I. Welcome and Acknowledgements
CCSG would like to acknowledge the following contributors to today’s meeting: Jim Wellman, AeroE.; James Parrott, GSB; Pete Sailor, Matt Darbyshire, Mark Beran, IT Services.

II. Announcements

A. NetPrint System Discontinuance (Dan Carlile)
The PaperCut system has gone through the second billing cycle. NetPrint will be discontinued as soon as possible, hopefully over the semester break. Contact Dan Carlile if you need help migrating to PaperCut.

B. Decommissioning keyserver.ait.iastate.edu (Dan Carlile)
AutoCAD/AutoDesk users originally connected to this server. Few users are left on what is now an out-of-warranty server. For help migrating to the new server, contact Dan Carlile.

C. Dell Nvidia Graphics Processor Issue (Mark Beran)
A number of vendors have had issues with Nvidia GPUs. Dell is addressing this on affected computers with a 12-month extension to the warranty. These issues start with a distortion on the screen and eventually loss of video. All affected systems from Dell will be given an additional 1-year warranty on this with a maximum of 5 years. If any other issues occur on the machine, the extension on the warranty will not cover those issues.

The D620 and D630 models are the primary machines with issues. A BIOS update is available that will cycle the fan to keep the GPU from getting too hot and minimize the chance of failure.

For the D630, BIOS A12 is the BIOS that minimizes the issues. Proactive solutions are available for D630s; Computer Service will be getting a small number of parts in the next 6 months. To get the board replaced in that time, either bring it in to 74 Durham Center or filling out the online request form.

Computer Service will be closed from December 24 through January 3.

D. Thawte Certificates
The transitioning from a Thawte SPKI account to a new type of enterprise account cutover point was Friday. Our transition did not go through so we have not been able to renew or request new certificates. John Rose is working with Thawte to resolve this issue, but currently it is not possible to renew or request new certificates. If there is a
need to get a new certificate, John Rose can work with you and Thawte to get it taken care of.

**E. Network Backbone Work (Steve Schallehn)**

Tomorrow morning from 4 a.m. to 7 a.m., network backbone work will be done on campus. This should not disrupt normal traffic. If there is an outage because of this, it will likely be an extended one. Everything is to be expected to be back up by 7 a.m.

**III. Discussion**

**A. New Storage Offerings (Pete Sailor, ITS)**

IT Services is working to introduce a storage infrastructure and service to assist the entire campus. The ITLC group has provided input. SAN and Blade Server infrastructure recently added. Blade Servers are for VMware and using space on the SAN. There are redundant systems in the Durham Center and ASB data centers.

Currently in place is the Tier 1 storage option. ITS is working on the Tier 2 option. RFP for this closes in early December. There is another RFP out for options to provide backup services for the rest of this infrastructure and potentially offer availability to the rest of the campus. ITS is currently focusing on getting a good file-level service available for the campus community.

Q: Timeframe?
A: RFP for NAS and backup are due December 4. Will try to get as quick a turnaround on those as we can. Hoping to have these in place by the end of the fiscal year; some internal needs have an April deadline. [John Dickerson] Able to implement a NAS environment in Engineering; smaller scope, but had delivery June 2007 and up and running one week before classes with all the data moved over. Pete hopes to have the NAS available a couple of months after the RFP is complete.

Q: Is it too early to talk about rates?
A: [Dave Popelka] Shooting for 10 cents per GB per month, doubling that for high redundancy needs. Also looking at utilities to allow placing data among the tiers to where it best fits based on need. [Dave Brotherson] Moved data from IBM disk to the DMX last year and have been happy with it.

