Utah Education Network
Steering Committee

April 15, 2005
Committee of the Whole

Welcome and Introductions

Tab 19  
**Legislative Outcomes for FY 2006 - Discussion** ............... 19-1

Tab 20
**Planning for FY 2006 Strategic Plan**  
**and Budget Development - Action**

Tab 21
**2005 Annual Security Conference** ......................... 21-1
**Report - Discussion**

2005 Annual Security Conference ................................. 21-3
Facilitated Discussions

Instructional Services Subcommittee Agenda

Tab 22
**Instructional Services Strategic Plan** ....................... 22-1
**for FY 2006 - Action**

Tab 23
**EDNET Facilitators - Action** ................................. 23-1

Tab 24
**Higher Education Advisory Committee** ................. 24-1
**Report - Discussion**

Tab 25
**Public Education Advisory Committee** .................... 25-1
**Report - Discussion**

Tab 26
**UEN-TV Update and Fall Schedule - Discussion** ....... 26-1
**UEN-TV Fall Schedules** ..................................... 26-3
Technical Services Subcommittee Agenda

10:00 a.m. - 11:00 a.m.

- Tab 29
  Strategic Planning for FY 2006 - Action ................. 29-1
- Tab 30
  FY 2005 Regional Priorities Progress .................... 30-1
  Report - Discussion
  FY 2005 Regional Priorities - Increased Capacity .......... 30-3
  and Ethernet
  FY 2005 Regional Priorities - Non Ethernet ............... 30-5
- Tab 31
  GL3 Phase One Update - Discussion ...................... 31-1
- Tab 1
  GL3 Phase Two Update - Discussion ...................... 1-1
  GL3 Phase Two Site List.................................. 1-3
- Tab 2
  National Lambda Rail Progress......................... 2-1
  Report - Discussion

Steering Committee Business Meeting Agenda

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

- Tab 3
  Report of the Instructional Services .................. 3-1
  Subcommittee - Discussion
- Tab 4
  Report of the Technical Services .................. 4-1
  Subcommittee - Discussion
- Tab 5
  Steering Committee Meeting Minutes .................. 5-1
- Tab 6
  Other................................................. 6-1
 UPCOMING MEETINGS

Instructional Services Subcommittee Meeting - June 24, 2005
Technical Services Subcommittee Meeting - June 24, 2005
UEN Steering Committee - June 24, 2005

Please place these materials in your Steering Committee Binder.
UEN’s major goals during the recently completed legislative session were to: 1) acquire additional salary dollars to retain key staff members, 2) replace last year’s one time allocation used to pay for mult-year telecommunication provider contracts with ongoing funds, 3) continue progress toward increasing network capacity, reliability, and security at public schools that do not yet have Ethernet connectivity, 4) acquire additional funding to convert the EDNET system from analog to IP-based digital videoconferencing, and 5) enhance web resources for educators and students by expanding Pioneer Online Library resources and implementing an enterprise-level learning management system in collaboration with the Utah System of Higher Education.

The State Legislature provided excellent support to make progress in achieving most of out budgeting goals.

1. Network Capacity, Reliability, and Security

Contracts with telecommunications providers to complete Ethernet projects at approximately 150 schools were funded in FY 2005 with one-time allocations. In the FY 2006 budget, one-time funds will be replaced with $400,000 ongoing allocations. New network capacity projects in FY 2006 will be funded with a one-time allocation of $1,500,000. UEN staff will be developing preliminary recommendations to be reviewed by the Technical Services Subcommittee during the coming months.

As we continue our efforts to secure Ethernet connectivity at every public school, there are two major issues that must be addressed to satisfactorily complete this project: 1) E-Rate as the primary funding source, 2) the relationships between UEN and districts in providing increased network connectivity to elementary schools.

2. Conversion of EDNET to IP-based Videoconferencing Technology

A major focus of UEN in FY 2006 will be to continue the EDNET conversion to IP-based videoconferencing technology. The Legislature fully funded the UEN request for $800,000 in one-time funds. By the end of FY 2005, a modest pool of state funds ($240,000), two federal grants, and priority two E-Rate funds will have paid for
conversion of approximately 65 classrooms, installation of 6 MCU bridges, and acquisition of a scheduling and management system to replace the CME system. In the coming months, UEN staff will recommend to the IP Video Steering Team and the UEN Steering Committee a proposed list of new sites to be converted during the coming fiscal year.

As experience is gained in converting the EDNET system, new budget issues emerge. This year, we are trying to identify ongoing funds to pay maintenance contracts of $115,000 for the classroom equipment, MCU’s, and management software that have been purchased to this point in the project. So far, we have requested and the legislature has provided only one-time funds for this project. Although we will be able to address this problem next year with one-time funds, the long-term solution will be to acquire a permanent source of revenue to pay those contracts.

3. Providing State-level Web-Based Educational Resources

As part of a three-partner consortium, UEN requested $500,000 to increase the Pioneer Online Library resources. Unfortunately, the legislature did not increase funding as requested by both higher education and UEN. We did receive $140,000 in ongoing funds to replace current year one-time allocations to pay software contracts and personnel costs for web resources.

UEN received excellent support from the fiscal analyst’s office, the Higher Education Appropriations Subcommittee and the Governor’s Office to provide a statewide perpetual license and UEN-provided hosting and technical support of WebCT Vista. Although the full request was not funded, UEN has received sufficient new funds to pay annual license fees for WebCT Vista and to support initial transition to the system as planned by several USHE institutions.

4. Other non-appropriations Legislative Actions

House Bill 260, sponsored by Representative John Dougall, was adopted by the Legislature. Among other provisions, it (1) requires the attorney general to establish and maintain an adult content registry database of Internet sites containing material harmful to minors; (2) subjects a person dealing in material harmful to minors to criminal liability for distributing material harmful to minors if the person negligently or recklessly fails to determine the proper age of a minor; (3) requires Internet service providers to prevent access to Internet material harmful to minors, if requested by the consumer and to block material on the adult content registry; (4) requires Internet content providers that create or host data in Utah to properly rate the data; and (5) provides civil fines and criminal penalties for Internet service and content providers who violate particular provisions of the legislation. Most of the provisions of the legislation take effect on January 1, 2006 or May 1, 2006. It is imperative that UEN, USOE, districts, colleges and universities, and public libraries undertake thorough legal reviews of this bill to determine its implications and to assure compliance.
House Bill 109, sponsored by Representative David Clark, was approved during the legislative session. This bill consolidates information technology services and governance in the executive branch of state government into one department by creating the Department of Technology Services to be headed by an executive director, who also serves as the chief information officer. The new Department will consist of three divisions: Enterprise Technology; Integrated Technology, and Agency Services.

**Recommendation**

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

During the next two months, the FY 2006 Strategic Plan and Budget will be developed for final consideration and approval at the June meeting of the Steering Committee. It is proposed that the process for developing these policies be approved.

**Background**

Preliminary budget planning activities by UEN managers and staff members have been underway for the past several weeks. Department managers were directed to develop budget recommendations based on current year funding levels for current expenses, capital equipment, professional development, etc. Departments’ highest priorities above the FY 2005 base budget were then identified and ranked in priority order. Taking into account ongoing, one-time, and federal revenues, a preliminary budget was then developed by UEN directors.

A preliminary draft budget will be ready for presentation and review by the UEN Executive Committee on April 15 after the regular Steering Committee meeting. That draft budget will also be shared with interested UEN stakeholders and the Technical Services and Instructional Services Subcommittees during meetings to be scheduled for late April and early May. Final budget decisions will be made by the Steering Committee at its June meeting.

The budget request for FY 2006 addresses the highest priority goals and objectives that were identified in the FY 2005 Strategic Plan. We anticipate that most goals, objectives, and activities in the plan will be carried forward into next year, and that our FY 2006 Strategic Plan will be an updating of our current plan, not a wholesale revision of it. For example, Goal 1, objective 1 commits UEN to increase network speed, reliability, and capacity, especially in rural areas. That task has been a primary focus for the past two years, and will require ongoing efforts not just during FY 2006, but for at least two to three more years. That is also true to at least some degree for most other goals and objectives in our FY 2005 plan.

The strategic plan will be the primary focus of extended meetings that are to be discussed and scheduled by the Instructional Services and Technical Services Subcommittees for late April through mid to late May. Other agenda items are expected to be regional and content and service priorities, and budget implications
of those priorities. It is hoped that all members of the Steering Committee will be available to participate in these discussions, and that other UEN stakeholders will also be in attendance.

Recommendation

It is recommended that the Steering Committee provide additional feedback in subcommittee meetings where specific plans will be made to develop the FY 2006 Strategic Plan and Budget. Key actions would include presentation of a draft budget to the Executive Committee in mid-April, followed by extended discussions of the Technical Services and Instructional Services Subcommittees, and final adoption of the Plan and Budget at the June meeting of the Steering Committee.
Issue

A statewide security conference, “Digital Citizenship: Utah At Risk” was held March 7 and 8 in Salt Lake City. The conference was a joint effort with State ITS and UEN. This report outlines participant feedback from the conference and some next steps to address security issues in Utah.

