hosted course management system, Pioneer Online Library, and the CollegeMedia and eMedia digital video services where teachers and students can download media for effective learning. The funding will target high enrollment courses and courses where student performance is enhanced through video-based instruction, such as medical assisting, mathematics, and LearnKey technology skills for writing and finance courses.

Reflected in this figure is $500,000 of ongoing revenue for licensing fees, video and computer-based instructional programs to advance learning in key areas, and one additional staff person for software integration support.

One-time funding of $320,000 is to purchase media rights to course content for CollegeMedia and eMedia, consulting to integrate media with the WebCT/Blackboard system, and production of new programs for KUEN-TV on technology, academic advising and college financial aid.

Priority 3: Instructional Video Conferencing Improvements

EDNET – Equipment and Site Upgrades

Major progress has been made to convert EDNET to IP-based videoconferencing technology. 24 new EDNET classrooms are now being requested by secondary schools throughout the state. Multi-point Control Units must be upgraded to support the full range of features that are now required by complex origination and receive sites, and classroom equipment in many locations must be upgraded. $800,000 in one-time funding is required to complete these improvements.

USHE – IVC Site and Equipment Upgrade

During the 2007 legislative session, UEN received one-time supplemental funding to convert the satellite infrastructure and 150 classrooms to Internet-based videoconferencing technology. USU is now conducting all of its distance education courses throughout the state using UEN IVC technology. The institutions in the Utah System of Higher Education need additional classrooms with IP-based videoconferencing technology for distance learning instruction. For FY 2009, UEN is requesting $1,200,000 of one-time Education Funds to install videoconferencing equipment in 67 classroom sites and at 21 administrative sites. Funding for this project will expand seating capacity for about 1,600 additional distance-learning students.

The UEN IVC systems are especially critical for students in rural parts of Utah who are able to complete full degree programs without relocating to the main campus of the university or college they are attending. In rural school districts, concurrent enrollment courses provided by USHE institutions are critically important. IVC equipped classrooms literally provide a college within each small high school.

Priority 4: Enterprise Applications

U of U Migration to UEN Course Management Support

UEN hosts a centralized course management system (Blackboard Vista) for most USHE institutions and the Utah Electronic High School. By using a UEN-hosted enterprise-level course management system, USHE institutions eliminate expenditures they previously paid for CMS hardware, software, and technical staff support. The enterprise CMS model allows USHE faculty to improve the quality of courses, class assignments, and student assessments. Course material developed by a professor on one campus can be shared collaboratively system-wide by other departments and colleges. Media-rich course materials can be economically aggregated using the UEN College e-Media tool and quickly and easily integrated into courses. This offers exciting possibilities for both increased efficiencies and increased richness of instructional content compared to traditional classroom instructional approaches.

UEN is requesting $200,000 to purchase the required equipment for moving the University of Utah to the UEN hosted course management system. Enhanced processing ability and storage capacity is needed to accommodate the addition of the University to those institutions UEN already supports. With UEN hosting an enterprise-level course management system, the Utah System of Higher Education maximizes information technology resources, optimizes investments in hardware and software, and ensures system reliability and performance.

Richfield Data Center – Disaster Recovery Improvements

When disaster strikes, whether in the form of an earthquake, a blackout, or far more likely, a virus attack or software or user error, the ability to respond well to the crisis can make the difference. The proposed funding request of $380,000 is to begin the expansion of needed storage capacity at the Richfield Data Center. The additional storage equipment ensures continuity and quick recovery of vital government data for state agencies and educational entities.

Summary

The preliminary budget estimate for UEN totals $6,000,000 in new funding for FY 2009. Reflected in this amount is $2,200,000 in ongoing Education funds and $3,800,000 in one-time funding. The following table identifies the distribution of the UEN FY 2009 budget request. Funding for staff retention is included, even though adjustments for selective salary increases will be addressed by the Legislature when they determine statewide compensation for all education sectors of State government.

FY 2009 Budget Request

		Ongoing	One-time	FY 2009 Request
Staff Retention		**300,000**		**300,000**
I.	**Network Improvements:**			
	Research Network	$500,000	$200,000	$700,000
	Network Improvements: Elementary, Charter & New Secondary Schools	700,000	500,000	1,200,000
	Network Backbone Increased to 10 Gigabite/second	200,000	200,000	400,000
	Subtotal	**1,400,000**	**900,000**	**2,300,000**
II.	**Technology-Rich Instructional Content**	**500,000**	**320,000**	**820,000**
III.	**Instructional Video Conferencing Improvements**			
	EDNET – Equipment & Site Upgrades		800,000	800,000
	USHE – IVC Sites & Equipment		1,200,000	1,200,000
	Subtotal	**0**	**2,000,000**	**2,000,000**
IV.	**Enterprise Applications Equipment**			
	U of U Migration to UEN CMS Support		200,000	200,000
	Richfield Data Center – Disaster Recovery		380,000	380,000
	Subtotal	**0**	**580,000**	**580,000**
FY 2009 Budget Request		**$2,200,000**	**$3,800,000**	**$6,000,000**
Plan of Financing				
	Education Fund	**$2,200,000**	**$3,800,000**	**$6,000,000**

Recommendation

It is recommended that the UEN Steering Committee review and approve the FY 2009 Budget request totaling $2,200,000 in ongoing funding and $3,800,000 one-time funds.

UEN STEERING COMMITTEE SCHEDULE FOR 2008 - ACTION

Issue

UEN Steering Committee meeting dates for 2008 are proposed.

Background

The following dates are proposed for the 2008 UEN Steering Committee meetings. The meetings are scheduled for the third Friday of every other month. The dates avoid conflicts with the schedules of the Board of Education, Board of Regents, and UEA convention. Meetings of the Utah School Superintendents Association have been scheduled through the end of July, 2008. There will be a conflict with the last morning of a USSA 3 day professional development conference held June 18- 20, so the Steering Committee may wish to change the June meeting to another date.

It is proposed that on the meetings dates, the Committee of the Whole will begin at 9 a.m., and that meetings of the Instructional Services and Technical Services subcommittees will follow at approximately 10:30 a.m. It is anticipated that all meetings will be completed by noon.

All meetings will be held at Eccles Broadcast Center, on the University of Utah campus. Members may also participate from Interactive Videoconferencing rooms throughout the state by making prior arrangements with the UEN Video Operations Center.

Proposed 2008 Steering Committee Meeting Schedule

February 15

April 18

June 20

August 15

October 15

December 19

Recommendation

It is recommended that the proposed UEN Steering Committee meeting schedule be approved.

UPGRADING CORE SEGMENTS OF NETWORK BACKBONE TO 10 GB ETHERNET - ACTION

Issue

Utilization on the UEN backbone has been increasing steadily since GL3 improvements were made in the past few years. We are now at a critical point of needing to support increased load. A new 10 GE backbone has been engineered which will meet user demand with limited budget increases and an RFP has been issued for six new 10 Gb Ethernet circuits to support this design.

Background

Network backbone utilization has been steadily increasing. Users can start experiencing slowdowns when 95th percentile utilization passes 75%.

Network Backbone Utilization by Ring

	Oct.	June	Apr.	Feb.
North Ring	57%	48%	45%	39%
Central Ring	71%	53%	54%	52%
South Ring	22%	55%	53%	31%

An RFP has been issued to upgrade the following most congested points on the network to 10 Gb Ethernet:

USU to Level3

USU to EBC

Level3 to SLCC

SLCC to UVSC

UVSC to EBC

UVSC to Snow South

Maps providing additional detail are provided in the presentation attached to this report.

Funding

Funds that are currently being expended in our Qwest WAN Backbone contract upon completion of GL3 Phase one equipment contract (as of Feb 2008):

- $35,000 per month ($420,000 annual)

Funds requested to support this upgrade in the UEN FY 2009 Legislative Budget Request:

- $200,000 One time
- $200,000 annual ongoing

Recommendation

It is recommended that the Steering Committee approve plans to increase capacity of six core segments of the backbone to 10 Gb Ethernet.

