Utah Education Network Steering Committee

August 20, 2010

UTAH EDUCATION NETWORK
WWW.UEN.ORG

Utah Education Network
Steering Committee

AGENDA

August 20, 2010

9:00 a.m.-
11:00 a.m.

Committee of the Whole / Business Meeting

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Upcoming Meetings

Steering Committee Meeting - October 22, 2010, 9:00 a.m.

Instructional Services Subcommittee Meeting - October 22, 2010, 11:00 a.m.

Technical Services Subcommittee Meeting - October 22, 2010, 11:00 a.m.

Please place these materials in your Steering Committee Binder.

TAB 9
NEW STEERING COMMITTEE MEMBER - ACTION

Issue

Ron Barlow resigned from the superintendency of Tintic School District and the UEN Steering Committee at the end of the school year, and his replacement, Doug Wright, is recommended for appointment to the Committee.

Background

Ron Barlow, Superintendent of Tintic School District, has retired at the end of the 2009-2010 school year. We greatly appreciate his service on the Steering Committee. At the suggestion of the Utah School Superintendents Association, Co-Chair Brenda Hales recommends that Doug Wright, Superintendent of San Juan School District, be nominated to the Steering Committee. Superintendent Wright has agreed to serve on the Steering Committee.

San Juan School District and UEN have worked closely together to provide strong network connectivity and interactive video-conferencing capabilities to support all of the educational organizations in the county. The UEN network hub is located in the San Juan Media Center, and we rely on San Juan School District staff support to meet network needs in the county.

Because of the importance of the San Juan School District to UEN, and because of the important role that UEN plays to meet educational goals in the Four Corners area, it is very appropriate that Superintendent Wright has been nominated and agreed to serve on the Steering Committee.

Recommendation

It is recommended that the Steering Committee approve Superintendent Doug Wright to serve a 4 year term on the UEN Steering Committee from August, 2010 through July, 2014. The nomination will be subject to final approval by Governor Gary Herbert.

TAB 10

RECOGNITION OF SERVICE TO DAVID DEVEY FOR CONTRIBUTIONS TO THE UNIVERSITY OF UTAH, KUED AND THE UTAH EDUCATION NETWORK

Issue

After a 41 year career and 36 years of service to KUED and the Utah Education Network, David Devey will retire on August 31st.

Background

David Devey first started at The University of Utah at the age of 19 working for KUER FM Radio. Over the years David has served Utah's broadcasting community, The University of Utah, KUED, and the Utah Education Network.

As David Devey approaches retirement UEN wants to recognize the numerous contributions he has made to the success of UEN's video network, data network and broadcast services. David applied his technical knowledge and innovation insuring UEN was built upon and provided solid, reliable services that UEN stakeholders and Utah's education community continue to depend on.

Recommendation

Please join the UEN staff in extending a huge "Thank You" to David Devey for his outstanding career.

TAB 11

FY 2011 UEN STRATEGIC PLAN - ACTION

Issue

Revisions and additions recommended during the draft review of the UEN FY 2011 Strategic Plan at our June meeting have been incorporated, and the plan is now presented for final approval.

Background

The FY 2011 Strategic Plan was developed with input from Steering Committee members during the June UEN Steering Committee meeting, the May Strategic Planning Retreat, several subcommittee meetings and internal UEN staff meetings. Revisions and additions that were recommended by Steering Committee members in June have also been incorporated. A full copy of the UEN Strategic Plan is included under this tab.

UEN follows a July 1 to June 30 fiscal year. Progress on the objectives of the Plan will be shared with Steering Committee members at the end of each quarter during the coming year.

Recommendation

It is recommended that the Steering Committee approve the FY 2011 Strategic Plan.

Tab 11 Attachment A
FY 2011 UEN Strategic Plan

Mission

We network to create educational opportunities, connect citizens and collaborate with partners.

Vision

Be Utah's most trusted, accessible and recognized partner for innovation in educational technology.

Values

Caring – Supporting community, customers,and co-workers

Leadership – Advancing relationships and encouraging ideas

Integrity – Keeping our promises

Communication – Listening to meet needs

Service – Benefiting our partners

Needs

Utah faces many educational and economic challenges and opportunities in 2011. Due to the recession in the national and state economy, school districts and higher educational institutions including UEN have had to do far more with less staff and funding resources. Utah's public schools, colleges, and universities perform their missions each day on the UEN network. Utah's public schools continue to accommodate additional students with less funding. Utah's higher education institutions are experiencing record enrollments; many have double-digit growth over last year. For example, the Utah System of Higher Education (USHE) student enrollment for the Spring 2010 semester increased by 13,104 total students over Spring 2009, a 9.48% increase. This is the largest year-over-year increase in the state's history. Utah's population continues to grow at a steady rate, far exceeding national averages.

Utah Demographics*

Population: The state's official July 1, 2009 population was estimated to be 2.8 million, an increase of 1.5% from 2008.

Rate of Growth: The U.S. Census Bureau ranked Utah second among states with a population growth rate of 2.1% from 2008 to 2009. The U.S. Rate of Growth was 0.9%

*Source: Utah's 2010 Economic Summary Governor's Office of Planning and Budget

Long-Term Projections: The state's population is projected to reach 3.7 million in 2020, 4.4 million in 2030, 5.2 million in 2040, and 6.0 million in 2050.

School Enrollment

In 2009, an estimated 563,273 students were in Utah's public education system, an increase of 12,260 students or 2.2% over 2008.

UEN provides Internet and network connectivity to every public school, college and university through the UEN Wide-Area-Network. UEN also manages a statewide interactive video conferencing system (IVC) and hosts enterprise-level software applications for our public and higher education partners In addition, UEN offers instructional programming and life-long learning opportunities through KUEN, a 24/7 public television station which reaches most Utah citizens. UEN also supports a growing range of rich educational resources at UEN's Web site, www.uen.org; and provides professional development in technology to Utah educators.

For thousands of Utah students and educators, the Internet is their school, classroom, meeting place, and library. The Internet must be accessible to every educator, student, administrator, and staff member from any location and at all times. It is the data and communications distribution system used to deliver hundreds of administrative, academic and student support applications affecting every student, educator, and staff member countless times each day. To ensure full-time access to the Internet, UEN must provide reliable, high capacity, and scalable network connections.

To keep up with growing network capacity demands, UEN works collaboratively with college and university and school district leaders and Utah telecommunications providers to increase the capacity of network connections throughout the state. In the Utah System of Higher Education, enrollment in online, technology-enhanced, and Interactive Video Conferencing classes has grown dramatically for the past several years.

Enrollment in the Utah Electronic High School has continued to show growth. This past year, UEH granted 15,691 quarter credits towards high school graduation requirements. Because of the trends described above, educators, public and higher education staff members, and UEN employees must be technologically competent. UEN plays a key role in providing training to its own staff members, and to teachers, faculty members, and technology staff members in educational organizations throughout the state.

UEN is driven by the diverse needs of education in a time of rapid growth and change. As it responds to more diverse needs, it grows in complexity, and supports more services at more locations. The result is increased pressure on all of us meaningfully connect, create and collaborate for the mutual benefit of all regions of the state, all levels of education, and ultimately all citizens. Improved coordination of IT policies and backbone infrastructure will guarantee effective sharing of resources, lower prices through joint purchasing, and assure efficient use of technical support and training as UEN staff members work collaboratively with their public and higher education colleagues. Gaps in effective coordination, planning, and governance must be identified and eliminated. There will be significant challenges facing us during the coming year.

Federal funding awarded to UEN through the Broadband Technology Opportunities Program (BTOP) at NTIA will provide exciting opportunities to invest in broadband infrastructure statewide for new community anchor institution (schools, libraries, and

head start programs) connecting into UEN. These investments will result in economic development and community infrastructure with UEN as the anchor tenant that will benefit students, teachers and faculty, library patrons, residences, businesses, government agencies, and local economies.

Although Utah's economy is still among the nation's best, no state has escaped the nation's most serious economic downturn in eight decades. State financial resources must be creatively prioritized to meet numerous compelling needs. UEN must achieve the greatest value possible from limited state resources, and continue to successfully seek grants and other revenue sources to augment state funds. By networking people and technology, by fostering connections and collaboration, UEN and its partners can help public and higher education and the state at large meet the challenges and the opportunities we face in the decade ahead.

I. WIDE AREA NETWORK

Operate, maintain, and expand a free, reliable and secure high speed network, connecting every public school, college, university and public library in Utah.

To achieve this goal, UEN will pursue the following objectives:

A. Operate and maintain the UEN network based on best practices and standards

1. Catalog and maintain a circuit database
2. Maintain an IP management database
3. Evaluate current filtering system and implement a 5-year plan for CIPA-compliant Internet content filtering system
4. Maintain standarization of network deployment process
5. Monitor the backbone to identify bandwidth, security, and utilization issues; and to increase capacity as necessary
6. Monitor endsites to identify bandwidth, security and reachability
7. Continue to develop tools which provide essential information about the network
8. Preserve and provide future increased Network Operations and Field Operations Staff
9. Strengthen operational coordination between Technical and Instructional Services departments and staff members
10. Support SURIN IPV 6 initiative (implementation on public facing servers, white paper, etc.)