Background

Conference Report

Goals of the conference established by the planning committee were:

1 Convene educational and state government stakeholders to build awareness of security issues, focus particularly on end-user training issues and overall digital citizenship, rather than specific software and tools.

2 Build consensus that security and digital citizenship are issues in Utah and that a collaborative, statewide approach toward the problems are needed.

3 Gain input from participants on appropriate projects and efforts that we should undertake; get ideas on a statewide strategy to implement in the coming year.

The committee met for a post-conference download on April 6, 2005 and agreed that all goals were met. There were more participants at this conference than in previous years, 175 the first day and 90 the second day. There was a good balance of education and state ITS as well as policy makers and technical personnel.

Feedback from participants was very valuable. During the conference 75 participants completed a three-page action plan for implementing ideas from the conference at their own site. Action plans highlighted a need for more Web site resources, administrator buy-in to the importance of security, end user training, and technical training (SSCP and CISSP).

A post-workshop survey was also sent to participants and 42 responded. 90% indicated they would attend or recommend others attend the conference next year.

Speakers from the Attorney General’s Office and the Keynote on Digital Citizenship were ranked as effective or very effective by attendees. Most attendees liked the two-
day format but requested more hand-on sessions and many suggested security vendors be invited to present as well.

**Results**

Video clips, PowerPoint presentations, and documents from the conference have been added to the 2005 Annual Security Conference Web site at [www.securityconference.utah.gov](http://www.securityconference.utah.gov)

A list of requested Web site resources has been culled from participant feedback. State ITS and UEN have planned expanded Security Web sites to be launched in the coming months.

A committee of State ITS and UEN people has been working on adding SSCP and CISSP preparation courses to the UEN Professional Development site in WebCT Vista. The modules can also be used for UCAT or Campus courses. State ITS is investigating whether the testing agency will offer the test in Utah at the conclusion of test preparation here, which would be a significant savings to agencies.

The Security Committee has committed to send quarterly reports to all participants at this year’s conference. Reports will be sent in June, September, December, and March. These reports will also be shared with the UEN Steering Committee.

The Security Committee is planning activities for Security Awareness Month in October and a spring conference again in 2006.

**Recommendation**

This is an information item. No further action is required of the Steering Committee at this time.
Digital Citizenship
Utah at Risk
2005 Annual Security Conference

Facilitated Discussions
Summary from March 7, 2005

Groups
- State IT
- Higher Education
- K-12 Education
- NUI
- USUG
- 170 participants for 90 minutes
- Facilitators and Note takers

Question 1. How should it be?
- Responsible, thoughtful users
  - Technology used for good reasons, not just cool factor
- Balance ease of use with security
  - Single user log-in OR cards
  - Most business is online, public trust in security, privacy

Question 2. What’s happening now?
- Filtering
- Reporting
- VPN
- Hard working people
- Much progress over last 5 years
- Spyware, SPAM, Viruses
- Technology getting more complex
- Policies ignored
- Password jungle
Question 2. What’s happening now?
- Users like Palm, USB drives, but there’s concern over easy portability of viruses too
- HB109 Angst – pending changes, policy, hardware distribution, training, suggestion to look at other states as models
- Inconsistent policies OR lack of policy
- Disconnect between upper management and IT trenches

Question 3. What do we need to do?
- Statewide end-user education
  - Parents, general public, employees
  - K-12 Digital Citizenship CORE requirement
  - Digital 101 course at IT University
  - Information for parents of minor children
  - Use distance learning systems
  - Public service announcements
  - More training for managers/policy makers

Question 3. What do we need to do?
- Policies and standards
  - Standards developed in partnership with IT, end-users, management (team approach)
  - Standards consistently applied and understood
  - More attention from management, direct reporting relationship to top management
  - Security not 2nd job

Question 3. What do we need to do?
- Funding and resources
  - Cost benefit analysis – save money on security but at what cost?
  - Catastrophe plan
  - Pooling resources and skills between organizations
  - Training not funded – much red tape – not a priority

Summary Next Steps
- Discussion notes and summary posted on security web sites from UEN and State ITS
- Security working groups/recommendations
  - Training
  - Funding and resources
  - Policy and standards
- Individual action plans to further refine plans – listservs and working groups
Issue

Instructional Services Strategic Planning for FY2006

Background

UEN has been working with a strategic plan for the past two years that has served UEN and its stakeholders well. It is the view of UEN staff that extensive revisions of the plan are not needed since many of the projects carry over multiple years.

Members of the Instructional Services, Instructional Delivery, and Public Information staff have met over the last several weeks to consolidate projects and requests from stakeholders into a draft plan.

Discussion on the plan is scheduled during the Public Education Advisory Committee meeting on April 29th and the Higher Education Advisory Committee meeting on May 18th.

Members of the Instructional Services Subcommittee should discuss whether additional input in the form of a 1 day Subcommittee planning retreat would be useful. This could be held in mid to late May.

After these meetings, The Instructional Services, Instructional Delivery, and Public Information portions of the plan would be incorporated into the overall FY 2006 Strategic Plan for presentation to the Steering Committee at the June meeting for final discussion and approval.

Recommendation

It is recommended that the Instructional Services Subcommittee determine whether a 1 day planning retreat should be scheduled in May, appoint a small group to plan the retreat, and endorse the planning process outlined above.
EDNET site facilitators play a key role in troubleshooting technical problems, proctoring exams, and student supervision. UEN has received reports that, in an effort to reduce funds, many school administrators are eliminating site facilitators. George Miller, USOE Distance Learning Specialist, will lead a discussion on this issue and some recommendations.

EDNET facilitators are a key player in the Distance Learning Team. Teachers in public and higher education rely upon these individuals, usually hired by the local school district for $8.00 to $9.00 per hour to act as facilitators in the EDNET rooms. They are expected by the teacher to be present at all times, be involved in the class, grade papers occasionally and fax everything back and forth to the originating site. They are also expected to be the class disciplinarian, technical trouble shooter, as well as the “eyes and ears” of the teacher. Distance learning classes often run from early morning to late at night usually five nights a week in many places.

Teacher expectations are considerable, often unduly burdensome on these facilitators, who may not have the expertise demanded of them. They have been trained as technical facilitators and hired as such. To expect them to act as a “surrogate” teacher is beyond the call of duty. They often do what is asked of them, because of their dedication to EDNET and their school. They are frustrated that this problem has gone on for so long. They have appealed to their LSR’s to no avail. Local administrators have other issues to deal with and EDNET facilitation is not deemed to be a significant issue.

At the same time, district administrators, looking for a way to save money, will encourage principals to cut back services of the facilitators. Even worse, local participants of EDNET events may be told that if they want to receive a particular event, the facilitator cannot be present, because the district cannot afford to pay them extra, will tell the originating site that the local site fees can be waived and perhaps one of the participants could be the facilitator. This is a common practice and is causing serious problems at the local, receive sites. Cheating on exams and tests is widespread if they are not properly “proctored.” Troubleshooting of technical problems, especially with the new Polycom IP sites is difficult if not impossible if the onsite facilitator is not present. Unsupervised high school students can pose liability problems for the local school district. Participants should never be expected to
proctor their own tests, nor troubleshoot complex technical issues that they are not trained for. That is left to the trained facilitators.

UEN goes to considerable effort to train our facilitators for demanding assignments. USOE also goes to considerable effort and expense to train teachers and administrators in the proper pedagogy of distance learning. We emphasize the critical role the facilitator makes in the unique educational team environment. For administrators to keep the facilitators out of their EDNET rooms or substitute untrained participants to act as facilitators, after all of the training has been provided; just to save a few dollars, is indeed unfortunate. This problem surfaced in 1997 and was addressed by Mr. Ed. Ridges in a communication to administrators. Obviously the problem still exists and is becoming worse.

Policy Issues

Administrators in positions of leadership in higher and public education need to be supportive of the distance learning facilitator. If left unchecked, the problems identified will seriously affect the operation of Utah’s Distance Learning Program. EDNET Distance Learning’s’ credibility is at stake here. The thousands of students that are participating now and in the future deserve our best efforts, not shortsighted, cost-saving measures that undermine the effectiveness of the distance learning classroom.

A suggested policy position would indicate:

- Facilitators play key roles with Distance Education.
- All users of the network have a vested interest in assuring levels of quality at the end sites.
- Working with the Instructional Services Subcommittee, UEN will consider terminating service at sites where the facilitator policy is ignored.

Recommendation

It is recommended that the Instructional Services Subcommittee discuss the issue and appoint representatives to develop policy language for consideration by the UEN Steering Committee in the June meeting.
Issue

Members of the Higher Education Advisory Committee met via phone on March 17th. Cyd Grua will report on activities of the committee.

Background

The committee distributed two online surveys in March. The surveys were designed to help get needed input to UEN in two key areas, Faculty Training and Digital Asset Use. The Faculty Technology Training survey had 218 responses. The Digital Asset Use survey had a total of 51 responses. In the coming weeks, members of the committee will analyze the data and use it to guide discussions for the UEN strategic plan and committee work. A full report will be shared with the Instructional Services Subcommittee during the June meeting.