TAB 30 ATTACHMENT A
10 GB ETHERNET UPGRADE - ADDITIONAL INFORMATION
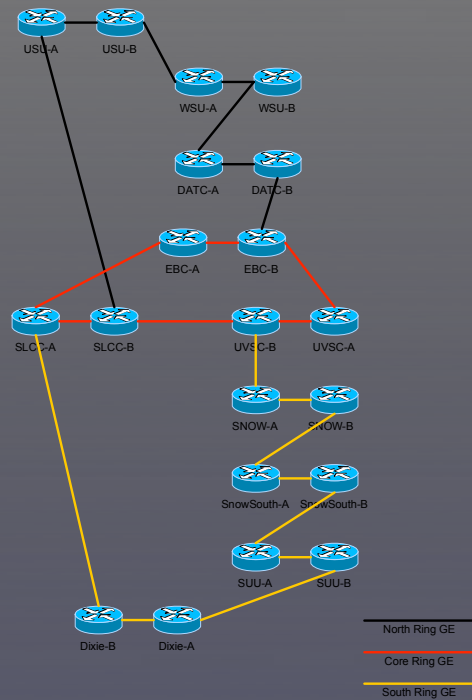
10 GE Backbone Upgrades

Steering Committee
October 2007

Kevin Quire
Senior Network Engineer
Utah Education Network
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What is the Backbone?

- Interconnects 10 major network aggregation sites with Internet links

- The highway for all State data traffic

- The most critical part of the network

- Today all are GE links; the same as schools

Current UEN GE Backbone

USU-A USU-B

WSU-A WSU-B

DATC-A DATC-B

EBC-A EBC-B

SLCC-A SLCC-B UVSC-B UVSC-A

SNOW-A SNOW-B

SnowSouth-A SnowSouth-B

SUU-A SUU-B

Dixie-B Dixie-A

North Ring GE
Core Ring GE
South Ring GE

Why do we need a 10 GE Backbone?

- Backbone Network Utilization has been steadily increasing

- Driven by more GE connected schools and entities

- Additional Video IP classrooms (UEN SS Conversion Project)

- Demand for Richfield Data Center co-location

- More multimedia content available on the Internet

- We cannot add any additional Internet bandwidth on current 1 GE backbone

Why do we need a 10 GE Backbone?

- 95th Percentile Backbone Network Utilization

- Industry standard is to start *planning* for upgrades when utilization hits 60%

- Users can start seeing slowdowns when 95th percentile utilization passes 75%

	Oct	June	April	Feb
North Ring	57%	48%	45%	39%
Central Ring	71%	53%	54%	52%
South Ring	22%	55%	53%	31%

When do we need a 10 GE Backbone?

- Based on current utilization and trending the network should operate without congestion for the 2007-08 school year

- UEN needs to begin 10 GE backbone upgrades during summer 2008 to support the 2008-09 school year

A Phased Approach

- Upgrading entire backbone in one phase is cost prohibitive

- Do we really need to upgrade all hubs to 10 GE today?
    - No....some hubs do not generate large traffic volumes

- Upgrades will be approached in multiple phases

- Phase 1 of 10 GE upgrade does not give us 10 GE to the customer; only 10 GE backbone links

Phase 1 - 10 GE Network

UEN 10 GE Backbone

- Backbone segments with highest utilization will be upgraded during Phase 1

- 10 GE link to SnowSouth will provide necessary capacity to RDC

- New hub located at Level3 facility

- Phase 1 will alleviate any potential congestion issues
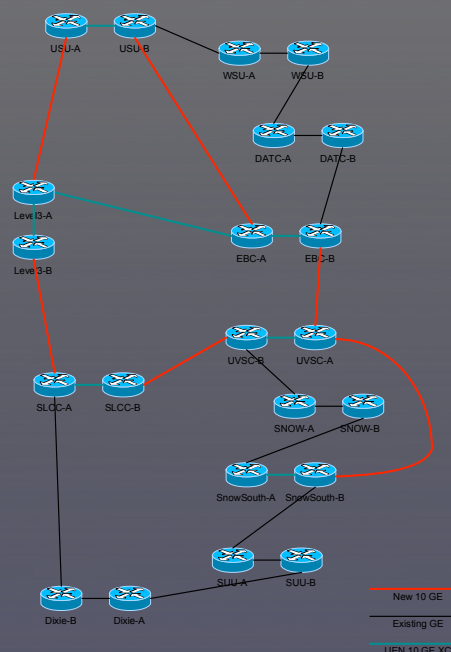


New UEN Backbone Hub

- Level 3 Hub Site

  - New hub located in Level 3 Colo on Delong St. in SLC

  - Internet2, NLR, TransitRail, and Cogent traverse this hub on the way to EBC for termination

  - UEN has fiber IRU (through CENIC/NLR) from EBC to Level3 hub

  - Additional expense includes two new routers and rack fees. Other routers will be reused

  - New hub will allow for less expensive connectivity to future ISPs

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Phase 1 - 10 GE Network

UEN 10 GE Backbone with Level3 Hub

- Phase 1 will benefit all hubs on the network

- Phase 1 - 10 GE backbone will give more bandwidth to GE connected hubs

- GE connected sites will no longer have other hubs transiting their connection (except during a failure situation)
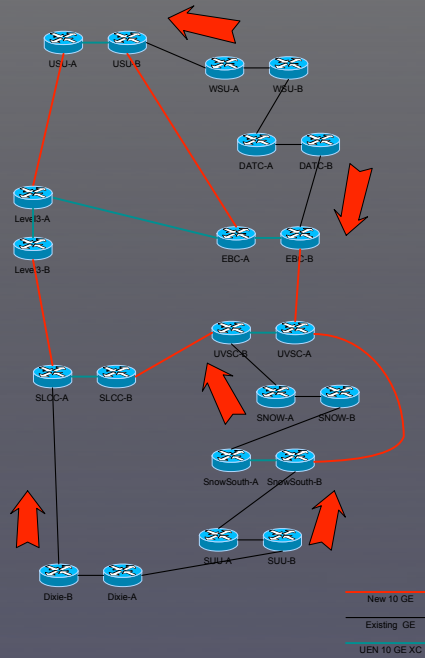
Richfield Data Center

- 10 GE Network Capacity to the RDC

- Customers connect to UEN in RDC via GE

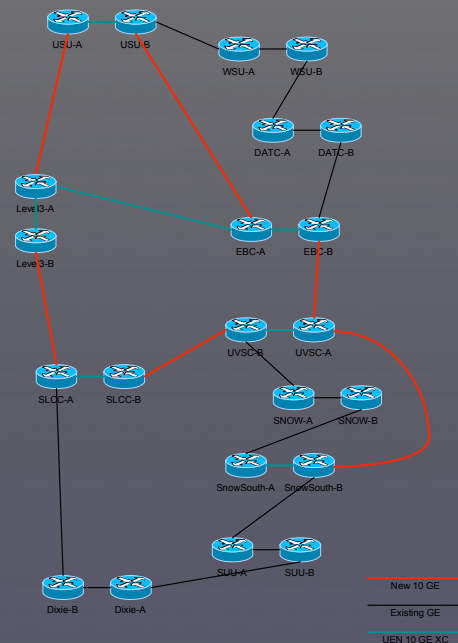- UEN can offer customers standard layer 3 connections or MPLS VPN

Funding

- GeoMax Phase 1 Funding Available July 2008
  - $35,000 per month ($420,000 annual)
- FY 2009 Legislative Budget Request
  - $200,000 one-time
  - $200,000 annual ongoing

Next Steps

UEN 10 GE Backbone

- RFP issued for phase 1 - 10 GE circuits (6 total)

- Work with vendors to finalize equipment decision

- Finalize Level 3 hub plans

USU-A USU-B WSU-A WSU-B
DATC-A DATC-B
Level3-A
EBC-A EBC-B
Leve 3-B
UVSC-B UVSC-A
SLCC-A SLCC-B
SNOW-A SNOW-B
SnowSouth-A SnowSouth-B
SUU-A SUU-B
Dixie-B Dixie-A

New 10 GE
Existing GE
UEN 10 GE XC

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UEN NETWORK PERFORMANCE METRICS - DISCUSSION

Issue

The UEN Network Operations Center continues to monitor health and utilization of the network. Network Operations is also continuing its development of tools and acquiring resources to better manage and monitor the network.