B. Increase reliability of the network to 99.999%

1. Provide full 10GB WAN redundancy for core UEN network connections in North Ring and 1GB WAN redudancy in Southeast (Uintah Basin, Price, Blanding, Moab, etc.)
2. Increase network utlization at locations where diverse paths exist, i.e. fast re-route, efficient routing, consolidation of data centers
3. Continue to explore diverse path options throughout the backbone
4. Work to secure resources to provide diverse paths for District offices
5. Perform application-level monitoring to ensure good system peformance and user experience
6. Monitor and respond to network outages

C. Increase network capacity by upgrading all remaining elementary and charter schools, all public libraries, and all head start centers to high speed broadband connectivity

1. Successful project management and implementation of broadband services to schools, libraries, and head starts for the BTOP Round 1 infrastructure grant
2. Ensure good communication and planning with UEN stakeholders in the BTOP implementation (develop website and regular updates)
3. Understand and expand UEN's role as a Community Anchor network
4. Manage high bandwidth sites and provide additional resources allowed by UEN policy
5. Continue to use E-Rate funds to develop broadband access throughout the state

6. Explore additional needs for UEN Points of Presence (PoP) sites
7. Continue to work with community networks to leverage network resources
8. Encourage cooperation and foster relationships between local telephone companies and community networks
9. Continue to work with Districts that have allocated funds for broadband elementary connectivity
10. Continue to work with the State Office of Education, Districts and charter schools to outline a multi-phase project plan for future upgrades in broadband to elementary and charter schools

D. Provide support to district and higher education technology staff to ensure that the enhanced capacity and reliability of the network is fully utilized

1. Post and share collaborative tools
2. Develop a plan to provide services for UEN tools

E. Expand Internet capacity to meet growth in network traffic

1. Explore additional alternate Internet Point of Presence (PoP) sites
2. Explore, develop and implement ways to keep local network traffic local

F. Protect the network through improved security and security practices

1. Continue UtahSAINT user group
   a. Keep current and publish security contacts list
   b. Conduct AdHoc Security calls
   c. Plan and conduct one security conference per year (UtahSAINT)
   d. Support other State security activities
   e. Develop single-issue forums for specific needs
2. Provide a leadership role for security expertise and assistance as required by districts and higher education institutions
   a. Work with Regional Service Centers to perform Network Security Assessments on school districts
   b. Assist with security configuration and design
   c. Provide security monitoring and reports
3. Work with Steering Committee to develop security policies
4. Continue to develop security monitoring tools

G. Support the high capacity/high speed network needs of university researchers

1. Continue participation in national and regional network partnerships
2. Continue to work within the SURIN Board as directed by the UEN Steering Committee
3. Expand optical network capabilities to support emerging research requirements at the state's research universities
4. Work with UDOT, UTA, and commercial partners to acquire fiber in Salt Lake Metro Ring, Logan and Provo Extensions
5. Play key network operation and development role in the NSF EPSCoR project for Utah

6. Assist the UofU as a technical resource in the planning and development of its new data center
7. Explore implementation of Internet2 ION (Interoperable On-demand Network) service in Utah

H. Provide network leadership and support to Utah state, county, municipal, and telehealth partners

1. Collaborate with Utah Telehealth Network (UTN) on UEN network access where feasible
2. Collaborate with DTS and county and municipal governments on UEN network access and Internet connectivity where feasible

I. Provide technical leadership and staff/stakeholder development

1. Continue to leverage economies of scale to minimize network operating costs, including Wide Area Network projects
2. Continue support of the Regional Technical Forums
3. Continue providing leadership in technical training: including regional training, techincal summits, and UtahSAINT conference
4. Continue to provide LAN evaluation and consulting as requested
5. Expand advocate program to libraries, USDB, Charter Schools, and Head Starts
6. Support USHE NISST (network infrastructure server storage telecommunications) and Disaster Recovery Groups

II. EDUCATIONAL WEB RESOURCES
Aggregate and deliver a suite of high quality Web-based educational resources to support best practices in teaching and learning.

To achieve this goal, UEN will pursue the following objectives:

A. Host, support, and maintain web projects and services

1. Expand the Course Proposal interface to allow institutions to import data
2. Coordinate lesson plan development and publishing with USOE
3. Expand and maintain the core curriculum resource database
4. Conduct website and link clean-up
5. Continue to update the my.uen software as necessary
6. Develop new my.uen portlets, such as an image gallery
7. Move to centralized authentication service
8. Complete the Core Management interface to update the core database
9. Upgrade Sybase database and investigate migrating to MySQL
10. Review and either update code on legacy applications or End of Life

B. Develop and implement new and expanded web resources

1. Provide individual educator access to eMedia
2. Integrate WIMBA Voice with my.uen for K-12

3. Develop reporting tools for the Professional Development group
4. Develop mobile-friendly version of uen.org
5. Revise Professional Development's web page
6. Complete Professional Development Management "Premium" Registration
7. Expand CACTUS interface as defined by USOE
8. Develop a new UEN-TV online broadcast schedule
9. Investigate the possibility of allowing individual educators to view test data in the state data warehouse
10. Implement an interface that will allow UEN departments to easily update their web pages
11. Implement a rating system for Professional Development courses
12. Develop a new interface for UIMC evaluations
13. Fulfill the requirements of the MISSION US grant
14. Support pending grants
15. Develop Climate Science website as defined by grant requirements
16. Work with partners to integrate assessment data, curriculum and instructional behavior where feasible

C. Promote new and existing UEN Web services through technology, outreach, special events and media relations

1. Discuss, plan, and develop promotion and communication at the monthly Instructional Services/Public Communication Coordination meeting
2. Produce and distribute NetNews Newsletters for public education and higher education
3. Promote UEN's key services and resources in a variety of ways
4. Increase readership and click through rates of UEN-hosted enewsletters and interactive content

D. Support administrative activities for the uen.org site

1. Gather, review, and post monthly web statistics
2. Sunset obsolete web services in accordance with established policies

III. ENTERPRISE SOLUTIONS

License, host and maintain statewide enterprise solutions supporting public education, higher education, and libraries.

To achieve this goal, UEN will pursue the following objectives:

A. Host, support and maintain existing enterprise solutions

1. Support license, host, and promote the Pioneer Library, Preschool Pioneer, CMS (Course Management Service) and associated software, eMedia/CollegeMedia, and Moodle for Utah Electronic High School
2. Provide support escalation between vendors and institutions as needed
3. Review and update service level agreements with CMS hosted institutions
4. Support and facilitate inter-institution collaboration with shared online content
5. Maintain UIMC, KUED, and UEN media assets

B. Expand existing service functionality or implement new enterprise solutions services to meet stakeholder needs

1. Facilitate discussion of CMS alternatives for higher education and K-12 communities. Decide which CMS to support after Blackboard Vista and create a migration plan
2. Involve Chief Academic Officers in the evaluation of the CMS
3. Implement Primo searching for K-12 Pioneer and harvest the eMedia collection metadata from Equella
4. Install additional hardware infrastructure to support new CMS
5. Define and publish instructional use cases for various desktop conferencing software supported by UEN (Movi, ConferenceMe, Wimba)
6. Federate or aggregate selected collections from PBS DLL and MWLD and allow reciprocal harvesting of eMedia metadata into the PBS DLL and MWDL
7. Expand the Utah eMedia assets to provide additional language offerings
8. Increase participation in Open Educational Resources initiative
9. Plan and design eMedia/my.uen integration
10. Add approximately 1,000 assets to eMedia for the Climate grant
11. Pending funding, add approximately 18,000 math-related assets to eMedia for the Ready to Teach grant
12. Incorporate the PBS Gap Analysis Tool to analyze subject content in eMedia
13. Federate to eMint's professional development content in eMedia
14. Support the PBS Digital Learning Library and eMedia integration project
15. Develop and deploy new enterprise DNS management tools and system to UEN stakeholders
16. Support USOE in the Utah Data Alliance (UDA) to develop the Utah Data Alliance Data Share (UDADS) as per the federal grant award by the US Department of Education for the development of the Statewide Longitudinal Data Systems
17. Work with USOE on redesign and development of formative testing tool
18. Provide technical support and hosting to USOE regarding summative testing processes, delivery, and reports
19. Support USOE initiatives in data community grant

C. Increase awareness and use of enterprise services. Provide service reports

1. Support the Pioneer Library advocates, promotion, and outreach
2. Continue developing Vista report generation capabilities for hosted institutions
3. Redesign and maintain an eMedia service basic information webpage
4. Publish RSS announcements of features and new content available via eMedia
5. Provide and publish quarterly reports on eMedia access and media download activity
6. Design and publish training materials for eMedia, including video tutorials to assist users in troubleshooting common problems
7. Support WIMBA promotion and outreach, K-20

D. With USHE CIO's and the TCC, investigate other services or IT functions that might be centrally hosted by UEN

1. Explore the feasability of centrally hosting a Learning Object Repository, building upon the existing Equella license for eMedia to allow for contribution of digital media assets to the collection
2. Research and support consortium licensing for Turnitin and other software
3. Foster collaboration and information sharing with other state networks around the topic of centrally hosted enterprise services
4. Explore technologies and standards and what roles UEN could serve in federated identity management
5. Support USHE NISST (network infrastructure server storage telecommunications) and Disaster Recovery Groups
6. Assist USHE CIO's and TCC to evaluate centrally managed disaster recovery services and the role UEN should perform in providing that service

IV. DISTANCE EDUCATION

Deliver Distance Education classes and programs offered by public and higher education that use real time and on demand, reliable, high quality interactive video conferencing technologies.