Dates were set for upcoming meetings of the Higher Education Advisory Committee meeting:

- May 18, 2005 - 11:00 a.m. at the Gateway
- July 20, 2005 - 11:00 a.m. by phone bridge
- September 21, 2005 - TBD
- November 16, 2005 - 11:00 a.m. by phone

Recommendation

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.
Members of the Public Education Advisory Committee met March 31, 2005. Rick Gaisford will report on the activities of this committee.

This is an information item. No further action is required of the Instructional Services Subcommittee at this time.
UEN-TV UPDATE AND FALL SCHEDULE - DISCUSSION

Issue

UEN-TV is looking at scheduling and programming changes for Fall semester. Committee members are invited to review this information and provide input. Final decision on these recommendations is scheduled for the June Steering Committee meeting.

Background

Since UEN's transition to digital, many new options for getting content to Utah citizens in the most effective uses for broadcast have been explored. Enrollment in TV-based courses has been flat for the last several years, while online enrollments are increasing dramatically. With changes to digital broadcast, and increased broadband access in homes, we're rethinking the most effective ways to get video-based courses to students.

The current TV model is using broadcast technology for a narrowcast audience. UEN-TV is proposing the following changes as a way to make better use of the signal and reach more Utah citizens.

1. Move broadcast of telecourses to begin at 11:00 p.m. and run through 8:00 a.m.
   • Telecourses on UEN-TV are offered by SLCC, UVSC, and the U of U. There have been discussions with the telecourse and distance learning personnel at these institutions. All institutions agree that enrollments are flat or declining and that students seek alternative delivery methods.
   • Research conducted 10 years ago indicated that 85% of students tape their programs or check them out from campus libraries. Telecourse institutions believe this data is still accurate, although more current data is needed since many report increased use of DVD check out or streaming options.

2. Capture and stream telecourses through UEN Digital Asset Management System.
   • Rights would need to be cleared through the institutions.
   • Students could view by episode.
• This would be problematic for students with limited bandwidth.

3. **Offer programming in high need areas, such as GED preparation, Workplace Essential Skills, Financial Literacy, LifeLong Learning, English Language Learning, Literacy, Health and Well-being, Community Awareness, Enrichment**

• There is a need for engaging prime-time programming that supports education.

• Interstitials can drive viewers to other education services such as Pioneer, Utah Mentor, Utah Electronic College, UCAT, and other distance delivered opportunities.

• UEN-TV proposes a Community Education Bulletin Board highlighting educational events on all campuses (lectures, exhibits, new degree programs, etc.).

4. **Develop digital Spanish education channel on 9.3.**

• The goal of this program is to downlink satellite programming from Mexico and make available to Logan campus, USU Cooperative Extension Centers, libraries, and eventually homes throughout Utah.

• Working with USU, UEN, and State Libraries to acquire and distribute satellite programming from the Institution of Latin American Educational Communication (El Instituto Latinoamericano de la Comunicación Educativa OR ILCE). ILCE is a consortium of 13 Latin American countries founded by UNESCO to support innovation, virtual learning, synergy, service, and new experiences for learners. The program, founded in 1978, is administered by the Mexico Secretary of Public Education.

**Recommendation**

It is recommended that subcommittee members discuss the information provided here and provide input over the coming weeks. Final recommendation will be presented at the June Steering Committee meeting.
The current schedule has large blocks of repeat telecourses. This was added when we went 24/7 in order to fill the time. New programming for workforce/GED is available. Teacher professional development blocks are increasing in enrollments.
The proposed schedule moves telecourses from midnight to 8:00 a.m., the total hours for telecourses remains the same. Repeats are eliminated. GED/Workplace program time is added, professional development for teachers increases. Evening blocks add international news programs focused on Utah's diverse audiences. Lifelong learning (non-credit) programming increases.
**Issue**

Report on the eMedia Service Beta Test

**Background**

UEN hosts an advanced digital media service, based on an enterprise digital asset management system, for use by K-12 and higher education institutions. The first service being deployed to our end-users is called eMedia. This service allows educators to search, preview and download rich media learning objects (such as video) for use in their classes.

System installation, configuration and Alpha testing (internal users) took place from August 2004 through December 2004. Issues identified during Alpha testing were addressed in January 2005. Beta testing with a select group of target audience users began in February 2005 and concluded April 1, 2005. UEN digitized and populated the eMedia service with 38 video titles licensed by the UIMC for digital distribution (2003 license purchase). These titles were the test videos used for the Beta test.

**Report**

Beta testing went well and users generally seem pleased with the eMedia implementation. 65 K-12 educators around the state responded to the invitation to join in the Beta test and provide feedback via short Web surveys. These Beta testers ranged from elementary school teachers to district and regional service center technical staff. Beta testers were given a guided task to complete and also asked to search for and download a video at least twice before March 31, 2005. Most testers downloaded several videos beyond the 3 requested for the test.

Howard Dee at Mexican Hat Elementary School in San Juan District reports that they are already using some of the videos to effectively address problems with bullying at their school. See Attachment A for some preliminary Beta test survey data.

In addition to the invited Beta testers, UEN also conducted 2 live focus group sessions at the annual UCET conference held in March. The sessions were open to all conference participants. The focus groups saw a demonstration of the eMedia service and then participated in a facilitated group discussion responding to targeted questions and also open discussion about what they saw. Participants expressed
enthusiasm and support for the service as it was implemented. One participant said, “I think UEN hit a home-run this time. They gave us everything we asked for.”

Going forward, UEN will identify, prioritize and resolve issues identified from the Beta test. In addition to fine-tuning the system, preparations for the eMedia general release also include integrating eMedia with the my.uen login and loading the system with videos from the 2004 UIMC licensing purchase. Skilled media development interns from UVSC and USU will assist in this work.

**Recommendation**

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

An email invitation was sent to 128 potential beta testers. 66 responded to say they wished to participate in the test. 37 testers responded to the online feedback surveys.

Beta Testers – Geographic Coverage

Beta testers came from across Utah and diverse schools with teachers representing elementary, middle and high schools. School media and technology staff also participated.
Access Location

Most participants accessed the service from school. Those who accessed from home all had broadband connections. No participants reported using dial-up connections to access the service. The 5% other connections were a district office and a library.

Perceived Download Speed

Download speeds depend on many factors including network connection speed and the size of the video file being downloaded. Regardless of the location or video rendition (high, medium or low) all Beta testers but 1 reported that they perceived the download speed to be from moderate to very fast.

Overall Experience Impression

Overwhelmingly, participants found eMedia either easy or very easy to use. Those who did report that it was somewhat difficult largely had problems related to Windows XP Service Pack 2 and Internet Explorer. Using Netscape or FireFox would solve most problems.

100% of the test participants reported that they were confident that they could find and download additional videos.
**Issue**

For the last two years UEN participated in pilot tests of electronic portfolio products with higher and public education stakeholders. Based on these studies, UEN is considering the purchase of the Johns Hopkins University Electronic Portfolio (JHU EP). This tool most closely aligns with criteria established by user groups, is reputable, and has been successfully implemented elsewhere.

**Background**

In April of 2002 a joint meeting was held at Utah State University to discuss the need for an electronic portfolio in Higher and Public Education. The direction that came out of this meeting was to support a common electronic portfolio solution that would meet the needs in two areas: 1) the accreditation process (e.g., NCATE, TEAC) of Colleges of Education, and 2) Early Year Enhancement for K-12 teachers.

According to the Early Year Enhancements (EYE) mandate ([www.rules.utah.gov/publicat/code/r277/r277-522.htm](http://www.rules.utah.gov/publicat/code/r277/r277-522.htm)), all K-12 in-service teachers with a Level 1 License (with fewer than three years of successful experience as a licensed teacher in a public school or accredited private school) employed or reemployed in the Utah Public Schools after January 1, 2003 are required to complete a portfolio review. This is now part of the Level 2 licensure process.

According to the professional accrediting organizations (e.g., National Council for Accreditation of Teacher Education, NCATE, and the Teacher Education Accreditation Council, TEAC) for schools, colleges, and departments of education in the United States, institutions are required to document pre-service teacher competencies based on the standards developed by the various professional organizations such as INTASC (Interstate New Teacher Assessment and Support Consortium) standards. Review of documents demonstrating pre-service competencies is part of the NCATE and TEAC accreditation process.

A pilot-test was conducted during the 2003-2004 school year with Universal Locker, an online archive and Excel interface. Participants included Higher Education institutions (e.g., Dixie, SLCC, SUU, U of U, & WSU) and three school districts (e.g., Nebo, Ogden, & Washington). Approximately 500 participants from Higher and Public Education participated in the pilot. The results of the pilot confirmed that there was a need for an electronic portfolio; however, the results also showed that there needed to be a way to easily present the content. Both faculty and students who participated in the pilot indicated that: 1) the Universal Locker application did not
have an interface that was very easy to use, and 2) the Microsoft Excel spreadsheet was not adequate for a presentation tool.