Background

Performance Metrics for the UEN Backbone

Network Backbone Availability

Month to date: 100%

Quarter to date: 100%

Year to date: 99.995%

Average PoP Site Latency

USU	4.7 ms
WSU	3.7 ms
DATC	3.4 ms
EBC	3.1 ms
SLCC	3.0 ms
UVU	2.7 ms
UVUW	3.3 ms
CEU	4.1 ms
Snow	3.6 ms
SnowS	4.0 ms
SUU	6.1 ms
Dixie	6.5 ms

Network Backbone Utilization by Ring

North: 57%

Central: 71%

South: 22%

Internet Bandwidth Summary

Bandwidth Available: 3.6Gbps

95th Percentile Utilization: 1.74Gbps

Note: All peak statistics are calculated using the peak 95th percentile industry standard calculations.

Recommendation

This is a discussion item requiring no further Steering Committee Action.

UENSS TO IVC PROJECT FINAL REPORT - DISCUSSION

Issue

This report is the final summary of the UEN and Utah State University statewide project to convert UENSS classrooms and video infrastructure to Interactive Video Conferencing (IVC), an H.323 based technology and service.

Background

The conversion from UENSS to IVC was completed as of August 30th. The UENSS satellite uplink is now off-line, as are the analog routing components required to route UENSS and EDNET video. All remaining Qwest CVDS video circuits have been cancelled and all distance education classrooms, both UENSS and EDNET, are fully compliant to UEN's Interactive Video Conferencing (IVC) standard.

The new infrastructure now includes over 400 classrooms and seven 48 port multipoint control units (MCUs). The MCUs are located in key UEN backbone locations, providing from 155 megabits up to two gigabits of robust, low latency network bandwidth.

Improvements have been completed to the UEN Video Operations Center (VOC) which is now organized to meet the support needs of the new IP based video network. Key changes include Tier One and Tier Two support and a new interactive voice response (IVR) system enabling the VOC to provide additional support service to IVC instructors, facilitators and regional support staff. The UEN Video Operation Center is now providing seamless support from both its Salt Lake and Logan VOCs.

It is important to note that the UEN Gigabit Layer Three (GL3) project, an ongoing multi-year project implementing significant bandwidth upgrades to state universities, colleges, applied technology colleges, school district offices and all secondary schools was a critical and essential component to the EDNET and UENSS conversion to IVC. Network improvements insured that bandwidth and network performance requirements for the new IVC network can be met.

With the start of the new school year, UEN and USU staff are making extra efforts to insure that the IVC network meets the needs of instructors and students. This work includes the isolation and resolution of technical performance issues; providing additional technical training to instructors and facilitators, and hosting open houses with instructors and facilitators to gather feedback.

UEN is also conducting a new evaluation of the next generation MCU. It was decided in July to continue operations on UEN's existing MCU platform until new platforms can be re-evaluated and tested. This is to insure that an enterprise wide solution can

be implemented that will meet the daily performance demands of Utah's large scale statewide distance education network.

Additional IVC classrooms will be installed during the year, with prioritization of work provided by Utah State University.

Recommendation

This is a discussion item requiring no Steering Committee action.

QUARTER ONE PROGRESS REPORT ON FY 2008 STRATEGIC PLAN - DISCUSSION

Issue

This is a quarterly progress report for the FY 2008 UEN Strategic Plan. This report includes activities conducted during July, August, and September 2007 for all UEN departments.

Background

Reports follow fiscal year quarters as outlined below:

Quarter 1 – July, August, September

Quarter 2 – October, November, December

Quarter 3 – January, February, March

Quarter 4 – April, May, June

Quarter One FY 2008 Activities and Highlights

Goal 1 – Wide Area Network

- Completed NEMO project reviewing and updating all device configurations resulting in comprehensive systems inventory and streamlined network administration processes

- Completed organizational realignment with engineering and NOC to better manage work flow for both areas

- Designed and deployed MPLS Virtual Private Network (VPN)

- Developed and implemented UEN Weathermap

- Purchased and implemented Opsware

- Upgraded the I2 link to GigE with connection to NewNet

- Planned and released the Internet and 10 GigE RFP

- Worked closed with University of Utah Legal Council, Internet2 and FRGP to negotiate the new Internet2 contract

- Completed planning and ordered Internet circuits for Level-3/Broadwing connection at SLCC and the Internet connection to Cogent in Denver

Goal 2 – Educational Web Resources

- Coordinated lesson plan development and publishing with USOE
- Expanded and maintained core curriculum resource database
- Upgraded mailing list software and provided end user training
- Completed design for College Prep Guide for USHE
- Designed USOE EdTech web site
- Promoted my.UEN through ad placement and regional conferences

Goal 3 – Enterprise Solutions

- Successfully supported Fall Semester start up for all hosted institutions with over 250,000 user sessions handled in the first 20 days.
- Completed Vista 4.1 production environment load testing with excellent results
- Applied Hot fix 1 to the 4.1 production environment resulting in problem resolution
- Implemented Blackboard for USU and UVSC in preparation for Fall, 2007 start up and increased UEN support to Blackboard and reduced open tickets to three
- Conducted Vista administrator training and monthly coordination calls
- Released web conferencing RFP and formed evaluation committee
- Launched Pioneer Library federated search tool and redesigns for landing and K-12 pages
- Upgraded UEN data center racks to support network infrastructure
- Evaluated the table structure of the UTIPS item pool and assisted in creating the import tool for upgrading the USOE items

Goal 4 – Distance Education

- UENSS Conversion Project completed
- Completed reorganization and realignment of IVC Operations with consolidation of USU TOC, Tier II positions hired and restructured resulting in better VOC workflow and coordination with USU distance education services
- EDNET Multi-year Conversion Project completed
- GL3 Project completed with all Rural Telecommunications Providers
- GL3 Project with Qwest 70% complete
- San Juan CIB Project Phases 2 and 3 completed

Goal 5 – Broadcast Services

- Launched Water Wise Utah project with museum opening, distribution of more than 400 promotional items at community events, supported numerous community roundtables and academic panels for Water conservation
- Launched Water Wise Utah web site

- Completed MOU's with Youth in Custody center directors for datacasting project
- Produced Multimedia Guide for K-12 teachers

Goal 6 – Professional Development

- Released fall/winter schedule on September 1
- Created new courses, course updates, and new online Professional Development communities pages
- Trained an average of 1,000 teachers per month during the summer

Goal 7 – Governance and Accountability

- Finalized Steering Committee Approval for FY 2008 Strategic Plan and Budget
- Facilitated changes in Steering Committee membership due to term renewals, retirements, and personnel changes
- Distributed electronic newsletters twice monthly, added podcast feeds of UEN News to iTunes and web site, added higher education articles to newsletters and podcasts

Recommendation

This is a discussion item requiring no further Steering Committee action.

T A B **3**

UEN Summer Goals and Progress - Discussion

Issue

UEN staff have met the 30 goals outlined at the beginning of the summer.

Background

In the June Steering Committee meeting, members were presented with a list of 30 summer goals that staff identified to be accomplished through the summer. We are pleased to report that the goals were accomplished due to incredible dedication and coordination from staff.

The goals represent activities identified through UEN's annual strategic planning process, based on input from districts, institutions, and our Steering Committee.

To illustrate the significance of this effort, staff for the following projects will report on their summer accomplishments:

- Launch my.UEN – Karen Krier
- Train 3,000 Teachers – Victoria Rasmussen
- Complete Nemo 3 Standards and Documentation Project – Troy Jessup
- Complete Stable Course Management System – Cory Stokes
- Complete UENSS to IVC conversion – Jeff Egly

Recommendation

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

T A B 4

STEERING COMMITTEE MEETING MINUTES

UTAH EDUCATION NETWORK STEERING COMMITTEE

August 17, 2007 – 9:00 a.m.