To achieve this goal, UEN will pursue the following objectives:

A. Support and maintain IVC core systems

1. Continue to improve technical support and efficiency in the Technical Services Support Center (TSSC)
2. Maintain staff training and certification by TSSC
3. Maintain inventory and equipment documentation by application and field engineers
4. Provide training and applications for delivery services and content services
5. Update and maintain web pages for IVC (Interactive Video Conferencing)
6. Upgrade site equipment when applicable to comply with current standards
7. Continue support of course scheduling process. Decentralized scheduling
8. Continue to identify new funding sources and solutions (e.g., grants, stakeholders, others)
9. Continue to support UEN Distance Education Catalog

B. Research, design, and implement new Distance Education integrated resources

1. Continue to evaluate new and emerging video technologies
2. Continue efforts to extend IVC and desktop conferencing solutions
3. Continue efforts to integrate IVC and WIMBA resources
4. Integrate IVC and Course Management System, eMedia, eCollege Media, and other application technologies
5. Provide engineering resources and lab for testing new technologies
6. Evaluate interactive media for integration into Distance Education

C. Revise IVC policies, develop operational practices and procedures to reflect new technical systems

1. Develop multi-year plan for replacement and upgrade to HD IVC hardware
2. Support Steering Committee in developing policies for UEN and Institutions to develop and carry out multi-year plans to replace $9.6 million in invested IVC hardware
3. Investigate internal communication solutions for project management and coordination
4. Continue to support stakeholder project design, procurement, and implementation
5. Continue assignment of billing and facilitation responsibilities to ready individual institutions
6. Create UEN site selection committee

D. Promote new and existing UEN IVC services through outreach, special events, media, and technology

1. Increase school district Technical Coordinators' and educators' understanding of Interactive Video Conferencing Services to improve satisfaction with use of system
2. Investigate and determine new applications for HDTV
3. Continue to evaluate UEN's role or responsibility as it pertains to IVC refresh and upgrades
4. Participate in faculty support open houses highlighting IVC services and tools on campuses

V. BROADCAST SERVICES
Educate, engage, and enrich the lives of Utah citizens through broadcast programs and services with UEN-TV.

To achieve this goal, UEN will pursue the following objectives:

A. Continue programming and outreach for education stakeholder groups

1. Program blocks and interstitials for targeted areas
2. Conduct research into the use of the channel by teachers, students and general viewers; report on results
3. Support high need academic programming and outreach (adult basic ed., job training, child care, educational technology, teacher licensing, STEM)
4. Enable and encourage locally produced programs, particularly students and teachers
5. Develop and support more statewide partnership-specific programs

B. Implement new projects to support educational programming and outreach

1. Utilize broadcast airwaves to promote UEN services and increase channel promotion
2. Coordinate screening events with institutions, departments, and community partners; report on the results of these events
3. Research new development of broadcast technology (i.e., mobile TV, 3dTV) and determine how it can be used to serve our mission

C. Support broadcast engineering infrastructure

1. Expand digital translator system
2. Move toward tapeless MassTech system
3. Implement Next Generation Interconnection System (NGIS)

D. Manage station administrative projects; document and report on results

1. Coordinate with national programming consortia and affinity groups
2. Continue cable relations for carriage of UEN-TV digital channels
3. Manage grant projects (Internet Safety, STEM, etc.)
4. Develop long-term goals and plan for station programming/content and new broadcast mediums (including mobile TV, IPTV, etc.)

VI. PROFESSIONAL DEVELOPMENT
Provide cost effective development opportunities to improve the quality of K-20.

To achieve this goal, UEN will pursue the following objectives:

A. Assess and respond to changing technology professional development needs

1. Teach classes and report participation statistics
2. Develop new courses, both online and in person
3. Continue to provide "just in time" training opportunities and evaluate tools and resources to diversify these activities
4. Continue to produce more video tutorials and publish on the web
5. Conduct assessment of teachers'/districts' technology professional development needs
6. Assure UEN courses align to new National Technology Plan; report on results

B. Implement non-traditional methods for providing technology integration professional development

1. Incorporate "office hours" using WIMBA
2. Increase interactivity in online courses without increasing facilitator time commitment using SoftChalk
3. Implement ongoing, subject-specific Faculty Lounge events with USOE curriculum specialists
4. Develop learning opportunity for mobile computing "power users"

C. Maximize use of current communication channels and develop additional audiences

1. Explore and implement new web tools and social networking as available and practical
2. Develop tech minute videos and other content for broadcast and web sharing
3. Explore course rating and recommendation system for incorporation in PDMS

VII. GOVERNANCE AND ACCOUNTABILITY
Coordinate educational technology governance across the state, and be accountable to our stakeholders.

To achieve this goal, UEN will pursue the following objectives:

A. Coordinate the UEN Steering Committee, subcommittee, advisory committee and constituent meetings

1. Involve broad representation when making network/system decisions
2. Regularly update the UEN policy manual

B. Request new funding for UEN priorities and maximize state funds through external grants, E-Rate, and federal stimulus monies

1. Educate Legislature and Governor's Office on importance of meeting future broadband needs for new schools; develop funding model to address one-time and on-going costs
2. Advocate for UEN Technical Services operational needs to maintain the network to ensure network reliablity and uptime
3. Achieve equity in UEN funding for elementary school high-speed connections for school districts
4. Coordinate E-Rate process with SLD, K-12 Districts, Libraries, Head Start, and telecom providers
5. Facilitate creation of Higher Education purchasing group - libraries, IT, education, eMedia
6. Seek grant and foundation funds; coordinate these projects with stakeholders as appropriate
7. Develop policies to ensure coordination with the FCC Broadband Plan; work to secure potential sources of new funding (E-Rate, Connect America Fund, etc.)
8. Monitor the national Unified Community Anchor Network (UCAN) program and coordinate with UEN's strategic plan where appropriate

C. Track UEN's performance, projects, and services and communicate with stakeholders concerning our progress

1. Provide monthly and quarterly performance dashboards to Steering Committee and to public and higher education regional, district, and campus level entities
2. Report monthly statistics on use of UEN WAN, Web Services, IVC, Enterprise Applications, Professional Development
3. Assure the UEN Service Level and Connection Agreements with stakeholder groups are in place and current
4. Highlight UEN services and tools at faculty open houses on campuses
5. Focus on promoting UEN successes with Steering Committee and with education and community partners

D. Increase internal communication, project management and coordination of services

1. Hold bi-monthly managers meetings, weekly executive meetings, and project team meetings to improve cross-department communication
2. Build skills and knowledge of UEN staff through professional development, industry publications, conferences, workshops and membership in professional organizations

TAB 12

NTIA BTOP INFRASTRUCTURE GRANT ROUND 1 PROJECT AND ROUND 2 APPLICATION UPDATE - DISCUSSION

Issue

This report describes progress with the National Telecommunications Information Administration (NTIA) Broadband Technology Opportunity Program (BTOP) infrastructure award made to UEN in February 2010. This award involves extending broadband services to 130 community anchor locations (elementary schools, charter schools, libraries, and head start locations). Due to a Special Award Condition (SAC) placed on the UEN BTOP grant by NTIA, all grant funding is on hold until NTIA issues a finding of no significant impact (FONSI) on the complete environmental assessment report submitted by UEN. Within six months of the SAC, UEN had to establish with NTIA that the BTOP project is compliant with the National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA). UEN submitted the draft Environmental Assessment (EA) at the end of July for comment. On July 22nd, UEN and the University of Utah held its first Desk Review with our Federal Program Officer to review progress and compliance with the BTOP grant program.

UEN also received notification in early June that our Round 2 Comprehensive Community Infrastructure Application (CCI) was selected for Due Diligence Review.

Round 1 Project Background

The NEPA Environmental Assessment is required for any federally funded project that has the potential of environmental impact including ground disturbance, air and noise pollution, critical habitat, historic sites or structures, wetlands and waterways.

During the due diligence process for the BTOP grant, UEN was required to complete a detailed environmental questionnaire. UEN retained Ludlow Engineering, local engineering firm specializing in civil engineering for telcom projects, to complete the questionnaire. NTIA determined after reviewing the questionnaire that a post-award environmental assessment was necessary for UEN's project. UEN had to complete the draft environmental assessment within a six month period. NTIA has also "started the clock" on UEN's project plan and implementation schedule. The challenge for UEN is the Environmental Assessment must be completed before project funds are released, however UEN must stay on track with the project timeline regardless of the impact of the environmental assessment to comply with BTOP requirements.

On July 22nd, NTIA held a Desk Review to review overall reporting and compliance with the project NOFA. Overall, NTIA was pleased with the progress of the project.

UEN received feedback relating to the baseline and Progress Reports in time for the July 30th submission deadline. On July 29th, UEN submitted the following reports:

- Progress Report for the 2nd quarter
- The Special Award Condition for having submitted our EA to the Environmental team by the July 31st deadline
- The Financial Report for the 2nd quarter
- ARRA report for the 2nd quarter

On August 6th, UEN's baseline report was approved by NTIA.

On August 9th, UEN received comments from both the National Oceanic and Atmospheric Administration (NOAA) and the federal environmental consultants on the draft Environmental Assessment (EA). UEN is working to incorporate requested changes and information to receive preliminary approval of the EA from the NTIA assessment team. Many of these changes relate to the Proposed Action and Preferred Alternatives sections of the EA. We anticipate it will be a few weeks before we are able to submit the revised draft EA for additional review.