Specific functions of an electronic portfolio as expressed by college/university and K-12 school districts include the following:

1. Internet accessible.
2. User friendly.
3. Secure environment (e.g., authentication required to access e-portfolio).
4. Access through my.uen.
5. PC and Mac compliant.
6. Select a template with pre-filled standards (e.g., INTASC, NCATE, or Institutional Standards), the ability to enter standards, or no standards.
7. Store, organize, sort, and annotate evidence that demonstrates capabilities and achievements in relation to a pre-determined set of standards.
8. Link a file to one or more standards. File may be Web, text, or graphics.
9. Give rights/permissions to others (e.g., mentor, principal, advisor) to access the e-portfolio for review and submittal of feedback in text format.
10. Institution to manage e-portfolios. For example, A) educators who have completed the requirements for the EYE/ INTASC/ NCATE/ Institutional requirements and their scores/grade, B) teachers who have not completed their electronic portfolio.
11. Use of WebDAV/Ldap technologies (i.e., integrates the electronic portfolio tool with your desktop computer) with their e-portfolios.
12. Adequate file storage for e-portfolio needs (based on others experience, 20-40 MBs should be adequate).
13. Create different types of e-portfolios (e.g., assessment, employment, etc.).
14. Training and support must be a part of a successful implementation plan.

The JHU Electronic Portfolio was developed at the Johns Hopkins Center for Technology in Education by a team of educational technology experts in portfolio design and implementation as part of a federal PT3 grant. This tool was specifically designed to meet the needs of pre-service and in-service teachers. The EP provides a secure online environment where educators can gather evidence, reflect, collaborate, and track progress. Although the JHU Electronic Portfolio enables a user to create a portfolio for employment purposes, UEN acknowledges that this tool may not meet all of the expectations for users outside of education. However, UEN would be willing to work with those organizations to investigate a solution for their unique needs if implemented.

**Recommendation**

This is an information item. Over the next two months members of the Instructional Services Subcommittee are invited to evaluate the JHU EP as a tool that can meet the needs of the organization and individual members of the organization you
represent. For more information about the Johns Hopkins Electronic Portfolio please contact Rick Cline at rcline@media.utah.edu or (801) 585-0913.
Issue

Technical Services Strategic Planning for FY2006

Background

UEN has been working with a strategic plan for the past two years that has served UEN and its stakeholders well. It is the view of UEN staff that extensive revisions of the plan are not needed.

There are, however, strategic issues that must be addressed, including: 1) long-term E-Rate planning and funding, and 2) the role of UEN in providing network connectivity to elementary schools.

Other strategic issues may exist. UEN Technical Services requests participation of the Subcommittee in identifying issues, determining if there is a need to expand beyond these two issues and strategically addressing these pressing needs.

This year, we propose that a subgroup of Technical Services Subcommittee members be identified to meet with UEN managers to develop a preliminary draft of the Technical Services portion of the FY 2006 Strategic Plan. This could be completed during one or two half-day sessions by the first or second week of May. The Subcommittee retreat would be held in mid to late May.

After the retreat, The Technical Services portions of the plan would be incorporated into the FY 2006 strategic plan for presentation to the Steering Committee at the June meeting for final discussion and approval.

Recommendation

It is recommended that the Technical Services Subcommittee discuss potential issues that should be addressed in the FY 2006 Strategic Plan, endorse the process outlined above for revising the plan, recommend individuals to participate in a subgroup to develop a Technical Services draft plan, and select a date for a May strategic planning retreat.
FY 2005 Regional Priorities Progress Report - Discussion

Issue

FY2005 Regional Priorities Progress Report

Background

The Regional Priority requests have been divided into two lists, one for Ethernet Connectivity projects and one representing all other requests. UEN has been busy addressing these requests. The purpose of this report is to discuss the progress made so far this year and outline the expected results that will be reached by year-end.

At the December Steering Committee meeting the determination was made to limit work on the Ethernet Priority list to a few selected sites while awaiting Legislative Funding and SLD E-Rate approval. We are very happy to report that both of these actions have been obtained and we are now prepared to move forward aggressively with Ethernet circuit installations.

Jeff Egly is the lead for the Ethernet project. UEN has been holding regular project meetings beginning last January. All districts involved in this project have been informed of these meetings and have been asked to participate. A copy of the updated Ethernet Project list has been provided in Attachment A.

UEN has also been busy working on the Non-Ethernet list. A copy of that list has been provided in Attachment B. Progress highlights from the list include:

- There are 56 total requests.
- To date 17 have been completed.
- UEN has worked with stakeholders to make significant progress on 30 additional projects. These should be completed by year end.
- In four cases either little work has been done, no solutions presently exist to complete the work, or the project is very costly and funds were not allocated for project completion.
- In three cases, projects were listed that UEN does not have responsibility for the activity. These are shown as information items.
- And in the final two cases there was either not enough information at the time of publication or no significant work has been done. UEN will follow-up in these cases and make sure that there is an emphasis to focus on these projects.
In conclusion, 30% of all non-Ethernet projects have been completed. Additionally, 50% of the remaining projects have received significant attention and should be completed by year-end. This would give UEN an 84% completion rate for these projects with a little more than two months remaining to address additional projects.

Statistics for the Ethernet portion of the priorities is not available at this time. The SLD approval was recently received. UEN will concentrate on moving forward aggressively and working with districts to facilitate a timely completion of Ethernet projects.

**Recommendation**

This is an information item. No further action is required of the Technical Services Subcommittee at this time.
## FY 2005 Regional Priorities - Increased Capacity and Ethernet

### Project Region Status

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

### Region Status

<table>
<thead>
<tr>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved; Complete</td>
</tr>
<tr>
<td>Pending Approval</td>
</tr>
<tr>
<td>Pending Approval</td>
</tr>
<tr>
<td>Waiting for South Central infrastructure improvements</td>
</tr>
<tr>
<td>Waiting for South Central infrastructure improvements</td>
</tr>
<tr>
<td>Phase 3 Qwest (FY2006)</td>
</tr>
<tr>
<td>Phase 3 Qwest (FY2006)</td>
</tr>
<tr>
<td>See Below</td>
</tr>
<tr>
<td>Approved; part of GeoMax Phase 2 and will be completed this summer</td>
</tr>
<tr>
<td>Approved; part of GeoMax Phase 2 and will be completed this summer</td>
</tr>
<tr>
<td>Phase 3 CUT (FY2006)</td>
</tr>
<tr>
<td>Phase 3 Conterra (FY2006)</td>
</tr>
<tr>
<td>Pending SLD Approval and UEN budget</td>
</tr>
<tr>
<td>Pending SLD Approval and UEN budget</td>
</tr>
<tr>
<td>Pending SLD Approval and UEN budget</td>
</tr>
<tr>
<td>Pending SLD Approval and UEN budget</td>
</tr>
<tr>
<td>Phase 3 Conterra (FY2006)</td>
</tr>
<tr>
<td>Pending SLD approval through Beehive</td>
</tr>
<tr>
<td>Phase 2; approved and in process</td>
</tr>
<tr>
<td>Tooele is complete; Vendor discussions ongoing for Price connectivity</td>
</tr>
<tr>
<td>Sites selected for phases 2 &amp; 3</td>
</tr>
<tr>
<td>Phase 2; approved and in process</td>
</tr>
<tr>
<td>Sites selected for phases 2 &amp; 3</td>
</tr>
<tr>
<td>Phase 2 in process</td>
</tr>
<tr>
<td>Phase 2 in process</td>
</tr>
<tr>
<td>Phase 2 in process</td>
</tr>
<tr>
<td>No order pending</td>
</tr>
<tr>
<td>No order pending</td>
</tr>
<tr>
<td>Working with UVCN, Nebo, Provo and Alpine Districts</td>
</tr>
<tr>
<td>Sites selected for phases 2 &amp; 3</td>
</tr>
<tr>
<td>Sites selected for phases 2 &amp; 3</td>
</tr>
<tr>
<td>Phase 2 in process</td>
</tr>
<tr>
<td>Project</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Weber - Move all services to new DO</td>
</tr>
<tr>
<td>Weber - Establish link between two DO sites</td>
</tr>
<tr>
<td>Jordan - New High School at the Jordan ATC</td>
</tr>
<tr>
<td>Toledo DO Move</td>
</tr>
<tr>
<td>Duchesne - UBT construction and fiber to new DO</td>
</tr>
<tr>
<td>GeoMax Phase II Incidents</td>
</tr>
<tr>
<td>Machine Room fire suppression</td>
</tr>
<tr>
<td>Internet Router</td>
</tr>
<tr>
<td>SAR Spare</td>
</tr>
<tr>
<td>CUES Region spares (outlined in regional list)</td>
</tr>
<tr>
<td>Upgrade memory in CUES TSC box</td>
</tr>
<tr>
<td>Regional NMS/statistics/monitoring pilot project</td>
</tr>
<tr>
<td>Get rid of all 2500 routers</td>
</tr>
<tr>
<td>DATC - Internal wiring/network Gig</td>
</tr>
<tr>
<td>Ogden - New router to replace current 72xx</td>
</tr>
<tr>
<td>SLCC - Harden site with cooperation on installation of generator</td>
</tr>
<tr>
<td>Re-engineering basin circuit at UVSC, Heber for better routing</td>
</tr>
<tr>
<td>Remove remaining 2500 routers</td>
</tr>
<tr>
<td>Backbone redundancy (SUU &amp; Dixie to EBC)</td>
</tr>
<tr>
<td>Alternate PeP to the Internet</td>
</tr>
<tr>
<td>USU - Diverse/protected route/bandwidth</td>
</tr>
<tr>
<td>Redundant data path for the SE region</td>
</tr>
<tr>
<td>Snow Richfield Generator Replacement</td>
</tr>
<tr>
<td>NLR 10 Gig connection to Denver</td>
</tr>
<tr>
<td>Reapoint all Sever District Circuits to the new DO</td>
</tr>
<tr>
<td>Bandwidth - High speeds services for Lake Powell School</td>
</tr>
<tr>
<td>Bandwidth - Radio path for E-Valley</td>
</tr>
<tr>
<td>Bandwidth - Reliable high speed connection to Antimony</td>
</tr>
<tr>
<td>Box Elder 2500 router replacement</td>
</tr>
<tr>
<td>Davis - GeoMax/EdNet to all schools (1st)</td>
</tr>
<tr>
<td>Increase bandwidth between CEU and Antelope</td>
</tr>
<tr>
<td>Upgrade of the D.O. connection at Grand</td>
</tr>
<tr>
<td>Upgrade DO connection at Emery</td>
</tr>
<tr>
<td>Phase II of the San Juan micro wave project</td>
</tr>
<tr>
<td>Improved connectivity to Park City</td>
</tr>
<tr>
<td>Logan - Router Upgrades</td>
</tr>
<tr>
<td>IP video upgrade of EdNet sites</td>
</tr>
<tr>
<td>Arbor Networks</td>
</tr>
<tr>
<td>Security Training and tools for the districts</td>
</tr>
<tr>
<td>Davis - Looking to deploy IDS and firewall to remote locations</td>
</tr>
<tr>
<td>Improve communication between UEN TS and region</td>
</tr>
<tr>
<td>USU - Availability/reliability to support 24/7 nature</td>
</tr>
<tr>
<td>Continue support of the UEN Technical Summits</td>
</tr>
<tr>
<td>Implement QOS on circuits supporting H.323</td>
</tr>
<tr>
<td>DNS and IP renumbering</td>
</tr>
<tr>
<td>Increased use of Internet2</td>
</tr>
<tr>
<td>Davis - VoIP to all schools by end of summer</td>
</tr>
<tr>
<td>Davis - Deploying context eligible for streaming media</td>
</tr>
<tr>
<td>WSU - EdNet video move to new Lamprose Hall</td>
</tr>
<tr>
<td>Continue funding for regional UEN supported positions</td>
</tr>
<tr>
<td>Timely rollout of new digital media system</td>
</tr>
<tr>
<td>Hardening of the power at SESC, NUES, CUES &amp; SECC</td>
</tr>
<tr>
<td>SLCC - leverage resources through joint strategic planning</td>
</tr>
<tr>
<td>Cyber Corps Grant Support</td>
</tr>
</tbody>
</table>