Members Present: Ron Barlow, Clark Baron, Charice Black (for Glen Taylor), Jon Crawford, Brenda Hales, Stephen Hess, M. K. Jeppesen, Gary Koeven, Pat Lambrose, Donna Jones Morris, Eric Mantz for Ryan Thomas, Mike Petersen, Kirk Sitterud, Elise Taylor (for Ronda Menlove), Ray Walker, Gary Wixom.

Others Present: Adriane Anderson, Barry Bryson, Lisa Cohne, Kevin Dutt, Jeff Egly, Rich Finlinson, Claire Gardner, Boyd Garriott, Cyd Grua, Eric Hawley, James Hodges, Troy Jessup, Doug Jones, Karen Krier for Laura Hunter, Bill Kucera, Lisa Kuhn, Jim Langston, Don Mahaffey, George Miller, Bryan Peterson, Kevin Quire, Joni Robertson, Dennis Sampson, Larry Smith, Nate Southerland, Jim Stewart, Cory Stokes, Louie Valles, Kathy Webb for Rick Gaisford.

Welcome and Introductions

Gary welcomed everyone to the August meeting. Gary also introduced and welcomed the new co-chair Brenda Hales.

Committee of the Whole

Tab 8 - New Steering Committee Membership

The terms of four members expired on July 31, 2007, and it is proposed that the Steering Committee request that those four members be reappointed to new four-year terms. The following individuals are:

Ron Barlow, Superintendent of Tintic School District

Stephen Hess, CIO of the University of Utah and USHE CIO

Donna Jones Morris, State Librarian

Kim Roper, Principal of Bonneville Elementary School, Alpine School District

They have all agreed to serve a second four-year term from August 1, 2007 through July 31, 2011.

Kenning Arlitsch is Associate Director for Administrative and IT Services at the Marriott Library, University of Utah. Kenning is recommended to replace Wayne Peay on the Steering Committee and he has agreed.

A replacement has not been named for Jeff Livingston at this time.

A motion was made and seconded to approve the nomination of the above individuals to new four year terms. The motion carried.

Tab 9 - Fiscal Year 2008 Budget

No changes have been made to the budget since it was preliminarily approved. There have not been any new issues or concerns raised by staff, Steering Committee members or other UEN stakeholders.

A motion was made and seconded to approve the budget as submitted. The motion carried.

Tab 10 - Fiscal Year 2008 Draft Strategic Plan

Draft versions of the annual tactical plan and the long term strategic plan were presented to the Steering Committee in June 2007. The planning documents have also been reviewed and discussed during the Higher Education and Public Education advisory meetings in August. Long term objectives serve as a complement to the annual tactical plan and help guide policy, funding and legislative priorities for the coming years.

The seven main goal areas of UEN have been consistent for the past several years, and are based on statute and mission. The list of goals can be found on Tab 10. The long term strategic plan can be found in Tab 10, Attachment A and the FY 2008 strategic plan can be found in Tab 10, Attachment B.

A motion was made and seconded to approve the long term strategic and annual tactical plans for FY 2008. The motion carried.

Tab 11 - UEN Performance Dashboard

UEN is a state-funded organization serving a range of stakeholders and has historically collected large volumes of data concerning its performance from a variety of sources. This information is then distributed to stakeholders both in periodic detailed reports and on an as-needed basis. Performance dashboards are utilized by many organizations to provide an at-a-glance indication of organizational performance.

Nate Southerland talked about the information that is provided in Tab 11, Attachment A. This includes information on FY 2007, Quarter 4.

Karen Krier talked about the information that is provided in Tab 11, Attachment B. This includes the actual data which makes up this performance dashboard.

A motion was made and seconded to approve the final draft of the Performance Dashboard. The motion carried.

Tab 12 - KUED–7 Digital Spanish Language Channel

Larry Smith talked about the new Spanish-language channel and its programming. V-me is a new national network partnered with public TV that entertains and educates America's latino families in Spanish with a mix or original and exclusive programs. The programming is organized into 5 themes which include kids, lifestyle, factual, movies and specials. To look at the promotional material regarding this new station please see Tab 12, Attachment A.

Tab 13 - Water Wise Utah Launch

Lisa Cohne, Water Wise Utah project manager, gave an overview of this project. There are numerous partners involved in getting this project off the ground. They are getting ready to roll out the statewide events which begin in August with the creation of a Web site . The state roll out of events begins in September and October 7-13, 2007 is the Water Wise Utah Water Week.

The partnership activities are listed on Tab 13.

Tab 14 - UEN Performance Metrics

UEN's Network Operations Center continues to monitor health and utilization of the network. Network Operations is also continuing its development of tools and acquisition of resources to better manage and monitor the network.

To see the performance metrics numbers for the current month , see Tab 14.

Tab 15 - E-Rate Funding Update

UEN filed for approximately $11.1 million in E-Rate dollars for FY 2008 and to date, UEN has been funded approximately $10.8 million, with 6 applications still under review. UEN has scheduled six E-Rate training sessions to help applicants prepare for the upcoming filing window this Fall.

Tab 16 - Steering Committee Minutes

A motion was made and seconded to approve the minutes as submitted. THIS MOTION CARRIED.

The next Steering Committee meeting will be held on October 19, 2007, at 9:00 a.m. at the Dolores Doré Eccles Broadcast Center.

The meeting then adjourned for subcommittee meetings. The minutes from each subcommittee appear on the following pages.

Attendees: Adriane Andersen, Kenning Arlitsh, Clark Baron, Jessica Bishop, Lisa Cohne, Rich Finlinson, Claire Gardner, Cyd Grua, Brenda Hales, Doug Jones, Donna Jones Morris, Karen Krier, Bill Kucera, Pat Lambrose, Jim Langston, George Miller, Kirk Sitterrud, Nate Southerland, Elisa Taylor, Kathy Webb, and Gary Wixom.

Tab 18 - UEN Enterprise Learning Services Summer 2007 Update – Discussion

Course Management Service

Cory Stokes provided an overview of the course management system activities since April, 2007. In general, the relationship between Blackboard and the Utah consortium is improving as Blackboard works to rectify problems with their code releases, customer support, and overall improvement in stability. There has been much activity including completing licensing agreements, software licensing assessment, and commencement of the hiring process for the Database Administrator, Systems Administrator, and Service Manager positions funded by the legislature. A detailed list of 9 activities is included in Tab 18.

Web Conference Service

Cory Stokes explained that UEN has an RFP for a statewide web conferencing solution for higher education. Partial funding was provided by the legislature for higher education. So far there are six vendors who have responded. Cory is reviewing the submissions to determine which ones actually meet the foundation requirements. An evaluation group has been created and this working group will determine how to proceed.

Kathy Webb and others asked that the K-12 community input be kept in mind during this evaluation for higher ed.

Digital Media Service

Cory Stokes reviewed 3 pages of charts and graphs which display the utilization of UEN's downloadable digital video and other media items which are offered under 3 branded services- eMedia, CollegeMedia, and MediaHub. Please review Tab 18, pages 59-61 to view the increases in utilization (doubling monthly) and the plans for further expansion of this service.

Tab 19 - EDNET Faculty Training Activity Report – Discussion

George Miller presented his annual report on the status of the Utah State Office of Education faculty training program. EDNET IVC continues to be a vital component in Utah education. Training and re-training is continuous. With the conversion to IVC there is a need for development of new training materials. EDNET facilitators have expressed a need for collaboration. There is an expressed need for self-paced training and teaching. Training statistics are included in Tab 19 Attachment A on page 65.

Tab 20 - Interactive Video Conferencing Update – Discussion

Jeff Egly and Claire Gardner led a discussion addressing the questions of where are we now and where are we going? Louie Valles, the new IVC Administrator, talked about the conversion of EDNET and UENSS to IVC technology. Now that the huge project is ending, we need to focus on the policy issues. How do we use the IVC network? There is a need for up-to-date maps that are easy to understand. People need to be able to access to the system for small ad hoc meetings. We need to let instructors and students know of the possibilities for utilization for IVC. Visualization should be included. Online training modules need to be developed. There is a definite need for more technical training for teachers and facilitators. It was suggested that this group reach out to others and create a video conferencing discussion group which will help lead toward more and better emphasis on training and communication. We were also reminded that we need to use our systems ourselves, not just talk about it. What about creation of a blog/wiki where current information is provided. The UEN IVC group will act upon these suggestions.