Round 2 Project Background

On March 26th, UEN submitted a Round 2 BTOP Comprehensive Community Infrastructure application to provide broadband Ethernet services to an additional 140 community anchor locations, including elementary and charter schools, public libraries, and Head Start programs, health care providers, community and applied technical colleges, and Utah's two major public research universities. This project includes important funding needed for the Salt Lake Metro and Logan Research Network Ring projects to the new University of Utah downtown data center.

A list of project partners and their roles in the project is on the attached page. On June 7th, UEN was notified that our application was selected for due diligence review. UEN began working with the Due Diligence team assigned to our application. The initial due diligence team was reassigned during the process, and a new team was assigned to us at the end of June. This lengthened the due diligence review timeframe due to new team members working with us. UEN responded to all financial, technical, environmental, and letters of support questions from project partners. We were able to submit all final documents to NTIA on July 30th. We are hopeful that a funding announcement will be made to us by the end of August.

Recommendation

This is an information item and requires no further action by the committee.

Tab 12 Attachment A

Utah Anchors: A Community Broadband Project

Round 2 BTOP CCI The University of Utah and Utah Education Network Partners

INCUMBENT MM TELCOM PROVIDER/ PROJECT PARTNER	PARTNER TYPE	LOCATION (URBAN OR RURAL)	UTAH ANCHORS PROJECT DELIVERABLE
All West Communications	Private Telcom Carrier	Kamas, Utah (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Bill and Melinda Gates Foundation	Private Foundation	Seattle, WA	3rd Party Cash Match for Public Libraries
American Fiber Systems (AFS)	Private Telcom Carrier	Salt Lake City, Utah (Urban)	20-Year Fiber IRU for Higher Education Institutions/CAIs
Centracom Interactive	Private Telcom Carrier	Fairview, Utah (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Emery Telcom	Private Telcom Carrier	Orangeville, Utah (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Frontier Communications	Private Telcom Carrier	Moab, Utah (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Integra Telcom	Private Telcom Carrier	Salt Lake City, Utah (Urban)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Manti Telephone	Private Telcom Carrier	Manti, Utah (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Qwest Communications	Private Telcom Carrier	Salt Lake City, Utah (Urban)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone; Cash Match
South Central Communications	Private Telcom Carrier	Escalante, Utah (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Strata Networks	Private Telcom Carrier	Roosevelt, Utah (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Syringa Networks, LLC.	Private Telcom Carrier	Boise, Idaho (Urban)	20-Year Fiber IRU for Higher Education Institutions/CAIs
Utah Education Network (UEN), The University of Utah	State Education Network	Salt Lake City, Utah (Urban)	Project Management, Network Operations & Maintenance
Utah Transit Authority (UTA)	Public Transit Agency	Salt Lake City, Utah (Urban)	Public Right of Way/ Conduit and Interduct Access
Utah Department of Transportation (UDOT)	Public Tranportation Agency	Salt Lake City, Utah (Urban)	Public Right of Way/ Conduit and Interduct Access
UTOPIA	Public Telcom Agency	Salt Lake City, Utah (Urban)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone
Wireless Beehive	Private Telcom Carrier	Lake Point, UT (Rural)	Middle Mile Broadband Infrastructure Connecting CAIs into the UEN backbone

TAB 13

COURSE MANAGEMENT SERVICE TIMELINE UPDATE - DISCUSSION

Issue

At the April 2010 UEN Steering Committee meeting, UEN proposed a process for choosing a replacement for Blackboard Vista. Scott Allen will provide an update on progress since the June 2010 UEN Steering Committee meeting.

Background

UEN holds and has negotiated the software subscription contract for the Blackboard Vista (formerly WebCT Vista) online course management suite for the last six years. The current contract with Blackboard expires on June 30, 2012. As Blackboard will be ending support for the Vista product as of December 2012, UEN and all USHE institutions relying on this product must shift to another CMS/LMS platform before June 30, 2012.

July 1st Vista Administrators Meeting

On July 1st UEN hosted a meeting of 45 Blackboard Vista administrators and others focused on the evaluation of several alternative course management systems. Throughout Spring and Summer there have been several web-based demonstrations of many different systems. During the July 1st meeting Utah State University and the University of Utah reported on their pilots of Blackboard Learn, and Weber State University reported on their pilot of Moodle. The majority of the meeting was dedicated to hands-on review and discussion of building a course in Blackboard Learn 9.1, Desire2Learn, Moodle, Sakai, Agilix BrainHoney, and Instructure Canvas. During the discussion at the end of the meeting, we unanimously decided to move forward with plans for a state-wide RFP for a Learning Management System and targeted the end of August to have the RFP ready. Each institution was to discuss who should be on the RFP evaluation committee and report back at the August Vista Administrators Meeting.

Blackboard Acquisition of Wimba and Elluminate

In July, Blackboard announced the acquisition of Wimba and Elluminate and created a new division within the company – Blackboard Collaborate. UEN licenses Wimba for K-20 through December, 2012.

Blackboard World

Several representatives from the Utah consortium attended Blackboard World in July. Blackboard arranged for a meeting with the Utah people and listened to our concerns and questions, and talked about their product road map for Vista clients. In addition to the acquisition of Wimba and Elluminate that happened before the conference, Blackboard announced that common cartridge would be supported by the end of 2010, and that Blackboard Mobile Learn would be available to Vista clients also by the end of 2010. Another announcement was the Open Database, which is available in Blackboard Learn 9.1 SP1.

Involvement of Chief Academic Officers

Mike Petersen and Scott Allen met with the CAOs on August 6th and gave a presentation on the past, present, and future of the LMS consortium. Gary Wixom will assist UEN with communication to the CAOs about developments in the evaluation process and its progression. Scott Allen has also contacted each campus individually in the past month to take their pulse on the consortium and any individual goals for an LMS that they may have for their campus.

Discussion Since Blackboard World

Several consortium members have suggested that we attempt to negotiate a contract extension with Blackboard before (or instead of) releasing the RFP. We've done some checking with individuals at each institution and there is generally support for negotiating with Blackboard, although there are some institutions and individuals that feel strongly that we should move forward with the RFP.

Plan for Fall 2010 and Beyond

Fall Semester 2010

- Issue RFP for Blackboard Vista replacement or negotiate with Blackboard for a pre-RFP contract extension (with approval from consortium). RFP would be issued at the beginning of Fall Semester 2010.
- RFP decision would be concluded by end of December 2010.
- Plan for implementation/migration process and set projects in motion for each institution.

Spring Semester 2011

- Prepare new LMS platform and begin course migration and faculty trainings.

Summer Semester 2011

- First courses offered in the new system. Continue course migration and faculty training.

Fall Semester 2011

- Continue course migration and faculty training.

Spring Semester 2012

- Continue course migration and faculty training.

Summer Semester 2012

- All courses in new system. Retire Blackboard (WebCT) Vista on July 1, 2012.

Summary

UEN is actively collaborating with institutions and vendors to evaluate alternate CMS/LMS platforms to replace Blackboard Vista within the next two years. We are continuing to follow the timeline outlined in the April 2010 UEN Steering Committee meeting.

Recommendation

This is an information item and requires no further action by the committee.

TAB 14

NETWORK PERFORMANCE AND IVC SERVICES METRICS - DISCUSSION

Issue

The UEN Network Operations Center continues to monitor the health and utilization of the network. This report provides the latest statistics regarding overall network performance.

Background

Network Performance Metrics for June 1, 2010 through August 1, 2010

Network Backbone Availability

Month of June 99.948%

Month of July 99.992%

Month to date August.....100.00%

Year to date.....99.797%

Network Backbone Utilization

North Ring.....55% (-3% since last report)