**FY 2005 Regional Priorities - Non Ethernet**

**Tab 30 Attachment B**
**GL3 Phase One Update - Discussion**

### Issue

Status update on GL3 Phase 1 (Backbone) migration

### Background

During GL3 Phase 1, UEN is replacing nine backbone points of presence (PoPs) and upgrading the backbone network from USU to Dixie. Each PoP is being upgraded from a single router to 4 redundant routers (more at EBC), and connected to a redundant GigE backbone ring. The GL3 network is the most complex IP network in Utah and surrounding region, and one of the most complex projects UEN has ever undertaken.

GL3 Phase 1 is being implemented in several waves. The first wave moves the existing PoP equipment onto the GL3 backbone. Subsequent waves will optimize PoP connectivity, upgrade customer connections, and implement new network standards through the end of 2005.

From June 2004 until early January 2005, GL3 implementation was planned to start at the least-complex sites (Dixie and USU) and move to the most-complex sites (UVSC, SLCC, EBC), which would reduce the complexity of migrating UVSC, SLCC and EBC. The schedule anticipated completing all PoPs except EBC by November 2005, and 4-6 weeks to migrate EBC by year-end 2005.

When the UEN network experienced several outages in January due to congestion on multiple EBC Core devices, our staff determined that the best resolution was to migrate EBC to GL3 as quickly as possible. To do this, the GL3 project had to be redesigned to start at EBC, and migrate EBC without reduced complexity or without prior migration experience. The GL3 implementation redesign was started January 24, and the EBC migration to GL3 began February 8 and completed ten days later on February 18. There has been more work done at EBC since then related to other projects and preparation for the remaining GL3 migration.

The EBC move to GL3 was planned and implemented by a team of four engineers during six maintenance windows over ten days (three maintenance windows ran from 11:00 p.m. to 7:00 a.m., and the others from 11:00 p.m. to 4:00 a.m.). These same engineers also supported the network following maintenance windows, including two full weekends worked by the entire team resolving issues.

Two teams (7 out of 9 NOC staff) are focused on simultaneously planning, implementing and supporting the remaining GL3 migrations, while also supporting
the rest of the network. The GL3 migration must be done in a specific order, so delays in migrating one PoP will extend the entire schedule. South Ring migrations are planned as follows: UVSC and SLCC moves were completed April 2. Snow South is currently scheduled to be migrated April 16 (delayed one week to allow time for resolving post-SLCC/UVSC migration issues), followed by SUU on April 22, Dixie on April 29. These dates are tentative and subject to change.

DATC, WSU and USU will be migrated in May (except during end-of-year moratorium) and June, dependent on when the South Ring is completed. All PoPs should be migrated June 30, 2005.

The second wave of GL3 Phase 1 implementation (PoP optimizations, upgrading customer connections, and network standards implementation) will begin in June and continue through the summer and fall.

UEN maintains a Web site with additional information about the GL3 project and status, at http://gl3.uen.org.

**Recommendation**

This is an information item. No further action is required of the Technical Services Subcommittee at this time.
GL3 Phase Two Update - Discussion

Issue

UEN, Qwest and several school districts are finalizing planning details and beginning construction to increase network capacity at 145 locations. Three additions to Phase Two are also under consideration.

Background

GL3 Phase 2 is a Qwest/UEN joint project that will place Ethernet circuits in 145 schools. UEN has now finalized the Phase Two site list with Qwest and each of the school districts for this project. The list is in Attachment A. UEN is directly responsible for 118 of the sites at secondary schools or district offices. Elementary school circuit costs will be paid by the local districts.

As we reported to the Steering Committee in December, two major obstacles complicated committing to a project start date. The first was that the $400,000 allocated by the legislature to initiate the project was one-time funding, and we were concerned about our ability to cover future years’ circuit costs. That concern has now been eliminated because our FY 2006 budget provides an ongoing funding stream.

Second, we hesitated to begin implementation until E-Rate funding was approved by the School Library Division (SLD) UEN received formal approval from the SLD for GL3 Phase Two this week.

UEN is now coordinating with each school district to define implementation priorities and agreed upon deadlines for district completion of site improvements, including conduit and equipment room improvements. Phase Two implementation priorities will be influenced by each district’s time line for completion of their site improvements.

UEN is currently conducting bi-weekly planning meetings with Qwest and district representatives. Key accomplishments to date include the following:

- Established project team;
  - Project Leader – Jeff Egly
  - Project Coordinator – James Brown
  - Network Coordinator - Mike Downie
  - Intern Network Engineer – Pete Kruckenberg
  - Site Coordinators – Leonard Romney and Jack Shusted
Qwest – John Morzelewski and Dan Patterson
Additional resources will be assigned as needed for implementation

• The majority of all site surveys have been completed
• Qwest is currently installing fiber and Nortel Optera equipment
• District site preparations are underway
• Network configuration planning is underway
• Sites in the following districts and higher education institutions are being planned:
  ◦ Box Elder School District - 2
  ◦ Cache School District - 21
  ◦ Granite School District - 20
  ◦ Iron School District - 4
  ◦ Jordan School District - 17
  ◦ Logan City School District - 2
  ◦ Murray City School District - 1
  ◦ Ogden City School District - 4
  ◦ Provo City School District - 2
  ◦ Salt Lake Community College - 6
  ◦ Salt Lake City School District - 38
  ◦ Sevier School District - 3
  ◦ Tooele County School District - 3
  ◦ Washington County School District - 6
  ◦ Weber School District - 15

Recommendation

This is an information item. No further action is required of the Technical Services Subcommittee at this time.
## TAB 1 ATTACHMENT A