Tab 21 - Utah Teacher Preview – Discussion

On September 12, 2007, the second Teacher Preview will be held. Previews of broadcasts for KUEN and KUED will occur. How to use video and broadcast in classrooms will be demonstrated. Other teacher resources will be presented.

Tab 22 - Courseware Showcase – Discussion

On September 13th, 2007, there will be an opportunity for vendors to show tools to enhance educational materials.

Tab 23 - Public Education and Higher Education Advisory Committee Reports – Discussion

Higher Education

Cyd Grua reported on discussion of 3 items. The first is KUEN. Currently KUEN is not being used to promote higher education. Are there topics that could be covered in short time limit that could increase awareness – such as a checklist for incoming freshmen? A UEN budget might need to be set up to produce more programs for higher education.

The second discussion item is a newsletter. The group would like to see a piece that contains more information on higher education. Currently NetNews reaches only 3,500 higher ed people of the 18,000 distributed. The committee would like to see the newsletter promoted on campuses.

The third item is a request to explore alternatives to VISTA. What other Learning Management Systems are available? Create ways to compile activities to show alternatives in use. Deliver content to students in a management-type system. Watch to see what's out there.

Public Education

Doug Jones reported that the PEAC was fully functional now with the addition of 2

new members. The UEN bylaws and the UEN strategic plan have been reviewed. Rick Gaisford will represent the group on the Enterprise activities. The group is soliciting suggestions for and recommendations for NetNews content. my.UEN received great reviews. It's a good start. Consider a move to a "Google look" both good and bad.

Information Exchange/Table Talk

- E-Portfolios - new my.UEN might be a great portfolio for new teachers
- State Software Purchases – could UEN come together with higher ed for state purchases?
- Faculty Lounge – Bring higher ed into it
- Pioneer Federated Search – Great
- ITC Configuration – ITC workshop is looking at 2 day training rather than 3 – or using day 3 as an online workshop

Big Upcoming Issues

- Testing and online testing
- Alternative language resources development
- How do we meet the needs of the immigrant and refugee population?
- What is happening with proctoring distance education exams?
- Need to expand what's available for K-12 online and telecourses
- Explore copyright, fair use and intellectual property rights

Utah Education Network Technical Services Subcommittee Meeting Minutes

Attendees: Ron Barlow, Charice Black (for Glen Taylor), Barry Bryson, Jon Crawford, Jeff Egly, David Fletcher, Eric Hawley, Steve Hess, M. K. Jeppesen, Gary Koeven, Don Mahaffey, Eric Mantz, Casey Moore, Kevin Quire, Joni Robertson, Dennis Sampson, Jim Stewart, Louie Valles, Ray Walker.

RUS Grant Status – It is still under evaluation. Last year the grant was awarded in August.

Eric Mantz is acting chairman today, substituting for President Ryan Thomas.

Tab 24 - Fiscal Year 2008 Regional Priorities - Action

The recommendation is for the subcommittee membership to provide input and make appropriate additions or changes to the current spreadsheet included in Attachment A. Additions can be made at any time. This is a dynamic document.

The priorities have been listed by regions based on the findings of the meeting held on May 21, 2007. UEN has not attempted to put in the regional priorities. No feedback has been received from the regions as to their priorities. There is a provision made within

the document if you as a region would like to prioritize them for us. Otherwise, we are moving forward and working through the document. Based on the status line of the 126 items, there are 15 that are complete, 23 that are in progress and 14 that are ongoing for a total of 52 or 41% percent of the requests that we are currently working on. Seven requests are to put sites onto the upcoming RFP, thirteen are requests for elementary school support for a total of 20 that we are working on that are not currently funded or needing some ground work to be done.

The eight priorities are priorities given to us by the Steering Committee. The Steering Committee has prioritized the first four and the last four items are for organizational purposes.

Action item is to review the list and keep it updated and accurate.

Motion was made to acknowledge that this is an ongoing document. Seconded and all in favor.

Tab 25 - UENSS to IVC Update – Discussion

Eighteen months of planning and implementation time has gone into this project. All of the WAN (Wide Area Network) and LAN (Local Area Network) improvements are now complete. The classroom improvements are nearing completion. One of the key locations we are focusing on now is the Granite Education Center which will house Utah State's new extension location. We are looking at eleven classrooms to be turned up at this location. We are on schedule to start up for fall semester.

As part of this project, UEN wanted to migrate toward a new bridging platform which is the RadVision Scopia. It provides features that we have wanted to address for some time. We have worked with RadVision over the past five months with Scopia. On August 3, 2007 we made the decision that we need to stay with our current platform which is the ViaIP400. UEN and USU IT administration concluded that additional work is required before a successful transition can be assured.

In September, 2007, we will again review all the platforms available. We will look and test the best platforms available. A significant amount of testing needs to go into this. Until we test it under the load UEN provides, we really don't know how well the appliance performs.

Another part of the project that is underway is completion of a new Video Operation Center in Logan at Utah State University. Jeff Egly introduced Louie Valles as the new IVC Operations Administrator. He will oversee the day to day operations of both of the operation centers. Louie will begin participating in the Instructional Services Subcommittee.

Jim Stewart added a comment that this project represents a 300% increase over any previous year projects in number of sites that we have had to address. We are more than 80% completed on this project.

Eric Hawley on behalf of USU thanked UEN. This has been an unprecedented effort and UEN stepped up and met or exceeded every deadline and performance metric.

On August 31, 2007 the uplink to the satellite will be shut off. The remaining CVDS circuits that we had between here and Utah Valley will go offline. The remaining analog switching that we require that has been in place at SLCC, UVSC and EBC will also go offline at the end of the month.

The question was asked if the IP Video has been responsible for the increase in the bandwidth? On the internet connectivity, we are not doing much that is traversing the internet. Most of it stays within the network. An increase will be seen on the backbone related to the new video classrooms that have been installed. We will need to look into what has caused this increase. We are still within tolerance range.

How do we insure quality of service? We have to make sure the sites are certified and scheduled according to policies. We look at the bandwidth requirements and can prioritize video traffic. As of today, neither Utah State University nor UEN has run out of bandwidth. From a WAN standpoint, what effects video is latency, jitter, and bandwidth availability. Those are the things UEN monitors very closely. The biggest issue we have run into is last mile LAN. We put in a dedicated connection that we know that can be managed all the way to the end point. We are not competing with other local area traffic for internet. Since we run classrooms all day, we take every step to manage the network right to the end point so we have as much control as possible over that bandwidth and issues that may effect the quality of the video.

Tab 26 - Vista Course Management Service – System Load Testing – Discussion

Cory Stokes of UEN gave a presentation of the Vista Course Management Service.

In March 2007, UEN installed a completely new infrastructure for the Vista Course Management system. With USU and UVSC coming on, we installed a much larger infrastructure. We engaged Blackboard to do a load test on the system to see what it could handle. The load test was conducted on Sunday, August 12, 2007. We asked Blackboard to provide us a summary.

The infrastructure that is now in place includes two F5 load balancers behind check point clusters, and we have four Sun T2000 servers. Each T2000 has virtualized nodes. We have four application nodes on each of those. This brings us up to 16 application nodes available and an additional admin node that handles administrative traffic. Behind that is a much larger Oracle database machine. The Vista storage is taking up about 2.4 terabytes in the storage area network.

Our current configuration is capable of handling 14,250 user sessions per hour. We anticipate that the fall load will be about 7000-8000 user sessions per hour. The system is capable of 13,000 assessments per hour. The system is stable under load. It is capable of 1.63 million hits per hour.

As we grow the system, the first place we will need to add infrastructure is at the database level. The database CPU's do become saturated under load. As we grow, adding processors to the database will become necessary.

Capacity Plan – Short term

Implement recommended configuration changes on the database.

Implement redundant database server environment into the infrastructure.

Regular load testing.

<u>Capacity Plan - Long Term</u>

Scale up database to consider Oracle RAC number of CPU processors.