Central Ring 19%

South Ring.....36%

Network Backbone Latency

North Ring Latency.....4.52ms

Central Ring Latency.....3.3ms

South Ring Latency 5.5ms

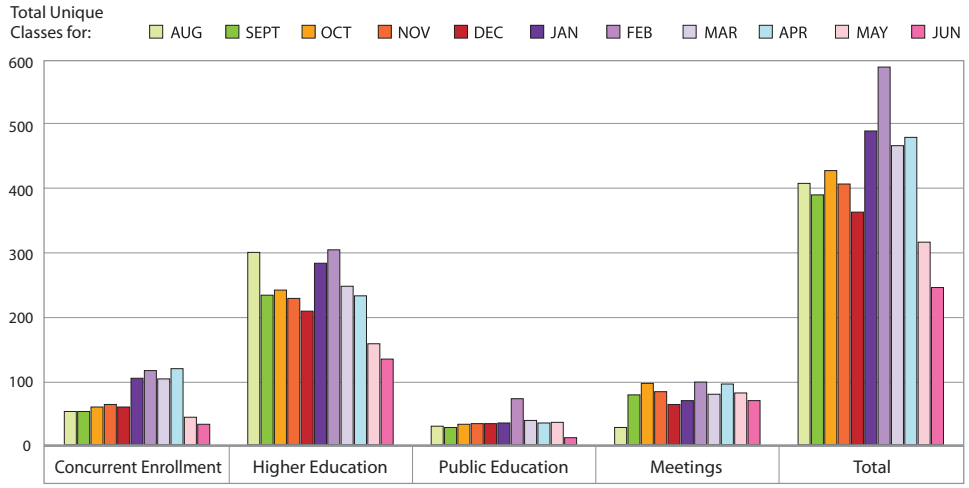
Internet Utilization Statistics

Available Bandwidth 12Gbps

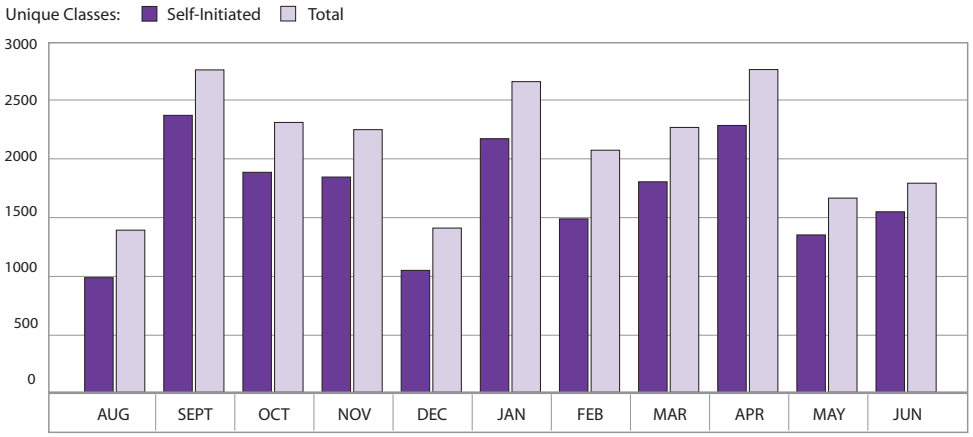
Peak Utilization 5.82Gbps

IVC Metrics Summary

Total Unique Classes



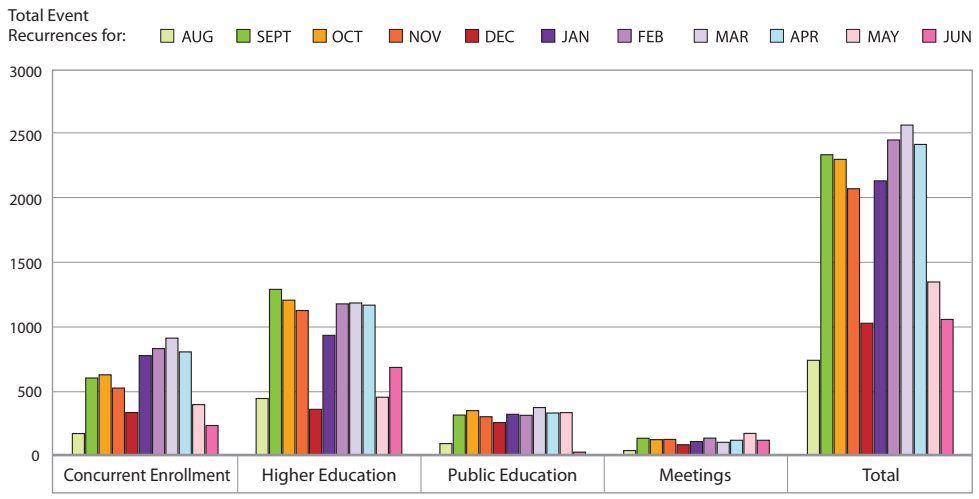
	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Concurrent	52	52	59	63	59	104	116	103	119	43	32	802
Higher Ed	301	234	242	229	209	284	305	248	233	158	134	2577
Public Ed	29	27	32	33	33	34	72	38	34	35	11	378
Meeting	27	78	96	83	63	69	98	79	95	81	69	838
Total	409	391	429	408	364	491	591	468	481	317	246	4595



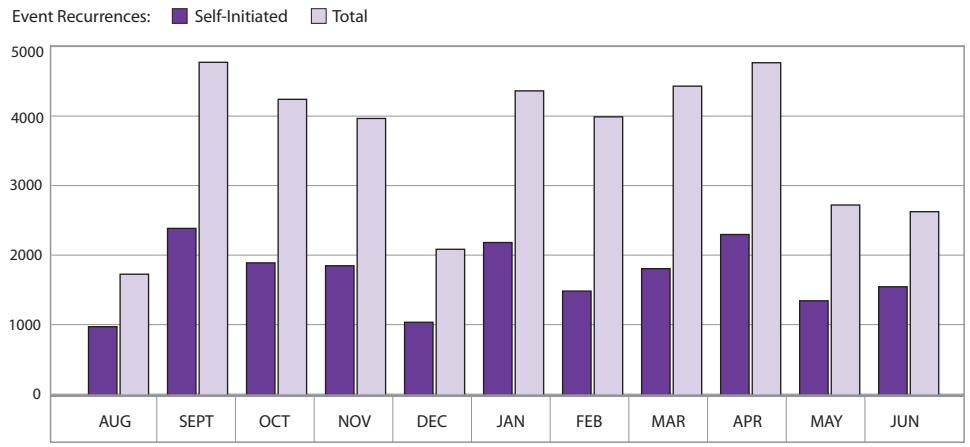
	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Self Initiated	985	2382	1892	1851	1048	2181	1491	1810	2295	1353	1552	18840
Total	1394	2773	2321	2259	1412	2672	2082	2278	2776	1670	1798	23435

Source: Utah Education Network, August 2010

Total Event Recurrences



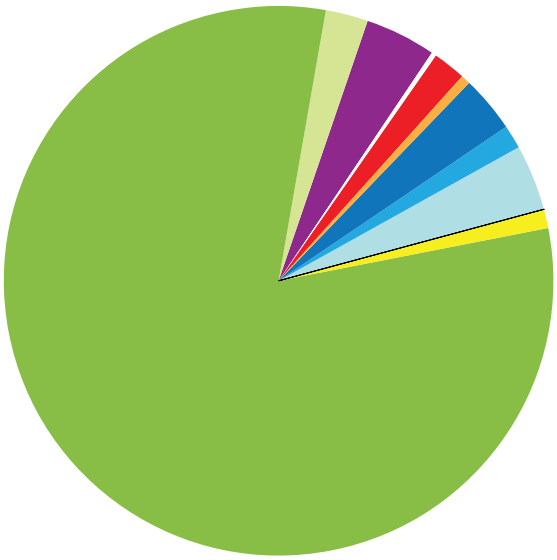
	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Concurrent	171	607	632	528	336	783	838	920	812	398	234	6259
Higher Ed	446	1303	1218	1137	361	942	1189	1196	1179	456	690	10117
Public Ed	92	316	351	303	257	322	314	375	332	335	25	3022
Meetings	37	134	123	125	83	108	135	102	118	172	118	1255
Total	746	2360	2324	2093	1037	2155	2476	2593	2441	1361	1067	20653



	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Self Initiated	985	2382	1892	1851	1048	2181	1491	1810	2295	1353	1552	18840
Total	1731	4742	4216	3944	2085	4336	3967	4403	4736	2714	2619	39493

Source: Utah Education Network, August 2010

Service QuickTickets Opened from 8/15/2009 to 8/10/2010



397	EBC	EBC Building Support
32	ENG	Engineering
187	FLD	Field Operations
53	IS	Field Operations
312	NOC	Network Operations
123	RSG	Regional Support Group
350	SCH	Logistics
13	SWG	Software Group
105	UA	Unix Administration
7547	VOC	Tier 1 Technical Services Support Center
226	VT2	Tier 2 Technical Services Support Center
8948	TOTAL	

Source: Utah Education Network, August 2010

Recommendation

This is an information item and requires no further action by the committee.

TAB 15
STEERING COMMITTEE MEETING MINUTES

UTAH EDUCATION NETWORK STEERING COMMITTEE

June 11, 2010 – 9:00 a.m.

Members Present: Kenning Arlitsch, Ron Barlow, Steve Corbató, Steve Fletcher, Rick Gaisford, Brenda Hales, M. K. Jeppesen, Pat Lambrose, Cheryl Mansen for Donna Morris, Donna Jones Morris, Gail Niklason, Mike Petersen, Robert Wagner for Ronda Menlove, Barry Walker, Ray Walker, Gary Wixom.

Others Present: Scott Allen, Sharon Bertelsen, Barry Bryson, Jeff Egly, Rich Finlinson, Boyd Garriott, Jenn Gibbs, Eric Hawley, Laura Hunter, Troy Jessup, Doug Jones, Lisa Kuhn, Don Mahaffey, Steve Mecham, Bryan Peterson, Joni Robertson, Dennis Sampson, Jim Stewart, Kathy Webb.

Welcome and Introductions

Brenda Hales welcomed everyone to the June Steering Committee meeting.