### GL3 Phase Two Site List

<table>
<thead>
<tr>
<th>Board of Regents (1)</th>
<th>Granite School District (20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board of Regents</td>
<td>Granite District Office</td>
</tr>
<tr>
<td></td>
<td>Cyprus High School</td>
</tr>
<tr>
<td></td>
<td>Evergreen Jr. High School</td>
</tr>
<tr>
<td></td>
<td>Granite High School</td>
</tr>
<tr>
<td></td>
<td>Granite Park Jr. High School</td>
</tr>
<tr>
<td></td>
<td>Skyline High School</td>
</tr>
<tr>
<td><strong>Box Elder School District (2)</strong></td>
<td>Olympus High School</td>
</tr>
<tr>
<td>Box Elder District Office</td>
<td>Cottonwood High School</td>
</tr>
<tr>
<td>Box Elder High School</td>
<td>Olympus Jr. High School</td>
</tr>
<tr>
<td></td>
<td>Taylorsville High School</td>
</tr>
<tr>
<td></td>
<td>Eisenhower Jr. High School</td>
</tr>
<tr>
<td><strong>Cache County School District (21)</strong></td>
<td>Central High School</td>
</tr>
<tr>
<td>Cache County District Office</td>
<td>Murray District Office</td>
</tr>
<tr>
<td>Park Elementary</td>
<td>JFK Jr. High School</td>
</tr>
<tr>
<td>North Cache Middle School</td>
<td>Hunter Jr. High School</td>
</tr>
<tr>
<td>White Pine Middle School</td>
<td>Hunter High School</td>
</tr>
<tr>
<td>Skyview High School</td>
<td>Granger High School</td>
</tr>
<tr>
<td>Cedar Ridge Jr. High School</td>
<td>Kearns High School</td>
</tr>
<tr>
<td>Sunrise Elementary</td>
<td>Valley Jr. High School</td>
</tr>
<tr>
<td>Summit Elementary</td>
<td>West Lake Jr. High School</td>
</tr>
<tr>
<td>Greenville Elementary</td>
<td></td>
</tr>
<tr>
<td>Millville Elementary</td>
<td></td>
</tr>
<tr>
<td>Nibley Elementary</td>
<td></td>
</tr>
<tr>
<td>North Park Elementary</td>
<td></td>
</tr>
<tr>
<td>Providence Elementary</td>
<td></td>
</tr>
<tr>
<td>River Heights Elementary</td>
<td></td>
</tr>
<tr>
<td>Spring Creek Middle School</td>
<td></td>
</tr>
<tr>
<td>Cache High School</td>
<td></td>
</tr>
<tr>
<td>Lincoln Elementary</td>
<td></td>
</tr>
<tr>
<td>Wellsville Elementary</td>
<td></td>
</tr>
<tr>
<td>Willow Valley Middle School</td>
<td></td>
</tr>
<tr>
<td>Mtn. Crest High School</td>
<td></td>
</tr>
<tr>
<td>So. Cache Center</td>
<td></td>
</tr>
<tr>
<td><strong>Iron County School District (4)</strong></td>
<td></td>
</tr>
<tr>
<td>Iron County District Office</td>
<td></td>
</tr>
<tr>
<td>Parowan High School</td>
<td></td>
</tr>
<tr>
<td>Canyon View High School/Cedar Middle School</td>
<td></td>
</tr>
<tr>
<td>Cedar City High School</td>
<td></td>
</tr>
</tbody>
</table>
**Jordan School District (17)**
- Hillcrest High School
- Jordan High School
- Jordan Tech. Center
- West Jordan High School
- West Jordan Middle School
- Jordan District Office
- West Hills Middle School
- Copper Hills High School
- So. Jordan Middle School
- Bingham High School
- Riverton High School
- Oquirrh Hills Middle School
- Herriman Middle School
- South Hills Middle School
- Brighton High School
- Alta High School
- Indian Hills Middle School

**Salt Lake Community College (6)**
- SLCC Main Campus
- SLCC Jordan Campus
- SLCC Larry H. Miller Campus
- SLCC South Campus
- SLCC Meadowbrook Campus
- SLCC Sandy Campus

**Salt Lake City School District (38)**
- Salt Lake City District Office
- Bennion Elementary
- Backman Elementary
- Bryant Middle School
- Ensign Elementary
- Escalante Elementary
- Franklin Elementary
- Horizonte Instructional
- Jackson Elementary
- Lincoln Elementary
- Meadowlark Elementary
- Newman Elementary
- North Star Elementary
- Northwest Middle School
- Rose Park Elementary
- Wasatch Elementary
- Washington Elementary
- West High School
- Northwest Middle School (new location 1700 N. Redwood Rd.)
- Bonneville Elementary
- East High School
- Indian Elementary
- Uintah Elementary
- Beacon Heights Elementary
- Clayton Middle School

**Logan City School District (2)**
- Logan City District Office
- Logan High School

**Murray City School District (1)**
- Murray City District Office

**Ogden City School District (4)**
- Ben Lomond High School
- Ogden High School
- Washington High School
- Ogden Tech. Center

**Provo City School District (2)**
- Provo City District Office
- Independence High School
Dilworth Elementary
Emerson Elementary
Hawthorne Elementary
Highland Park Elementary
Hillside Elementary
Nibley Park Elementary
Whittier Elementary
Highland High School
Riley Elementary
Parkview Elementary
Mountain View Elementary
Edison Elementary
Aux. Services

**Sevier School District (3)**
Sevier District Office
No. Sevier High School
So. Sevier High School

**Washington County School District (6)**
Washington County District Office
Hurricane High School
Pine View High School
Millcreek High School
Dixie High School
Snow Canyon High School

**Weber School District (15)**
No. Ogden Jr. High School
Orion Jr. High School
Weber High School
Wahlquist Jr. High School
Weber Administration
BDO
So. Ogden Jr. High School
TH Bell Jr. High School
Bonneville High School
Two Rivers (includes Weber District Office)
Roy Jr. High School
Sand Ridge Jr. High School
Roy High School
Rocky Mt. Jr. High School
Fremont High School

**Tooele County School District (3)**
Tooele County District Office
Grantsville High School
Tooele High School

BDO
This is a status report on UEN’s participation in the National Lambda Rail project.

Background

UEN, in partnership with the University of Utah, is working on connecting to the National Lambda Rail (NLR) national optical network. UEN shares membership in NLR with the Front Range GigaPoP (FRGP) of Boulder, Colorado. NLR is a five-year project, and over that period it will require payment of $1,000,000 to participate. In addition, between $350,000 and $400,000 will be required to meet connectivity needs over the five-year period.

The current connectivity date is August 18, 2005, but may be at least a month earlier. We are working on several issues at this time. Working with FRGP the following activities must be completed prior to going live on the NLR network:

1. Completion of the local loop connectivity from The Salt Lake WilTel Office to EBC.

UEN intends to acquire fiber Irrevocable Rights of Use (IRU) along with optical transport equipment to complete the local loop. These IRUs will allow UEN to connect NLR at about the same dollar amount as contracting with a vendor for a 10 Gbps circuit over five years. Additionally these fibers will allow UEN to add further 10 Gbps and 1 Gbps circuits to facilitate Western Lights connectivity when that project matures.

2. Purchase and installation of 10 Gbps interface equipment at EBC.

UEN is exploring several options to facilitate the interface needs at EBC. We will likely purchase Cisco equipment for this project.


The FRGP Management Committee (FMC) on April 1, 2005 approved the purchase of a Cisco 6500 to provide interface connectivity at the Boulder facility. This is the
point that ties UEN and FRGP to the NLR network. UEN is obligated to pay 10% of the total. This amount is estimated to be no lower than $6500 and no greater than $8300. FRGP must complete negotiations with Cisco to obtain a firm price.

4. Final engineering and routing configuration.

5. UEN is participating with NLR and FRGP engineers to define routing issues and prepare to pass traffic to the NLR network.

**Recommendation**

This is an information item. No further action is required of the Technical Services Subcommittee at this time.
The Instructional Services Subcommittee will report to the Steering Committee on items covered in the subcommittee agenda.
The Technical Services Subcommittee will report to the Steering Committee on items covered in the subcommittee agenda.
Welcome and Introductions

Gary Wixom welcomed everyone to the February meeting. Gary thanked Mike for all of his hard work in getting the legislative information and budget information put together and guiding UEN through the legislative budget process. He then turned the meeting over to Mike Petersen for the rest of his Legislative update.

Committee of the Whole

Tab 31 – Legislative Update

Mike Petersen advised the committee that the full list of recommendations could be found behind Tab 31, Attachment A. Mike said that there were several of the budget items that were very important to UEN’s overall success: the first is funds for retention of faculty and staff, the second is replacement of last year’s one time money with ongoing funds used for the network capacity reliability project, and the third is support for enterprise-level technology support and the ongoing conversion of EDNET to IP-based technology.
Several UEN requests for one-time funds also are receiving strong support from the Higher Education Appropriation Committee. This information can be found behind Tab 31, Attachment A.

HB 109, a bill which provides for the complete reorganization of the State Government IT organization was discussed briefly. The Chief Information Officer, who currently is the technology advisor to the Governor, but not tied into the technology infrastructure of the state, would become the head of the department of Information Technology. A new department would be created which would consolidate the IT infrastructure and would encompass ITS and other state agency ITS groups. There would be an advisory body created with representation from 6 organizations. Mike did not foresee any changes in how UEN relates to the state regarding IT operations.

