July 7, 2009
Connectivity Committee Meeting
MINUTES

Network Projects Review – Ed Anderson (SCS)

Core Router Project – Kirk Fitzgerald (SCS)
The backbone cutover went well the second time, and the backbone has been stable ever since. We have not had any issues with the new backbone routers or the links connecting them. We still have the same links we had before, but now we are fully redundant North/South and in the Reno and Las Vegas metro areas. In the Las Vegas Data Center, pieces that were not completely finished have now been cleaned up so we have full redundancy there as well. Based on the new redundancy, we should be able to handle future changes without having full system outages.

Reno-Carson Fiber Project
We are carrying traffic to WNC on the full ring now. There was some minor work that needed to be done that opened the ring for short periods of time on a couple of occasions. However, all the work is now complete and the Reno/Carson path and the metro ring in Carson City are totally closed and operational. We will be turning down the DS3 after a suitable time once we are convinced it is going to remain stable.

Eureka Fiber Project – Stanton Gurr (SCS)
We worked with the Eureka County School District to place fiber across the town – from the cooperative extension building, up to their elementary school and on to their high school. In the next phase, they helped us tap into the fiber along US50, and we were able (with some year-end funds) to get a temporary link from our collocation at the AT&T regeneration site up to the cooperative extension building. This allows us to serve the customers in Eureka (ECSD, GBC, UNCE, and the Clinic) with a 100Mb link instead of three T1s. In the final phase, the county and the school district will purchase a generator and a UPS and place them at the Coop facility. When that is in place, we will move our optical equipment up to that facility and create a second link to Ely. In the event of an optical or fiber failure from Reno to Eureka, that will allow fail over capabilities through the link to Ely. We hope to complete the final phase this fall.

Not only has this project added capacity capability and improved service from a reliability standpoint, but it will also save money once the T1s are turned down.

IP Address Migration
Several months ago, we had a request from UNR to migrate off a portion of a shared IP address space. A plan was put together and a meeting of the affected parties was held in early June. This is a major effort for some, and it requires work on several of the NSHE campuses to make changes moving things off of certain networks and onto others. WNC has already completed their work, and we are working with the rest of the institutions to make sure the effort keeps moving forward. We hope to have all of the work completed
within a year.

**EPSCoR Grant Funding**
SCS, DRI and UNR jointly prepared an EPSCoR grant request that will provide some added capabilities for the network. The grant has been recommended for funding and will provide approximately $150,000 a year for the next three years for some network improvements. Since we have already completed some of those improvements, we have gotten permission to make some adjustments.

One of the projects will be an upgrade of the northern research connection to the high speed network. Similar projects will be started once the funding is available.

**Economic Stimulus Opportunity Status**
The final notice of funds available, a 120 page document of the rules and regulations necessary to submit an application for broadband under the stimulus program, came out on July 1. The applications are due starting July 19 and must be in by August 14. Since the time to prepare and submit the first-wave request is so short, we are working urgently with everyone involved to prepare the appropriate documentation.

Our first-wave request will cover establishing fiber distribution points along the existing US50 and I80 corridors where they do not currently exist – Fernley, Lovelock, Wells, Austin, Fallon, and possibly Yerington.

There are three rounds of funding. In the first round, we are concentrating on the actual provision of fiber distribution points. In the second and third rounds, we will request funds to upgrade the DOIT wireless microwave network to bring broadband to health clinics in rural areas that do not currently have fiber access.

Others are applying to other sources of stimulus monies to bring high bandwidth into health clinics for the electronic health records initiative and mandate. We are trying to dovetail these two applications together so that we can provide the backbone broadband into these communities and then have a different grant take the last-mile portion of it.

As part of the application process, we will need letters of support from county and local governments, from the public safety sector, clinics, rural health organizations, K-12 school districts, etc.

Ed Anderson will be sending out an email requesting your assistance with these letters and will offer some guidance on what the letters should contain. They should cover what the impact will be to your education or health programs and show the value of this service.

**Network Presentation to SCS Advisory Group**
Ed Anderson gave a presentation in June to the SCS Advisory Group, which is a group of executives from various institutions that guides SCS on how best to meet the needs of the NSHE community. The presentation gave an overview of the network – its
configuration, current operating constraints, capacities, etc. Ed offered to give this presentation at the next Connectivity Meeting in August, and those present agreed that it would be of interest.

Ed would like this to be the first in a series of presentations given by the various institutions. Any interested institution will have the opportunity to give a presentation highlighting what they are currently doing, issues of interest to them, critical needs, etc.

The hope is that we will be able to leverage the knowledge and experience of the group to spot opportunities for improvement, and to use this as an informational tool for us to better understand some of the issues that we all face.