Committee of the Whole

Tab 31 – FY 2011 Budget

Mike Petersen went through the UEN FY 2011 budget which reflects a decrease in one-time state appropriations and an increase in federal E-Rate reimbursements. The UEN budget includes a $1.5 million one-time funds and during FY 2011 there will be a $0.5 million reduction in one-time funds. Our on-going base budget for FY 2011 will be the same as last fiscal year which was $17.4 million. For a detailed breakout on the budget please see Tab 31, Attachment A. **A motion was made and seconded to approve the UEN FY 2011 budget as submitted. THE MOTION CARRIED.**

Tab 1 – FY 2011 Strategic Plan Draft

Mike Petersen presented an overview of UEN's updated the Strategic Plan which includes stakeholder and staff input in light of the past two years of budget reductions and new sources of funding. The resulting document is in a draft format for further discussion and consideration. There are also a number of key policy issues which are under consideration including one-time and on-going funding for UEN broadband connections for new public schools; preservation of the reliability and redundancy of the network; to just name a few. To see the complete detailed FY 2011 Strategic Plan in Draft Form, please see Tab 1

Tab 2 – Utah Data Alliance

Bryan Peterson reported that in August 2009 a working group was formed by USOE to apply for a grant to establish a Statewide Longitudinal Data System. The following Agencies formed the Utah Data Alliance (UDA): Utah State Office of Education, Utah System of Higher Education, Utah College of Applied Technology, Utah Department of Workforce Services, Utah Education Network and Utah Education Policy Center. The formal name will be known as Utah Data Alliance Data Share (UDADS) and it will be constructed and updated through scheduled import of data from partner agencies. This new and continually growing data share will enable many new and never before possible research studies to be undertaken. See Attachment A for project abstract and a link to the full application for additional project details.

UEN has a proven track record working in collaborative projects with educational agencies to provide enterprise level services. UDA is a collaborative effort between multiple educational agencies and is commissioned to develop UDADS. **A motion was made and seconded to approve UEN's role and involvement in the Utah Data Alliance, and the primary responsibility UEN will have to facilitate the development and implementation of UDADS. THE MOTION CARRIED.**

Tab 3 – NTIA BTOP Infrastructure Grant Round 1 Project

Dennis Sampson reported on progress UEN has made with the National Telecommunications Information Administration (NTIA) Broadband Technology Opportunity Program (BTOP) infrastructure award that was made in February. This award involves extending broadband services to 130 community anchor locations. Due to a Special Award Condition placed on the UEN BTOP grant by NTIA, all grant funding is on hold until NTIA issues a finding of no significant impact on the complete environmental assessment report submitted by UEN. UEN has until the end of July to submit our final environmental assessment with a conclusion of the engineering analysis.

Tab 4 – UEN Technical Summit Update

Jim Stewart previewed the annual Technical Summit to be held at Weber State University on June 15 – 17th. This summit provides low-cost training and will cover a variety of technical topics. We encourage UEN Stakeholders to participate in the conference where possible. We would also like to express our appreciation to WSU for their willingness to donate the use of their facilities for this conference. To see a complete agenda of the Technical Summit please see Tab 4 Attachment A.

Tab 5 – Course Management Service Timeline

Scott Allen briefed the committee on the Course Management Service Timeline. At the April Steering Committee meeting, UEN proposed a process of shifting its Course Management Service platform. Since then, additional input has been provided through the UEN Steering Committee planning retreat. UEN holds and has negotiated the software subscription contract for the Blackboard Vista (formerly WebCT Vista) online course management suite for the last six years. The current contract with Blackboard expires on June 30, 2012, which means that the support for the Vista product will end

as of December 2012. UEN and all USHE institutions relying on this product must shift to another CMS/LMS platform before June 30, 2012. There is a complete timeline of events that shows the Update on the CMS Evaluation Process, Progress since April, Pilot Courses, etc. and this can be found on Tab 5. There is also a "Top Ten Requirements" broken down by Institutions which can be found on Tab 5 Attachment A.

Tab 6 – Network Performance and IVC Services

Troy Jessup reported Year to Date figures for the Network Performance and IVC Services Metrics. To see the usage and percentages please refer to Tab 6.

Tab 7 – Steering Committee Meeting Minutes

A motion was made and seconded to approve the minutes as written. THE MOTION CARRIED.

Tab 8 – Other

The next Steering Committee meeting will be held on August 20, 2010 at 9:00 a.m. at the Dolores Doré Eccles Broadcast Center.

Tab 16
Other

TAB 17

PERSPECTIVES K-12 MEETING REPORT - DISCUSSION

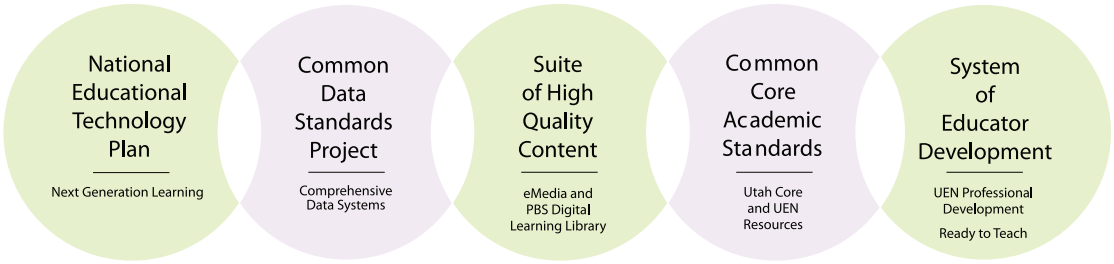
Issue

UEN hosted a meeting of K-12 informational technologists, educational leaders, curriculum and assessment specialists, and others on August 19, 2010. The purpose of the meeting was to assist UEN planning and service coordination for projects that involve teaching, learning, and assessment in light of new leadership and funding opportunities at the state and federal level. Doug Jones and meeting attendees will provide a brief update.

Background

Many initiatives are taking place in education at the national, state, and local level. These initiatives and programs are interrelated, and tied to UEN services. At the March meeting of the Public Education Advisory Committee, committee members discussed the various reforms and projects and recommended a day-long meeting that would provide both UEN and local school leaders an opportunity to gain greater understanding of different projects and how they support students, teachers, learners, researchers, and parents in our state.

Data Systems and Content Systems Integration Chart



Christopher Lohse, Director of Data Policy and Research for the Council of Chief State School Officers, was invited to keynote the day-long meeting. He shared information about national initiatives, particularly in the use of student data to inform instruction. Three panels shared their perspectives and program updates regarding assessment, teaching, and learning. Q&A and discussions followed each panel. Brenda Hales, Associate Superintendent for Student Achievement and School Success, gave an update and led a discussion about the Race to the Top grant and what's next. The meeting ended with an opportunity for all participants to share their recommendations for the State and UEN in terms of communication and collaboration.

The meeting agenda is available under this tab. Additional information and recommended readings can be found online at the meeting website http://www.uen.org/perspectives/ UEN will produce a meeting summary document for attendees and posting on the site.

Recommendation

This is an information item and requires no further action by the committee.

Tab 17 Attachment A
Perspectives K-12 Meeting Agenda
August 19, 2010

TIME	ACTIVITY	ASSIGNMENT
8:30 a.m.	**Continental Breakfast**	
9:00 a.m.	**Welcome**	Mike Petersen, UEN
9:10 a.m.	**Purpose of Meeting and Introduction of Christopher Lohse**	Laura Hunter, UEN
9:20 a.m.	**Keynote Speaker** – Christopher D. Lohse *Director of Data Policy and Research* *Council of Chief State School Officers*	
10:20 a.m.	**Break**	
10:30 a.m.	**Perspectives – Teaching** Continuum of Support for Teachers –Preservice to Leadership (Syd Dickson, USOE) • Higher Education Teacher Support & Preparation (Sandie Waters, UVU) • Ready to Teach & National Ed Tech Plan (Laura Hunter, UEN	Facilitator: Marliese Burns, USOE
11:30 a.m.	**Break**	
11:35 a.m.	**Perspectives – Learning** • UEN Web Services (Karen Krier, UEN) • Common Core Standards: Math (David Smith, USOE • Common Core Standards: Language Arts (Reed Spencer, USOE)	Facilitator: Cory Stokes, SEDC
12:35 p.m.	**Lunch**	
1:30 p.m.	**Perspectives – Assessment** • UDADS (John Brandt, USOE) • UTIPS (John Jesse, USOE) • SMARTER Balanced Assessment Consortium (Judy Parks, USOE)	Facilitator: Kathy Webb, USOE
2:30 p.m.	**Break**	
2:40 p.m.	**Perspectives – Reflections and Observations** Brenda Hales, USOE Utah State Office of Education • Race to the Top Update • Reflections and Observations Discussion	Laura Hunter, UEN
3:30 p.m.	**Adjourn**	

TAB 18

UPDATED UEN SERVICE CATALOG - DISCUSSION

Issue

The UEN Service Catalog has recently been updated.

Background

UEN staff members have recently updated the UEN Service Catalog. The Service Catalog is organized with tabs for each core UEN service:

- Wide Area Network
- Web Resources
- Enterprise Solutions
- Distance Education/Interactive Video Conferencing
- Broadcast Services
- Professional Development

The Service Catalog is designed to capture information about the many services offered by UEN using concise language and links to those services where possible. The newly updated Service Catalog is helpful for prospective employees, Steering Committee members, and partner organizations.

Go to http://www.uen.org/ueninfo/service_catalog to view the catalog.

Recommendation

This is an information item and requires no further action by the committee.

TAB 19
MOBILE DTV - DISCUSSION

Issue

UEN has applied for a grant from the Corporation for Public Broadcasting to develop Mobile DTV services. The grant award will be announced by November 1. Steering Committee members are invited to learn more about these new technologies and how UEN is planning for them.