HB 260 is intended to regulate Internet pornography. Its intent is to create through the Office of the Attorney General a database that would maintain a list of Internet sites that have content which is harmful to minors. The bill allows consumers to request from their ISP a filtering service that would prevent minors from accessing Internet sites that are on this register. We anticipate that UEN would need to be able to block access to these Internet addresses. It subjects an ISP to criminal penalty. This bill is still undergoing major revisions.

Tab 1 – 2005 Annual Security Conference
The 2005 annual Security Conference “Digital Citizenship – Utah at Risk” will be March 7th and 8th at the University Park Hotel. Invitations have already been mailed. If anyone did not receive announcements, please talk with Ray Walker. An agenda has also been posted to the Utah Security Conference Web site.

Tab 2 – Quarter 2 Progress Report on FY 2005 Strategic Plan
Detailed progress reports with each of the department’s highlights can be found in Tab 2. A complete FY 2005 Strategic Plan Update can be found in tab 2 Attachment A.

Steering Committee Business Meeting
Instructional Services Subcommittee Report

Tab 3 – Higher Education Advisory Committee
Linda Fife reported that members of the Higher Education Advisory Committee have been working on their two surveys to be distributed to faculty and distance learning department heads. The surveys are intended to gain input regarding faculty use of digital assets and to learn more about professional development training on
campuses. Data from the surveys will help guide activities of the committee and be valuable in helping UEN develop its strategic plan.

**Tab 4 – Public Education Advisory Committee**

The discussion notes from the January 28, 2005 meeting and the report reflecting the value of UEN to public education are located in Tab 4 Attachment A.

Linda Fife reported on the committee’s concerns regarding lack of staff resources for the eMedia project and the PECC’s recommendation to the Steering Committee that UEN allocate more resources to digitization.

PECC has also asked for clarification regarding UEN committee roles and responsibilities, structure and purpose. There was discussion of the need for balance between staff members’ responsiveness to committees and their need for latitude to accomplish their work. ISS suggested creation of an organizational chart, job descriptions, and a route for the flow of information.

The Instructional Services Subcommittee reviewed and discussed the role of the PECC and recommended approval of the following mission statement.

\[
\text{The mission of the Public Education Content Committee (PECC) is to provide input and feedback to the Instructional Services Subcommittee (ISS) and the Utah Education Network (UEN) relating to technology integration and delivery systems to enrich the Utah State Core Curriculum.}
\]

The Mission Statement was approved unanimously.

Linda Fife summarized a discussion of a K-3 automated online reading program that has been proposed to go through the Electronic High School. It was suggested that if a task force is formed and an RFP were issued that it would be better to go through Pioneer Online Library and UEN.

**Tab 5 – Monthly E-Mail Newsletter Report**

Linda Fife reported on the E-mail updates that are sent twice each month to approximately 15,000 educators in Utah. Rich Finlinson shared a presentation regarding the effectiveness of the Email newsletter. The statistical data gathered in the past five months can be found in Tab 5 Attachment A. The results have been very positive, especially for Professional Development. Mike Petersen suggested that an Email Newsletter should include the Steering Committee notification to provide feedback opportunity for meetings in advance of the meeting.

**Tab 6 – UEN Adult Learning Specialist**

Linda Fife introduced Nate Southerland to the committee and talked about his role at UEN and what his new job will entail. PBS Adult Learning Service has announced that it would cease operations effective September 30, 2005. UEN contacted the distance learning staff from the University of Utah and Salt Lake Community College, since they are the only institutions currently licensing programs through
PBS ALS. As we learn more, UEN will work with these institutions to identify alternative programming or alternatives for these courses.

**Tab 7 – Lightweight Directory Access Protocol (LDAP)**

The Utah Education Network was asked by various stakeholders to provide a way for educators to use their my.uen login information to access certain non-UEN services, such as UTIPS and OnTrack. Educators would benefit because it would eliminate the need to create and remember additional logins. Brad Midgley from UEN’s software development group set up the LDAP (Lightweight Directory Access Protocol) service the beginning of October 2004. The server is now installed and UEN is continuing to work with third party vendors in order to get this service fully operational.

**Tab 8 – IP Video Project Update**

Linda Fife reported that there is a lot of information on the update in Tab 8. Linda highlighted the number of sites that have been migrated and stressed how important funding was going to be regarding the sites left to migrate.

The committee discussed the ongoing problems associated with distance learning facilitators. Linda Fife referred the issue to the IP Instructional Subteam for further discussion and requested a report in the April 2005 Instructional Services Subcommittee meeting.

**Technical Services Subcommittee Report**

**Tab 9 – Ethernet RFP**

Glen Taylor reported that UEN has prepared and circulated a statewide Request for Proposals to procure Ethernet services. The RFP was completed and sent to vendors last November. Dennis Sampson has been leading this effort. It is the UEN goal to complete Ethernet transformation over the next 2-3 years. The short timeframe and complexity of this project precludes us from being able to provide further details at this time. A full review of this project will be provided at the April Steering Committee meeting.

**Tab 10 – RFP For Additional Internet Bandwidth**

Glen Taylor reported the main purposes of the RFP were to (1) replace the Sprint OC-3, (2) explore the potential of providing Internet access at a UEN point-of-presence (PoP) other than EBC and (3) decrease the dependence on EBC as the single Internet PoP. Glen recapped the highlights of this award which were:

1. Doubles Internet capacity from 900 MB to 1.8GB
2. Reduces Internet expenditure by $30,000 per year
3 Adds an Internet point of presence in southern Utah that is not dependent in any way on infrastructure in the Salt Lake metro area

4 Closely matches the capacity of the three Internet connections for better load balancing, control and access

5 Takes one more step toward a more diverse, reliable network

Due to E-Rate filing deadlines, awards have been made and contract written and executed by both parties. All contracts are subject to state and federal funding.

A motion was made to approve the installation and extend the contract with American Fiber Systems and Broadwing Communications. **THIS MOTION PASSED WITH ALL VOTING IN FAVOR.**

**Tab 11 – Service Desk Status**

Glen Taylor reported that HP Service Desk has been in use at UEN for about 18 months. Unfortunately, over a year after its deployment at UEN, many of the problems which Service Desk was expected to cure still exist. Some of the ongoing problems exist independent of software. Glen talked about the need for creating a service development users group. The subcommittee passed a recommendation to create a Service Desk User’s Group which will consist of UEN staff and appropriate stakeholders who will provide advice to UEN regarding the Service Desk development.

**Tab 12 – IP Addressing Process**

Glen Taylor talked about the outcome of the December IP Addressing meeting. The Technical Coordinator Council (TCC) initiated a process for IP allocation. One of the recommendations is to have representation and input from seven regions. The seven regions and reps include SEDC/Cory Stokes, CUES/James Christensen, SESC/Coy Ison NUES/Guy Durrant, Wasatch Front North/Don Thompson and David Cook, Wasatch Front Central/Sterling Fuhrman and Jim Langston and Wasatch Front South/Matt Johnson. The TCC and UEN would be included in this group. The charge given to this committee is to: define membership, develop an IP number inventory, identify IP number resources, and provide a set of standards for IP addressing.

**Tab 13 – NOC directions**

The UEN Network Operations Center (NOC) has begun a transformation to improve the way we address this priority, and specifically to ensure that the GL3 and Ethernet upgrades provide increased network and reliability. A set of responsibilities has been developed for NOC staff that will be essential to the NOC transformation and these actions include:

1 A phone tier has been implemented that will answer all in-coming calls, open and close tickets, and escalate issues to Escalation Engineers.
2 Software development has hired a programmer who is currently focused specifically on Network Operations internal tools development.

3 We are developing a NOC Strategy similar to the GigE strategy that led to GL3, and expect to complete a draft document this summer.

**Tab 14 – NOC Update**

Glen Taylor talked about the network outages that occurred in January and the steps that were taken to resolve this issue. More information regarding the chain of events can be found in Tab 14. This group feels that GL3 is the permanent solution to the congestion that caused the January outage. UEN has reorganized the GL3 implementation schedule and assigned a “Hot Team” to accelerate the move to the GL3 network. The EBC migration began Feb. 8th and is expected to be completed by Feb. 25th. Changes at UVSC and SLCC are planned for mid-March. Changes for the modifications on the south and north backbones will occur later as a date has not been determined yet. The UEN NOC has been reorganized on a temporary basis to accommodate the GL3 Hot Team.

**Tab 17 – Steering Committee Meeting Minutes**

Mike Petersen pointed out that minutes from the Instructional Services Subcommittee and Technical Services Subcommittee were now being included in the Steering Committee Minutes.

A motion was made to approve the minutes from the UEN Steering Committee held on December 17, 2004. THIS MOTION WAS APPROVED WITH ALL VOTING IN FAVOR.

The meeting was then adjourned until the next Steering Committee meeting, which will be held on April 15, 2005 at 9:00 a.m. at the Dolores Doré Eccles Broadcast Center.
Instructional Services Subcommittee Meeting
February 18, 2005

Attendees: Dale Bills, Rick Cline, Jon Crawford, Linda Fife, Claire Gardner, Cyd Grua, Pat Lambrose, Jeff Livingston, Donna Morris, Mike Petersen, Victoria Rasmussen, Dick Siddoway, Weldon Sleight, Nate Southerland, Cory Stokes, Gary Wixom

Minutes compiled by Leah Bryner

Tab 3 – Higher Education Advisory Committee – Cyd Grua

The professional development and faculty use of digital resources surveys are available on the Higher Education Web site. Cyd Grua will be sending out more surveys (reflecting what was gleaned from an online survey workshop) and will report results at the next Subcommittee meeting. The results of these surveys should assist in strategic planning.