Note: Due to the requirement to move video locations and the lack of video presentation equipment in the relocated location, the SCS network presentation scheduled for July will be postponed until August.

Data Center Facilities and Planning Update – Lori Slemmer (SCS)

The planned power outage for the final electrical connections and functional testing of the new UPS and generator went very smoothly and all services were restored on time.

Bob Moulton added that previously, we could only run about 80kva before we ran into trouble on the old generator set. The new set up gives us about double the capacity, a new UPS, and the ability to run at full capacity. The generator was tested for over four hours at 100% load.

Systems Support Services – Chris Gaub (SCS)

For iNtegrate, we continue to roll out and provision server resources and storage resources for UNR and UNLV on the Shared Instance on an on-demand basis. As last fiscal year proceeded, we started to look at how we were utilizing disc capacity in the iNtegrate environment. We decided we were consuming disc capacity at a faster rate than we originally perceived when we put the RFP together. So one of the things we did was to add 19.2 TB of storage in the iNtegrate storage arrays. That is about 9.6 TB per data center, and it brings us up to a little shy of 30 TB per data center for iNtegrate. That equipment has been delivered to the Las Vegas and Reno Data Centers, and we anticipate that the upgrade will be performed in the next week or two.

We also looked at our utilization of capacity and perceived the need, and projected the need, for additional Intel processing capacity for iNtegrate. So, we added additional capacity to the Intel blades. We are installing additional capacity in both the Reno and Las Vegas Data Centers through the month of July.

SCS has four IBM DS 8100 storage arrays, two are allocated to iNtegrate, and two are allocated to our legacy systems. As part of the power outage in Las Vegas, IBM
performed a microcode level upgrade for all four of our DS 8100s which are now running at the same microcode level, which is the most reliable, and will facilitate common maintenance of those devices over time.

During the month of June, we implemented high availability clustering for all three instances. We implemented it both at the system level and for the applications for UNLV and the Shared Instance. We also implemented the system level high availability for the UNR instance. To truly test high availability clustering, you need to have the applications in place so you can actually make sure the applications switch from one clustering to the other. That work was performed in June and has been tested both equivalent with the power off from one of the servers and also soft failed over. Those tests were performed for both the Shared Instance and for UNLV.

Information and Application Services – Dodie Bryant (SCS)

We continue to work on the iNtegrate Shared Instance.

Focus for SIS was upgraded to version 7.3 to resolve an ABEND problem.

We anticipate heavy network activity with the last day to make fee payments and the first day of fall 2009 classes:

- CSN  8/06/2009 and 8/31/2009
- NSC  8/21/2009 and 8/24/2009
- TMCC 8/13/2009 and 8/22/2009
- UNLV 8/21/2009 and 8/24/2009
- UNR 8/21/2009 and 8/24/2009
- WNC 8/30/2009 and 8/31/2009

We anticipate implementing a number of modifications for HRMS in the next few weeks to accommodate the mandated furloughs for classified staff and the voluntary furloughs for academic and administrative faculty. Year-end and New Year processing for Advantage Financial will take place in July.

Systemwide Software/Client Services – Susan Bunyan (SCS)

This is our busy time in Systemwide Software, because we have a number of contracts that come due on July 1. Invoices have been sent out. We should be getting most of our requisitions out this week as soon as we know the money has been deposited in our account. Most of our vendors give us a 30 day grace period before they cut us off. SPSS provided us with a temporary code to last through the end of the month for the network server license at UNLV. Blackboard has also given us temporary codes to last us to the end of the month.
Novell will be coming up in August. Everyone should have received ALA forms from Novell specific to their campus. Those can be paid directly to Novell.

Symantec changed resellers resulting in some certificate auditing problems for us. However, we have been working that issue with Symantec and everything should be all cleared up and fixed for next year.

**System Security Update** – Paul Mudgett & Jana Dunn (SCS)

On June 26, the Security Interest Group hosted a speaker, Ira Victor, a local security consultant and president of the local InfraGard Chapter. He talked about Nevada’s new encryption law, SB227. Jana Dunn emailed out a summary of his talk, and his handout is available on the SCS website for download for those who may have missed the meeting.

We had a terrific turnout. It was probably the largest SIG meeting we have ever had, and almost all the campuses participated. Jana has talked with Ira Victor about a possible follow-up meeting or meetings on the technology he suggested for implementing compliance. It would probably be a demo focusing on open-source tools, low-cost tools, and using what you have already, and possibly some webinars on the tools. Please let Jana know if you are interested.

The financial auditors are in town from Grant Thornton, the new auditing firm that was picked up by the system. They are currently at SCS and will also be making their way to the campuses.

**Operational Issues/Events** – All

None offered.

**Other Issues**

None offered.