Background

Mobile DTV makes local, digital broadcast TV portable. Manufacturers and automakers are increasingly offering devices to extend the broadcast-quality TV signal to portable devices such as mobile phones, laptop computers, portable media players and automobile media systems. This is an enhanced service to the required digital transition mandated by the FCC. KUEN's current network of digital transmitters and translators can also deliver the Mobile DTV signal with full-motion video and audio, as well as program guides and other features.

Of course, the rate at which consumers will acquire these devices is unknown at this time. Market research conducted by Magid Media Labs indicated that 9 out of 10 adults wanted to see live news and weather programming while on the go. Kids programming in vehicles will likely have an enthusiastic consumer following, particularly in Utah. KUEN's proposal incorporates transmittal of the MHz Worldview channel (UEN's 9.2 digital multicast channel). Unlike a programmed channel, this pass through stream would require no additional staff time to deliver.

Additionally, UEN is exploring ways to leverage the IP network for backchannel interactivity on mobile devices and an alternative way to receive MHz feeds from Falls Church, Virginia. Internet Protocol television (IPTV) is also an option for UEN, leveraging our broadband infrastructure, existing eMedia VOD service, and new opportunities with release of the Google TV and Boxee slated for this fall.

We will continue to research and update the Steering Committee on these promising technologies.

The executive summary of UEN's Mobile DTV proposal reads:

> KUEN requests support to build new Mobile DTV capabilities. This project meets CPB's strategic digital and diversity goals and will include installation of approved ATSC equipment and mobile broadcast of MHz Worldview statewide. KUEN will match the proposed budget and meet the implementation target set by CPB. KUEN is a long-time affiliate of MHz Worldview, broadcast as a KUEN

digital multicast channel. This globally-minded news and content provides an important service to support diversity education. Utah is undergoing major demographic, cultural, and economic shifts that make global understanding increasingly valued by our community and economic development officials. Rural Utah areas are not very diverse, so MHz Worldview's international programming is essential for global education in these areas. Mobile DTV distribution will enhance critical services and also helps KUEN develop capacity to Beta-test IP back-channel and geolocation applications in the future.

Recommendation

This is an information item and requires no further action by the committee.

TAB 20

HOW TO FOLLOW UEN NEWS - DISCUSSION

Issue

UEN uses multiple platforms to distribute information to stakeholders. This agenda item will provide a brief overview of the past and present approaches to distributing news about UEN. It will also look ahead to emergent trends in keeping stakeholders informed about organizational news and related resources.

Background

In the 1990's UEN produced and distributed a printed newsletter to keep stakeholders informed about organizational news. At its peak the UEN NetNews publication was mailed via the US postal service to about 1,500 recipients several times a year.

In January 2001, UEN NetNews became a digital newsletter distributed via email. The publication is emailed monthly to a frequently updated list of more than 16,000 Utah educators and UEN stakeholders who have opted-in to receive this information. The total number of UEN newsletters sent via email was 1,907,686 as of August 12, 2010.

In addition to UEN NetNews these other methods are also used to communicate and interact with stakeholders:

- UEN Highlights on the UEN home page
- UEN News and NetNews sections of the UEN home page
- UEN NetNews RSS feeds for my.uen and other web applications
- UEN News Twitter
- UEN FaceBook fan page
- UEN-TV announcements of upcoming UEN Professional Development Courses
- UEN Professional Development Twitter
- UEN Professional Development Highlights via Text Messaging
- UEN Professional Development FaceBook fan page
- UEN Professional Development Blogs
- UEN Professional Development YouTube channel

Recommendation

Committee members are encouraged use these UEN news resources and to tell others about them. No further action is required.

TAB 21

UEN COMMERCIAL VOIP TASK FORCE - DISCUSSION

Issue

UEN Commercial VoIP Task Force.

Background

The UEN Commercial VoIP Task Force has been organized since December 2009 and has met several times to consider VoIP Services and UEN involvement in providing these services to UEN stakeholders.

A broad community of participants has supported these meetings and given input into this process. UEN has taken this input and developed a draft Commercial VoIP Policy. The draft policy document is provided as Attachment A.

Recommendation

This draft policy is provided for consideration by members of the UEN Commercial VoIP Task Force and the UEN Steering Committee. Additionally, it is available for input from all UEN stakeholders. We will review and discuss this draft policy at the UEN Technical Services Subcommittee and at a future meeting of the UEN VoIP Task Force.

Additional input will be taken and a second draft will be developed for discussion and consideration at the October 2010 UEN Steering Committee. At that point UEN will provide a recommendation to either take further input and provide a more refined draft policy or to approve the draft policy with any minor changes agreed upon at that time.

Tab 21 Attachment A
Voice over Internet Protocol Policy Draft

Policy

The purpose of this Policy is to clarify UEN's position regarding VoIP Services transported over the UEN network. The policy outlines the criteria and standards for implementing a VoIP communication link through UEN. The implementation process will be defined separately by UEN Technical Services and will be modified from time-to-time as needed.

Scope

The Utah Education Network was established to provide Utah students and educators with electronic access to quality educational services that improve the quality of student achievement and communications through high-quality, cost-effective Internet access and Interactive Video Conferencing (IVC) through existing public telecommunication services.

In a continuing effort to support schools, school districts, and the public and higher education systems and deliver cost-effective services through an open and competitive bidding process, UEN makes its network available to VoIP services for public and higher education institutions according to identified UEN standards from licensed VoIP vendors under the following conditions:

1. UEN will not solicit VoIP services on behalf of stakeholders.
2. UEN will assist stakeholders in implementing VoIP services at their request.
3. UEN provides VoIP network services as a "best effort" strategy and does not provide guaranteed quality of service (QoS) or level of performance.
4. UEN will not enter into contracts with vendors to guarantee them service beyond contracts with UEN stakeholders.
5. If a UEN stakeholder wants VoIP services at their institution, then UEN's principle concerns are that:
    a. VoIP services will be offered on the condition that it will not degrade network performance.
    b. VoIP service will not impose additional operating costs on UEN.
    c. UEN will determine the best interface to link with UEN's network; (i.e. location, equipment, protocols, etc.).
    d. Clients/vendors are responsible to implement and operate VoIP services according to established state and federal rules and regulations.

Definition of Terms

Voice over Internet Protocol (VoIP) is a general term for a family of transmission technologies for delivery of voice communications over IP networks such as the Internet rather than the public switched telephone network (PSTN).

VoIP Network A Public Telecommunication Network over which VoIP Services are provided.

VoIP Service(s) All of the services and technologies that allow the transmitting, receiving, delivering and routing of voice telecommunications by means of Internet Protocol (IP); i.e. commercial VoIP, PBX VoIP, hosted PBX or any like service regardless of branded terminologies.

Public Switched Telephone Network (PSTN) also referred to as the Plain Old Telephone Service (POTS) is the network of the world's public circuit-switched telephone networks.

An **Internet Service Provider (ISP)** is a company that offers its customers access to the Internet. The ISP connects to its customers using a data transmission technology appropriate for delivering Internet Protocol such as dial-up, DSL, cable modem, wireless or dedicated high-speed interconnects.

Firewall A technological barrier designed to prevent unauthorized or unwanted communications between computer networks or hosts

Enhanced 911, E-911 or E911 is a North American telecommunications based system that automatically associates a physical address with the calling party's telephone number, and routes the call to the most appropriate Public Safety Answering Point (PSAP) for that address. The caller's address and information is displayed to the call taker immediately upon call arrival. This provides emergency responders with the location of the emergency without the person calling for help having to provide it.

Assisted GPS A system which can improve the startup performance of a GPS satellite-based positioning system. It is used extensively with GPS-capable cellular phones. making the location of a cell phone available to emergency call dispatchers.

Border Gateway Protocol (BGP) is the protocol backing the core routing decisions on the Internet. It maintains a table of IP networks or 'prefixes' which designate network reachability among autonomous systems (AS). It is described as a path vector protocol. BGP does not use traditional Interior Gateway Protocol (IGP) metrics, but makes routing decisions based on path, network policies and/or rule sets. For this reason, it is more appropriately termed a reachability protocol rather than routing protocol.

Abstract Syntax Notation (ASN) is a standard and flexible notation that describes data structures for representing, encoding, transmitting, and decoding data. It provides a set of formal rules for describing the structure of objects that are independent of machine-specific encoding techniques and is a precise, formal notation that removes ambiguities.

Synchronous Optical Networking (SONET) are standardized multiplexing protocols that transfer multiple digital bit streams over optical fiber using lasers or light-emitting diodes (LEDs).

Time-Division Multiplexing (TDM) is a type of digital or (rarely) analog multiplexing in which two or more signals or bit streams are transferred apparently simultaneously as sub-channels in one communication channel, but are physically taking turns on the channel.