Watch how our load balancers and our SSL accelerator are affected by our database being expanded.

Load testing as part of our upgrades and changes to infrastructure.

The full report should be available to us the middle of next week. It was suggested the full report get incorporated into the Steering Committee material.

Cory has confidence in Blackboard as a product and with the 4.2 release we will see significant bug fixes. If we know it is a stable environment, we can move into the 4.2 environment sometime in October. The code base is getting better. UEN has two years on the contract.

An issue at USU was the inability of Blackboard to handle cross listed courses. There is manual work that has to be done in order to do the fix that Blackboard doesn't seem to have. USU developed the fix.

The University of Utah will bring on another 6,000 concurrent students and we are comfortable the infrastructure can take University of Utah through the migration. We will increase the capacity as we bring on the University. They have two additional application nodes they can bring to us and also help in the redundant database.

Blackboard is looking at our logs to try and determine what caused the bog down and emergency restart about three weeks ago.

Some issues with garbage collections problems will be resolved in 4.2.

Other Items

Mike Petersen stated that in our October meeting we plan to have a presentation that will focus on our network backbone plan to move part of our backbone to a 10gig configuration. We had a presentation on this from Kevin Quire and will have it ready for the next meeting.

Ray Walker spoke to the question about archiving email. In talking with their legal people, the requirement is not to archive all the emails indefinitely, but archive those that are associated with lawsuits. They have a written policy that says our email is deleted after a certain period of time and is not available. If we have a lawsuit or pending lawsuit we will archive that at that point in time.

The Attorney General is getting ready to put together a statement for all higher and public education. According to what the Attorney General's office has said, if someone notifies us of we have a lawsuit, we have to archive all emails that are related. If not, our policy of what we do for retention is what we can follow.

 Motion made to adjourn and was seconded. All in favor.

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

TAB **6**

COURSEWARE SHOWCASE REPORT AND DEMONSTRATION - DISCUSSION

Issue

Representatives from higher education participated in a day-long meeting September 13, 2007 to view new multimedia content from several vendors. Feedback from the event indicated a desire to move forward with collaborative media licensing and new formats tied with the Blackboard Course Management system.

Background

Collaborative licensing for software and content has been a successful model in Utah. Projects such as the Pioneer Online Library and Courseware Management System have demonstrated their benefit through economies of scale and increased collaboration among institutions and providers. Last spring members of the higher education community expressed interest in inviting multimedia vendors to demonstrate their new content and delivery now that many of the vendors are redesigning their product to meet the demands of new learners and delivery systems such as iPods and interactive courses.

Three vendors and UEN participated with 25 representatives from higher education institutions for a Courseware Showcase on September 13, 2007 at Salt Lake Community College. Of these, 20 participants returned evaluation forms that resulted in the following:

• All 20 participants indicated that they enjoyed their time at the Showcase and 12 responded they enjoyed their time "very much."

• 18 of 20 responded that they would definitely or likely attend were the showcase held again next year

• 19 of 20 said they would recommend attendance to their colleagues next year

Overall feedback indicated that new delivery systems such as iPods and learning objects were of great interest. Long format video courses were not. Participants were pleased to see that vendors are adapting their products to the new models that Blackboard and similar systems can provide (although several mentioned they would have enjoyed seeing more product and less self promotion).

Cory Stokes demonstrated the new CollegeMedia digital asset system for higher education and its application for sharing content among institutions and faculty using

the LearnKey modules that teach the Microsoft Office suite. Participants comments were very positive about this demonstration.

Now that we have an enterprise course management system and robust asset management system, participants reported they were very excited to see the potential of these systems working together to expand course offerings, particularly for multimedia content that is usually expensive to license or produce for individual institutions, but would be very attractive for group pricing.

Based on this feedback, UEN will continue to work with vendors and institutions to identify areas where collaboration on content is helpful. Members of the Higher Education Advisory Committee are working to promote CollegeMedia on their campuses, and UEN will continue to pursue power linking CollegeMedia with the Blackboard system for ease of use. Another vendor showcase will be scheduled next fall.

Recommendation

This is information item only. No further action is required of the Subcommittee at this time.

WORLDVIEW DIGITAL CHANNEL - DISCUSSION

Issue

UEN has identified a new digital broadcast service called "Worldview" and will be gathering community input over the next three months. Worldview presents a very good option for international news and programming not currently available in Utah.

Background

UEN-TV is currently broadcast in analog and digital. The FCC has mandated that analog broadcast be turned off in February 2009. A digital signal provides 19.4 mg of bandwidth that can be divided for multiple channels or services. When UEN-TV began digital broadcast in 2002, we selected a free multicast option from the Annenberg Channel. We also leased extra bandwidth to US-DTV, a company that no longer exists.

UEN has the opportunity to present a new digital service by realigning bandwidth allocation as follows:

Current bandwidth allocation	Proposed bandwidth allocation
9.1 UEN-TV educational programming	9.1 UEN-TV educational programming
9.2 Annenberg Media	9.2 Worldview
Small allocation – KUER rural translators	Small allocation – KUER rural translators
	Datacasting Educational Media to YIC

Worldview is a national feed that can be captured and rebroadcast by the station at no additional cost. Moving away from Annenberg Media won't present a significant shift because UEN already picks up the most recent programs and the Teacher Professional Development programs and airs them on 9.1. Additionally, Annenberg Media programs are available through streaming on the Internet. Cable companies tell us they have no interest in carrying Annenberg because the programming is already available on the Internet, so having another alternative that still fits the UEN mission and is attractive to cable companies means that the signal will serve more viewers.

Worldview is a programming stream created by a station very much like UEN–an independent public broadcaster with an educational mission and without PBS affiliation.

The programming is designed to bring a broader perspective of the world to American audiences. World News from Russia, France, Taiwan, India, and Germany provide the main programming, with additional programs on Foreign Affairs, International Mysteries, World Music, Sports, and Foreign Films–all of it English accessible (in English or subtitled). The service is supported by the U.S. Department of Education, National School Boards Association, Washington Post, and several international news organizations.

In the coming months, additional input on this programming option will be gathered through community focus group meetings. Program schedules, clips, and viewer discussions will be an important part of this effort. Members of the Subcommittee will receive an email schedule of the meetings and are invited to participate. Additionally, you can learn more about the channel by visiting *www.mhzworldview.org/* and more about the conversion to digital by visiting UEN's digital TV page at *www.uen.org/tv/ dtv/index.shtml.*

Recommendation

This is an information item requiring no further subcommittee action at this time.

K-12 PIONEER ONLINE LIBRARY
ENHANCEMENTS - DISCUSSION

Issue

This fall the Utah Education Network has enhanced the K-12 Pioneer, Utah's Online Library in two ways: 1) revised the K-12 Pioneer Web site to improve its "look and feel," and 2) added a federated search engine, which allows users to search more than one of Pioneer's databases with one search. (See attachment.)

Background

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

When Pioneer started more than 10 years ago the partners collaborated to create a Web site *http://pioneerlibrary.org* that each could promote jointly; however, each partner has also created a Web site that specifically meets the needs of their respective patrons or constituents (i.e., K-12, College/University, and local communities).

In the past, students and teachers have only been able to search a product or database individually. However, with the recent emerging technologies with respect to federated search engines, online tools have become available to allow the simultaneous search of multiple online databases.

Recommendation

This is a discussion item requiring no further Instructional Services Subcommittee action.

Support Materials | Quick Reference Online | Contact | Utah Education Network

K-12 Schools
PIONEER
Utah's Online Library

Select Category: All Resources ▾

Search

Advanced Search

General Reference Collection

🌐 **CultureGrams**
📘 **EBSCO**
🅴 **eMedia**
SIRS Discoverer
SIRS Knowledge Source
Visual Thesaurus
World Book Encyclopedia

Utah Collection

DN **Deseret News Archive**
Deseret Morning News
The Salt Lake Tribune
SURWEB
State of Utah Archives
UCME (Utah Collections Multimedia Encyclopedia)
Utah Digital Newspapers
Utah's Local Newspapers
Counties of Utah

Additional Library Resources

✳ **Spanish Resources**
Thinkfinity (Formerly MarcoPolo)
ThinkQuest
ALA **ALA Internet Resources**
Library of Congress

Utah Educator & Student Home Access

To access the K-12 Pioneer Library from home:

Go to: http://pioneer.uen.org

Login Name: **pioneer**
Password: **look**

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Contact Info: 801-581-2999 | 800-866-5852 | **resources@uen.org**

T A B **9**

MULTIMEDIA GUIDE - DISCUSSION

Issue

The annual Multimedia Guide has been distributed to K-12 teachers.