Tab 4 – Public Education Advisory Committee – Dick Siddoway

Dick Siddoway discussed Public Education Content Committee’s (PECC) concerns about a lack of staff resources for eMedia project. Cory Stokes has 38 titles ready to be digitized, but there are already 400 titles that have been ready for a long time. Digitizing this many titles will take one year of man hours to complete. PECC recommends that the pilot begins, but that the launch be postponed and that UEN allocate more resources to digitization.

PECC discussed the roles and responsibilities of UEN committees. How do committees move ahead on new projects? Who makes and when are approvals made? PECC would also like clarification regarding their structure and purpose. Creation of an organizational chart was suggested, and should include route for flow of information and job descriptions.

The committee reviewed and discussed the role of the PECC and approved the mission statement. The mission of the Public Education Content Committee (PECC) is to provide input and feedback to the Instructional Services Subcommittee (ISS) and the Utah Education Network (UEN) relating to technology integration and delivery systems to enrich the Utah State Core Curriculum.

Representative Eric Hutchings has proposed a K-3 automated early online reading program to supplement live specialists. It was originally going to be added onto the Electronic High School, but it may make more sense to have it go through Pioneer Library. If a task force is formed, it will put out an RFP.

Tab 5 – Monthly E-Mail Newsletter Report – Rich Finlinson

Rich Finlinson shared a PowerPoint presentation regarding the effectiveness of the E-mail newsletter. Statistical information is available in Tab 5 Attachment A and B.

5-7
Every Saturday Professional Development course has been full since September, and that success is directly attributed to the E-mail Newsletter. Only a couple of weekday classes have been cancelled due to low enrollment. The Associate Director of the National School Public Relations Association asked to have some of the E-mail publications shared as examples.

**Action Item** - Mike Petersen suggested that an E-mail Newsletter be used as a Steering Committee notification and feedback opportunity in advance of meetings. He will pursue this task with UEN staff.

**Tab 6 – UEN Adult Learning Specialist** – Nate Southerland

Nate Southerland introduced himself and discussed his new role. There was a discussion of PBS Adult Learning Service’s intent to close operations this fall. UEN will work with institutions to identify alternative programming.

**Tab 7 – Lightweight Directory Access Protocol (LDAP)** – Cory Stokes

LDAP allows those who sign up for my.uen to sign up for other third party databases with the same login. CACTUS doesn’t use LDAP, but they may in the future.

UEN has worked with SESC/UTIPS and iAssessment/OnTrack to complete this process. As of October, 2004 UEN’s portion of the work was complete.

**Tab 8 – IP Video Project Update-Discussion** – James Hodges

James reported on successful installation of 50-60 IP Video this past year.

Two products are currently being evaluated for the MCU Bridge system, and Instructional Delivery Systems (IDS) is working with vendors on issues as they arise. IDS is preparing for next phase of site migration of 50-60 more sites, and an IP Training group continues to evaluate and improve training.

Legislative funding is required to complete the next stage, and Mike Peterson believes we are in a strong position to get funding. $800,000 has been recommended by the fiscal analyst and Higher Education Appropriations Committee to fund EDNET to IP transition in FY 2006.

The committee discussed roles and responsibilities of the remote facilitators. Poor performance has a serious effect on the quality of the classes and student performance and interaction. Proposals to correct the problem include ideas ranging from increased facilitator pay to better faculty/facilitator advance planning. **Action Item** - Linda Fife referred the issue for discussion by the IP Instructional Subteam and to be reported back in the April Instructional Services Subcommittee meeting.
Technical Services Subcommittee Meeting
February 18, 2005


Minutes compiled by Cindy Najarro

Tab 9 – Ethernet RFP

The Response for Proposals on Ethernet services was discussed. UEN would like to build an infrastructure in the most efficient way possible. Vendor responses were received in December 2004. Meetings were held with the vendors in January and awards were sent out late in January. Contracts must be completed and E-Rate/SLD documents filed by February 17, 2005. A full report will be provided at the April Steering Committee meeting.

UEN’s involvement in connectivity of the elementary schools is one that we should continue to pursue.

Tab 10 – RFP for Additional Internet Bandwidth

UEN’s contract for an OC-3 with Sprint will expire in May 2005. A Request for Proposal was sent out in the fall of 2004 to replace this contract and explore options for Internet connectivity.

Jim Stewart explained the purpose of the RFP. We needed to get rid of Sprint, increase our bandwidth significantly, and meet the need of many of our stakeholders for an Internet access point outside of the Salt Lake area. UEN chose American Fiber Systems and Broadwing Systems. Our contract with Broadwing is 100% dependent on state and E-Rate funding. Jim reviewed what we are going to do. UEN will wait for approvals from the Schools and Library Division/E-Rate. The Sprint contract will end in May. We will be running with two vendors in June. Jim’s intent is to install this and have it ready for the beginning of school by next fall. His recommendation is to move ahead with this, plan for UEN funding, and hope for SLD funding approvals.

A motion was made to support the contract with AFS and Broadwing Communications. THIS MOTION PASSED WITH ALL VOTING IN FAVOR. Recommendation will be taken to the full Steering Committee.

Tab 11 – Service Desk Status

Jim Stewart reported that Service Desk has moved out of the NOC area of responsibility and into the Software Development area. It is Thom Gourley’s recommendation that we put together a user group and we do an assessment of this product. It will take time and resources to do this.
We are making sure that every call that comes in gets a Service Desk ticket opened. We have employed temporary employees who take the calls and escalate them to our more experienced technicians.

A motion was made for support of the request for a Service Desk User’s Group which will consist of UEN staff and appropriate stakeholder representatives. **THIS MOTION PASSED WITH ALL VOTING IN FAVOR.**

**Tab 12 – IP Addressing Process**

IP Addressing was discussed in the December meeting. James Christensen updated the committee on the progress of the group. The Technical Coordinator’s Council met and an informal committee was formed at that time. A follow-up meeting was held on February 4th. At that time, it was decided the state would be divided into seven regions and a certain number of representatives assigned to each region. The regions and representatives are: SEDC, Cory Stokes; CUES, James Christensen, SESC, Coy Ison; NUES, Guy Durant; North Wasatch Front, Don Thompson and David Cook; Central Wasatch Front, Sterling Fuhrman and Jim Langston; South Wasatch Front, Matt Johnson. Karl Buchanan will be the TCC representative on the committee. Jim Stewart and Pete Kruckenberg are the representatives from UEN.

The charge given to TCC for this committee was to: define membership, develop an IP number inventory, identify IP number resources and provide a set of standards for IP.

Five fact finding groups were created. They are:

1. ARIN organization. This group will study the ARIN organization modeling group.
2. ARIN policy group. This group will study the policies of ARIN.
3. IP inventory. This group would be in charge of IP inventory.
4. Core Leadership group.
5. Technical group.

The next meeting will be on March 4th when the members of the group will be determined.

UEN will work on a suggested outline of the format for inventory and send it to Karl Buchanan. Karl would then refine it and send it out to the group. This will happen after E-Rate filing deadlines.

**Tab 13 – NOC Directions**

Pete Kruckenberg discussed how the NOC is getting ready to support the new network. Studies show that 80% of network failures are due to human mistakes or process failures, and only 10% are due to equipment, circuit, etc. Pete is focusing on the 80%, how we make the organization more capable of operating this network reliably.
Some specifics on what we are doing as far as developing and pursuing this direction are: 1) a phone tier has been implemented that will answer all in-coming calls, open and close tickets, and escalate issues to Escalation Engineers. 2) Software Development has hired a programmer who is currently focused specifically on Network Operations internal tools development. 3) We are developing a NOC strategy similar to the GigE strategy that led to GL3, and expect to complete a draft document this summer.

**Tab 14 – NOC Update**

In January we had some serious outages. We have done fairly extensive post-mortem analysis on that. The issue that caused the problem was congestion on several of our core devices here at the Dolores Doré Eccles Broadcast Center. The most important solution to resolve that problem is to accelerate the GL3 project, beginning at the Dolores Doré Eccles Broadcast Center. Previously, the plan had been to start at the periphery of the network and finish the conversion at EBC. These outages changed our priorities.

We have made changes in the NOC management with Troy Jessup functioning as the NOC supervisor. This will allow Pete Kruckenberg to focus on the GL3 project and lead the GL3 Hot Team.

We hope to complete the project by this summer. UVSC and SLCC are expected to cutover in March.

James Hodges and Pete Kruckenberg have discussed the process to strengthen the effectiveness of the NOC and TOC. Cross training between the two departments has already occurred and the NOC and TOC are working together more effectively. The project we are now undertaking is to build processes that make us work as a team. It will take a while for us to get all the tools and processes in place.
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.