Policy Issues

UEN's policy regarding VoIP Services transported over the UEN network includes but is not limited to:

1. Any licensee offering or marketing VoIP Services shall inform users and potential users of VoIP services of any differences between the VoIP service and traditional telecommunication services.
2. UEN is not responsible for the quality of service (QoS) associated with any particular VoIP vendor. Therefore, the stakeholder exploring VoIP services should consider the issues and potential limitation of VoIP telephone service including but not limited to:
    a. Service Quality;
    b. Latency;
    c. Availability - In situations where telephone services become completely reliant on the Internet infrastructure, a single-point failure can disrupt all communication, including Enhanced 911 and other equivalent services.
    d. Voice Quality;
    e. Nature of Operation;
    f. Ease of Use;
    g. Pricing;
    h. Any other matters that may impact the decision of any user or potential user to access the VoIP service as opposed to alternative voice services; and
    i. Any other matter of which UEN from time to time requires the licensee to inform users or potential users.
3. UEN does not guarantee network security for VoIP services transported over the UEN network infrastructure. Therefore, the stakeholder exploring VoIP services should consider potential network security responsibilities and issues including but not limited to:
    a. Licensees shall implement all appropriate security measures concerning their VoIP networks and protect them from unauthorized or unlawful access.
    b. UEN may either conduct or authorize a third party to conduct, security audits on a licensee's VoIP network and associated facilities, to ensure the security and integrity of that VoIP network.
    c. Licensees shall provide access to UEN or any third party appointed by UEN to conduct these security audits.

d. In respect of any VoIP services and VoIP networks over which those VoIP services are provided, licensees shall comply with all requirements of the state (or agencies of the state) regarding national security requirements.

e. UEN reserves the right to shut off "excessive or bad traffic."

f. Meeting legal requirements of content (CALEA, copyright, etc.) are the responsibility of vendors and all UEN stake holders.

g. Security breaches that affect UEN must be reported to UEN (vendors are responsible for monitoring and reporting all security breaches).

4. Risk issues

   a. UEN will not be responsible for the loss of telephone service during a power failure. Therefore, the stakeholder exploring implementation of VoIP services should consider service risk issues including but not limited to:

      i. The susceptibility of electrical service to power failures is a common problem.

      ii. Since IP phones and VoIP telephones connect to routers which typically depend on the availability of municipal electrical service, phone service would be lost during a power failure.

      iii. A temporary solution calls for a locally generated power supply or a battery-backed power supply (UPS) to assure uninterrupted service in case of local power failures.

      iv. Telephones for traditional residential analog service are usually connected directly to telephone company phone lines which provide direct current to power most basic telephone handsets independent of locally available electrical power sources. It is recommended that a least one POTS line be available at the institution for emergency use during a power failure.

   b. UEN will not provide redundant VoIP circuits over the network infrastructure. Therefore, the stakeholder exploring implementation of VoIP services should consider service redundancy related issues including but not limited to:

      i. With the separation of the Internet and the public telephone network, a certain amount of redundancy is provided. An Internet outage does not necessarily mean that a voice communication outage will occur simultaneously, allowing individuals to call for emergency services and many businesses to continue to operate normally.

      ii. In situations where telephone services become completely reliant on the Internet infrastructure, a single-point failure can disrupt all communication, including Enhanced 911 and other equivalent services.

   c. UEN will not be responsible for maintaining a VoIP E911 emergency calling system. Therefore, the stakeholder exploring implementation of VoIP services should consider VoIP E911 issues including but not limited to:

i. The nature of IP makes it difficult to locate network users geographically. Emergency calls, therefore, cannot easily be routed to a nearby call center. Since IP allows a great deal of mobility, mobile user could be anywhere that there is network coverage. The VoIP E911 emergency-calling system associates a physical address with the calling party's telephone number. . In the United States, the Wireless Communications and Public Safety Act of 1999 leaves the burden of responsibility upon the subscribers and not the service providers to keep their emergency information up to date.

ii. It will be the responsibility of the VoIP provider to assure that E911 information is up-to-date in conformance with the Wireless Communications and Public Safety Act.

d. UEN will not be responsible for monitoring or enforcing State and Federal telecommunication regulations. Therefore, the stakeholder exploring implementation of VoIP services should consider regulatory issues including but not limited to:

5.

a. VoIP providers and clients will comply with all Federal, State and Local Government rules and regulation comparable to those of traditional telecommunication service providers. Examples include:

i. VoIP operators support local number portability;

ii. Make service accessible to people with disabilities;

iii. Pay regulatory fees, universal service contributions, and other mandated payments;

iv. Free-of-charge access to emergency numbers, Caller ID, and Directory services.

v. Enable law enforcement authorities to conduct surveillance pursuant to the Communications Assistance for Law Enforcement Act (CALEA).

6. Technical Issues

a. Any VoIP providers connecting to UEN must physically connect and peer to a UEN backbone hub location.

i. Backbone hub locations are: USU, WSU, DATC, EBC, SLCC, UVU, SNOW - Ephraim, SNOW - Richfield, SUU, DSC, CEU, and UVW.

ii. Connections into these locations must be either 100Mb Ethernet (copper only) or Gigabit Ethernet (copper and fiber supported). No Synchronous Optical Networking (SONET) or Time-division multiplexing (TDM) connections are supported.

b. Routing information between UEN and VOIP providers are exchanged only with Border Gateway Protocol (BGP)

i. VoIP provider should preferably use public Abstract Syntax Notation (ASN) for peering but a private ASN will be supported.

ii. Any UEN routes sent to VoIP provider should be marked with NO_EXPORT BGP community or something similar which disallows UEN routes from being leaked to any other ASN.

iii. Any VoIP provider routes sent to UEN will also be marked with NO_ EXPORT BGP community and will not be sent to any neighboring ASN.

iv. Any UEN routes leaked outside of the VoIP providers ASN will be reason for termination of connection and BGP peer.

v. VoIP provider cannot use UEN network for transiting any traffic.

c. UEN does not provide any end-to-end service guarantees.

i. UEN will ensure proper routing only on the UEN network.

ii. UEN cannot provide any Quality of Service (QoS) guarantees on the UEN network.

iii. UEN cannot assist in troubleshooting any layer 4+ issues.

TAB 22

INTERACTIVE VIDEO CONFERENCING (IVC) INSTALLATION FEE AND TRAVEL COSTS - DISCUSSION

Issue

UEN is incurring costs for the installation of stakeholder requested and funded Interactive Video Conferencing (IVC) classrooms and boardrooms including hardware and other travel related expenses.

Background

Over the past couple of years the UEN budget has tightened and Interactive Video Conferencing projects have not been funded by the legislature. UEN's stakeholders have continued growth and momentum by providing the funding for new IVC classrooms and classroom upgrades within their districts and on their campuses. UEN Technical Services has adjusted to this new dynamic by providing stakeholders with network and video engineering service in addition to equipment and parts procurement and implementation services, streamlining this process for stakeholders and leveraging UEN's experience in this area. However, UEN is installing 40 to 60 rooms a year under this model and many of the projects involve multiple rooms and extended overnight travel for multiple field staff. As a result UEN Technical Services is looking for a means to continue support for this popular service but to recover some but not all of the expenses required to implement an IVC classroom.

UEN is not a cost recovery organization and UEN Technical Services must proceed cautiously in this area. It is recommending that the Technical Services Subcommittee discuss the possibility of setting a flat per room IVC installation fee regardless of a complex or simple design. Also, when extended overnight travel is required UEN may request funding for hotel and per diem costs if these expenses place excessive demands on the UEN Field Operations travel budget. UEN Field Operations travel budget must fund all field related projects, support and maintenance and is not exclusive to IVC projects and operations. Based on recommendations from the Subcommittee, this may become an action item during the October Steering Committee meeting.

Implementation and travel fees could be waived if stakeholders provide a form of match that reduces implementation and travel costs, such as providing local installation support for the duration of the project.

This is a difficult request to make when stakeholders have limited budgets and they have come to depend on UEN to work on a cooperative basis without levying fees for services.

Recommendation

UEN Technical Services recommends to the Technical Services Subcommittee that a per room IVC installation fee be discussed and recommended for further action at the next meeting of the Steering Committee. It is further recommended that UEN travel costs may be recovered if travel for the IVC project places excessive demands on the UEN Field Operations travel budget.

TAB 23

EBC-UEN DATA CENTER AIR CONDITIONING REPLACEMENT ISSUES AND SOLUTIONS - DISCUSSION

Issue

Cooling problems at the Dolores Doré Eccles Broadcast Data Center.

Background

The data center located in the Dolores Doré Eccles Broadcast Center (EBC) on The University of Utah campus has been experiencing cooling problems for a number of years. These problems became severe as outside temperatures neared 100 degrees in June. A temporary cooling unit was installed and is now in place. No immediate threats exist at present.

After careful evaluation of the situation UEN staff have determined that it is necessary to upgrade the existing cooling capacity in the UEN EBC Data Center. Current cooling capacity is 28 tons. The existing cooling needs have been determined to be 55 tons, which clearly demonstrates the cause of our cooling problems.

Any solution would also need to provide capacity to add equipment to this room. Without this upgrade the inadequacy of cooling capacity could produce a failure of critical electronic equipment used to power the statewide backbone and many important servers.

The new data center located in downtown Salt Lake City would be a good option if we could wait for it to come on line. Unfortunately the best case for a move to the new data center is October 2011. Waiting for the space in the new data center would be a mistake given the critical nature of the equipment in the UEN EBC Data Center.

UEN has pursued the installation of three (3) 30 ton air conditioning units for the UEN EBC Data Center. This would give us enough capacity to meet current needs, additional capacity for any future needs, increased reliability with new equipment and redundant cooling capacity should any single unit fail.

The cost of this upgrade will be approximately $250,000. UEN will ask other EBC occupants to pay for some portion of this project, however, UEN will be responsible for the bulk of the costs. No budget exists for this upgrade and all costs to UEN would be covered from contingency reserve funds.

Recommendation

This is an information item and requires no further action by the committee.