Background

The annual guide has been renamed this year to "Multimedia." Copies of the guide are being mailed to each committee member. The guide features programs on KUED and UEN-TV as well as material that can be checked out from district media centers or rural service centers through the Utah Instructional Media Consortium. Over 2,000 programs are also now available for download through the digital management service called eMedia.

"Multimedia" represents great collaboration between districts, USOE, KUED, and UEN, and will be widely promoted through training and conferences in the coming months.

Recommendation

This is an information item, no further Subcommittee action is required at this time.

TAB 9 ATTACHMENT A
UIMC ARTICLE

State tech perspectives

Video gives instruction a boost in Utah's schools

By Kathleen Webb and Doug Jones

The information age. The communication age. The media age. The game-playing age. The digital age. The internet age. Generation X. Generation Y. Generation D. Generation C. Internet generation. Millennials. Generation Now. iGeneration. Remix culture. Mash Up.

Today's iKids interact with media at every turn. It used to be that over-the-air television and the Friday-night movies were the only place rural students in Utah had access to multimedia. Now, it's everywhere—including on their mobile phones.

Forty-four years ago, Utah districts banded together as a consortium to purchase 16-millimeter films. Part of the consortium was known as UNIT (the Utah Network for Instructional Television), and its annual contribution was used to purchase broadcast rights for core-related K-12 programming that aired from Monday to Friday during the 9:00 a.m. to 3:00 p.m. block on Utah's public television stations. Schools used these over-the-air television shows in their classrooms.

The other half of the consortium, known as the Film Video Consortium, purchased films for classroom use.

By 1970, the Film Video Consortium had made the huge technology switch from film to group purchases of videotapes. Teachers could get videotapes delivered to their classroom, or they could record over-the-air programs for convenient use during instruction. Teachers no longer had to plan their instruction around the television schedule.

Glen Taylor, director of a regional service center for rural schools in central Utah, remembers traveling to West Desert Elementary to visit the school. The teacher announced proudly they had 100-percent attendance at the school that day. Glen counted all the students one by one, for a total of 11 students. West Desert Elementary was part of the consortium and had access to more than $200,000 worth of instructional media resources for its students. The consortium purchases brought media-resources equity to small rural schools and increased access for large urban districts.

In 1997, the 40 superintendents in the state agreed to merge the two parts of the consortium to create the Utah Instructional Media Consortium (UIMC). The consortium members continued to pool their resources to purchase high-quality media resources to support instruction, and Utah continued to support the 9:00 a.m. to 3:00 p.m block of instructional television with some broadcast rights purchased by UIMC.

That was a decade ago. And as they say, we've come a long way, baby.

Beginning in 2001, UIMC began its quest to purchase digital distribution rights, as well as duplication and broadcast rights. Several distributors—such as Weston Wood, Landmark, Sunburst, and AIMS Multimedia—understood where Utah was headed and worked to help UIMC secure the rights to distribute the media digitally.

Around the same time, the Utah Education Network (UEN) was completing two statewide pilots with united-streaming and Digital Curriculum. These pilots were annual contracts, and at the end of the pilots, teacher and student access to the media resources was terminated. Many of the media available from these services also had been purchased by UIMC. And not all the resources from these two vendors matched Utah's state core curriculum.

A UEN stakeholder group with representatives from the UIMC discussed the pilot results and made the tough decision to move ahead with developing a Utah-based distribution system. UIMC brought its digital distribution rights and core-selection process to the table and became

the K-12 anchor tenet for the Utah-based system.

Now, every school in Utah has a high-speed connection to the internet. And every school has access to eMedia— the Utah digital media file-distribution system. In support of eMedia, UIMC established a policy no longer to purchase video items without digital distribution rights.

UIMC continues to have a vendor fair each May, inviting digital media vendors to bring their newest releases. Consortium members visit with the vendors and sign up to preview curriculum-based items of interest. The videos, now in DVD format, are sent out to consortium members for evaluation for correlation to the core curriculum, student engagement, and production quality. Members meet in January to rate the media resources and make the group purchasing decisions.

UIMC has a digitization and duplication process for the purchased items as they arrive. Members can purchase the items on DVD for just the cost of the physical media and duplication time, or they can access the video resources for no cost via eMedia. eMedia protects the distribution license through both IP verification and password protection.

UIMC is continuing to look at the media needs of Utah teachers and today's iKids. We're looking at compelling ways to present the content to students. And we're contin-

best to use handouts; toolbars; inserting pictures, sounds and videos; backgrounds; hyperlinking, buttons, and action setting; and animation techniques for instruction.

In this hands-on course, teachers become familiar with the pedagogy, skills, and resources associated with educational technologies. Specifically, they become familiar with problem-based learning strategies and outcomes, project development and storyboarding techniques, computer file-management processes and products, copyright and fair-use guidelines for the classroom, the process of finding and saving classroom-appropriate pictures, sounds, and videos, and internet and video resources— including commercial, instructional TV, and digital video.

To complete the ITC workshop successfully, teachers must attend all three days, fully participate in each day's activities, complete a final, post-workshop assignment, and report back via the workshop web site. The online, final report asks each participant to respond to the following, post-workshop questions:
- How did you incorporate video resources into your classroom? What worked? What didn't?
- How did you incorporate internet resources into your classroom? Which resources? What worked? What didn't?

Students watch an educational video from the Utah Instructional Media Consortium.

uing to support teachers with professional development.

The Integrating Technology and Curriculum (ITC) workshop is three days of comprehensive professional development designed to help classroom teachers effectively integrate technology into their curriculum and classroom. The workshop focuses on the "hows" and "whys" of incorporating video, the internet, and multimedia resources into lesson plans and classroom environments.

The first day of ITC training includes an in-depth look at video resources for the classroom—commercial video, instructional television, and digital video like those now available via eMedia. Teachers learn how to find and save pictures, sounds, and videos that are ideally suited to teaching. Day two includes an in-depth look at internet resources for the classroom. Teachers become intimately familiar with, and skilled at accessing, Utah's Pioneer Library resources from eMedia, as well as Curriculum Search, Verizon's Thinkfinity (formerly MarcoPolo), eThemes, ThemePark, Pioneer Library's World Book Encyclopedia, CultureGrams, EBSCO, Visual Thesaurus, and SIRS Discoverer and Knowledge Source.

The third and final day of the workshop takes a look at multimedia, with an emphasis on PowerPoint as a tool for incorporating educational technology into the classroom and curriculum. Participants review content integration, slide design, and transitions. They also have time to consider how

- How did you incorporate your project-based, multimedia presentation into your classroom? What worked? What didn't?
- From a teacher perspective, did the integration of educational technology make a difference in your classroom? Explain.
- From the students' perspective, did the integration of educational technology make a difference in their learning? Explain.

The ITC workshop, or some derivative of it, has been offered to teachers in Utah for more than 15 years. Utah was one of the original National Teacher Training Institute (NTTI) sites, and the workshop has blossomed from there. This past year, more than 1,000 teachers participated in the workshop, which is offered in all 41 school districts and four regional service center areas. We estimate that some 40,000 K-12 students have benefited directly from the tools and resources learned by ITC workshop participants.

Today's iKids are media savvy. UIMC is helping teachers leverage these skills and bring rich resources to bear in the classroom.

Kathleen Webb is the educational technology coordinator for the Utah State Office of Education. Doug Jones is in charge of online resources and professional development for the agency.

PUBLIC EDUCATION AND HIGHER EDUCATION ADVISORY COMMITTEE REPORTS - DISCUSSION

Issue

Doug Jones, representing the Public Education Advisory Committee and Cyd Grua, representing the Higher Education Advisory Committee will provide an update on recent committee meetings.

Background

Members of the Higher Education Advisory Committee met on September 19, 2007 at the USHE Gateway offices where the following items were discussed:

1. Water Wise Project
2. Courseware Showcase Report
3. Faculty Lounge
4. College Media Update
5. RFI for Broadcast Spots
6. NUTN June 9-11, 2008

The Public Education Advisory Committee met on October 4, 2007 to discuss the following items:

1. Enterprise Services Report
2. my.UEN
3. Teacher Preview Event
4. NetSafe Utah Grant
5. KUED Spanish Channel
6. Water Wise Project
7. Professional Development
8. EDNET Training Revisions
9. Pioneer Library Federated Search and New Look
10. Multimedia Guide

11. Worldview Digital Channel

12. Qwest Grant

13. Instructional Technology Symposium

14. Future Vision and Perspectives

Meetings of both committees will be held again in November. Contact the committee chairs if you'd like to participate or have questions.

Recommendation

This is an information item requiring no further Subcommittee action at this time.

TAB **11**

NETWORK IMPROVEMENT REQUEST FOR PROPOSALS - DISCUSSION

Issue

Requests for Proposals from telecommunications providers have been released, or will soon be released, to initiate steps to undertake several important network improvements.

Background

UEN issued a Request for Proposal (RFP) in mid-September to procure services to upgrade core segments of the UEN backbone to 10GB and obtain additional Internet access bandwidth. Proposals are being sought for installation of 10GB segments of the core backbone because of increased traffic on the backbone, the installation of Gigabit Ethernet to school district offices and secondary schools, additional IVC classroom installations, and the need for additional bandwidth to the Richfield DTS Data Center for disaster recovery and data/application hosting for higher and public education. Within budget limitations, we also need to increase the total aggregate commodity Internet access bandwidth to 8Mbps. A pre-bidders conference was held on October 1st, and was attended by 16 telecommunication and ISP providers.

UEN staff members are now preparing another RFP to be released in mid-October. Its purpose is to include all remaining elementary schools, charter schools, and library locations that do not currently have broadband Ethernet network connections to their buildings. UEN staff are also working on several contract renewals with existing network providers for E-rate purposes. In order to meet projected filing deadlines for E-rate, UEN staff are planning on completing both RFPs and negotiating and finalizing new contracts and renewals by early January 2008.

To define the requirements of the RFPs prior to publication, UEN staff have worked closely with school districts staffs. When proposals are received, district staff will participate in evaluation of proposals and determining contract awards.

Funding for these projects is contingent upon UEN's FY 2009 budget request which is under review by the Steering Committee during the October 19 meeting.

Recommendation

This item is informational only. A full report on the results of the RFPs will be given to the Technical Services Subcommittee in December.

FY 2008 QUARTER 1 ACCOMPLISHMENTS BY GOAL AND DEPARTMENT - DISCUSSION

Issue

This is a FY 2008 quarterly progress report for UEN Technical Services.

Background

GOAL 1 – Wide Area Network

Network Operations Center & Security and Network Engineering

Troy Jessup and Kevin Quire

1. Completed the Nemo project reviewing and updating all device configurations throughout the network.

2. Restructured the NOC department to support additional network engineering needs and enable better focus on NOC and Security processes.

3. Planning for and work on the November 2007 UtahSAINT conference in Richfield.

4. Developed and deployed the UEN Weathermap tool.

5. Purchased, deployed, tested, integrated the Opsware tool.

6. Designed, developed and implemented the Flexwan Project in coordination with Engineering.

7. Designed and deployed MPLS Virtual Private Network (VPN).

Issues/DirectorProjects–FRGP/NLR/Internet2/TransitRail/Technical E-rate Advocates

Barry Bryson

1. Upgraded the Internet2 link to GigE with connection to NewNet (July 5th).

2. Completed planning and ordered Internet circuits for Level-3/Broadwing connection at SLCC and the Internet connection to Cogent in Denver.

3. Planned and released the Internet and 10 GigE RFP released.

4. Completed planning for fall RFPs and bids (Internet, 10GigE, expiring contracts, elementary schools, charter schools and Salt Lake County Library system).

5. Worked closely with University of Utah Legal Council, Internet2 and FRGP to negotiate the new Internet2 contract.

GOAL 2 – Educational Web Resources

Software Development

Thom Gourley

1. Evaluated the table structure of the UTIPS item pool and assisted in creating the import tool for upgrading the USOE items

2. Completed further work on the my.UEN project.

3. Provided weekly reports on Service Desk trouble tickets

GOAL 3– Enterprise Solutions

Computer Operations

Bryan Peterson

1. Assisted USHE project to purchase and host Compuware Vantage. Deployment scheduled for Q2.

2. Participated in USHE NISS meetings.

3. Supported UTIPS Operators group in developing new item import tool and maintaining a regional UTIPS server.

4. Deployed updated Mail List Server hardware and software

5. Implemented Blackboard for USU and UVSC with full implementation ready for Fall 2007 semester.

6. Health Checked and Load Tested UEN's new Vista 4 systems and configuration before Fall 07 Semester start

7. Provided increased support to Blackboard and reduced the open tickets to three.

8. Installed new Telescope Development Systems Hardware and loaded the Operating System. Application configuration and setup scheduled for Q2.

9. Deploying Solaris 10 Operating System (OS) for all new servers. Started conversion update for servers with older versions of OS.

10. Completed the update of data center racks and network hardware.

11. Continued planning phase for move of Dixie to Blackboard Vista 4.1.1 or 4.2 from Vista 4.0.3. Will be completed in Q2 and ready to for Winter 2008 Semester.

GOAL 4 – Distance Education

Field Operations/Video Operations Center/Scheduling/Distance Education Specialist/Application Engineering

Jeff Egly

1. GL3 Project – Qwest

   a. Phase 3 – Network improvements to 52 sites. Phase is 69% complete

   b. Phase 4 – Network improvements to 22 sites. Phase is 41% complete

2. GL3 Project – Rural Telecommunication Providers

   a. Allwest

      i.   North Summit School District Office – Complete

      ii. North Summit High School – Complete

      iii. Park City School District Office – Complete

      iv. South Summit School District Office – Complete

      v. South Summit High School – Complete

      vi. Rich County School District Office – Complete

      vii. Rich High School - Complete

   b. South Central Telephone

      i.   Wayne County School District Office – Complete

      ii. Wayne High School – Complete

      iii. Gigabit backbone circuit from Panguitch to Cedar City (with Qwest) – Complete

      iv. Kanab Continuing Education Center – Complete

   c. Emery Telco

      i.   Emery School District office – Complete

      ii. Green River High School – Complete

   d. CentraCom

      i.   American Fork Jr – Complete

      ii. Lehi Jr – Complete

      iii. Oak Canyon Jr – Complete

      iv. Pleasant Grove Jr – Complete

      v. Orem Jr – Complete

      vi. Willow Creek Middle School - Complete

   e. Conterra

      i.   Box Elder School District – Completed late mid-4th Qtr

      ii. Adele C. Young Intermediate – Complete mid- 4th Qtr

      iii. Alice C. Harris Intermediate – Complete mid-4th Qtr

      iv. Bear River High School – Complete mid-4th Qtr

      v. Box Elder Middle School – Complete mid-4th Qtr

3. UENSS Conversion Project Completed

4. EDNET Multi-year Conversion Project Completed

5. San Juan CIB Project Phases 2/3 completed

6. IVC Operations

   a. VOC SLC and Logan staff consolidation 90% complete

   b. Tier II Engineers on staff

   c. IVC Auto-Attendant IVR in test.

d. IVC class room State tour being scheduled.

e. Planning for Technology Summit March 2008 in St. George

GOAL 5 – Broadcast Services

Computer Operations

Bryan Peterson

1. Configured and installed AnyCAST DNS servers at EBC, SLCC, SUU, and Dixie.

Recommendation

This item is informational only. A full report on the results of the RFPs will be given to the Technical Services Subcommittee in December.