Q: [Steve Heideman] Will there be a basic allocation for faculty and students on this like the AFS allocation?
A: [Pete Sailor] Will be staying with AFS for now, but this is looked at as more of a CIFS model. Will be looking at moving to a default application for faculty and students. [John Dickerson] Survey from ITLC indicated that the heaviest use of storage is administrative use, the next biggest is faculty use, then research use, and finally student use. Using those groups, the goal was to create a system that would give a default allocation that would meet the needs of each of these groups. Engineering is currently working on this, balancing the needs of students, research, and faculty. In Engineering they would like to offer 2-5 GB of storage to students, grad students perhaps a little bit more. [Pete Sailor] Goal is to have a default allocation with a cost for additional storage.
Q: Scalability, what is the potential?
A: [Pete Sailor] Within the RFP for Tier 2, start with 100 TB but needs to be scalable to greater than 500 TB. Tier 1 will currently scale to 1 PB. Scalability was one of the main features we were requesting. [Mike Lohrbach] The reason for the tiers is that we want to make sure we have enough space on all of these different tiers to meet storage requirements for users on those tiers.

Q: Budgeting point of view…is the idea here to provide the service in such a matter so that some people could get out of the storage business locally?
A: [John Dickerson] “That would be swell.” Hope is to make available a service that is a commodity, available for people to use and establishes a high bar for quality. [Pete Sailor] Want to provide a quality storage service that would provide the opportunity to make that possible.

Q: Since LeftHand was acquired by HP, are these going to be HP boxes?
A: Those are there as a backup system for the Tier 1 systems. And yes, they will be HP boxes.

[Ted] Talking about what departments need, our department has users, admin, and group storage space. [Pete Sailor] This is the focus and the goal of the second tier—individual and group allocation. AFS has these options, but does not necessarily have the scalable storage behind it and requires a client. [John Dickerson] Do we need to give our students more space? We are providing team share that is group storage for team projects. Students are using 1-4 GB of space. The usage in the group storage area was much larger, maybe only using 1 GB individually, 100 GB shared with a group.

Q: [Dan Carlile] What is the long-term prognosis for AFS?
A: [Pete Sailor] This does not have any impact for AFS. However, we will be discontinuing Novell Netware in April/May timeframe.

**B. Energy Saving Techniques in Labs (Stephanie Kadlicko, LAS Green Teams Research Group)**

Apologize for problems caused by placing signs in computer labs. Goal is to reduce energy consumption on campus – signs on walls, light switches, and on lab computers. Received funding from Deans and Provost. Includes undergrads, grad students, and volunteers. Thought they had gone through the proper channels, talking to FPM and IRB and Deans.

Major problem expressed was the recommendation of just putting computer to sleep instead of logging out. Ten buildings affected by this are Ross, Durham, Catt, Curtis, Physics, Atanasoff, Science I, Science II, Gilman, and Music. They are willing to remove the signs in any building that would like assistance to do so. What message could be put on the monitor?

[Marie Mayer] Suggest no signs on the computer monitors. Very important to have users log out and that message is already on the computer desktop. Computers are configured to put themselves to sleep after a few minutes. Turning off the lights in labs and hallways is also a bad idea because it counteracts the security system; without
lights, the security cameras cannot monitor what is going on. [Stephanie] No signs should have been put up in hallways.

[Mike Lohrbach] We met with Stephanie regarding our labs; we are currently shutting down the machines at 2 am for additional energy savings. What are other areas doing in their labs that we could all learn from?

[Steven Heideman] Moved everything to thin clients; on logout, power will shut off completely after 30 seconds. With low overhead on the OS, it takes only 30 seconds to start backup. With thin clients, it is a 17-watt power consumption as opposed to the 90 that are currently used.

[Ted] Signs don’t work. In Carver, we use DeepFreeze to shut down machines. Any machine that is unused for an hour is shut down; we also shut down everything after 1 am.

[Stephanie] Maybe people just walk away from the machines because in the Library there is no need for login. [Dan Staedtler] Library has external clients and that is why the machines do not require logins there.

[Marty Teply] Wear and tear of powering off and on is hard on a computer. He has the lab monitors turn off monitors in the lab. With the lifetime needed from lab computers, this wear and tear will add up. [Dan Carlile] Merry Rankin may have information on that wear-and-tear issues. [Mike Lohrbach] Could talk to Dell about that as well and see what they say. Mike has some of those numbers that could be shared with the group.

[Dan Carlile] Another part of this will determine how long before the machine fails with power changes. [Clare Smith-Larson] Moved to power savings in Enrollment Services. With the screen going blank it required some changes to make sure that the machines are shut off. How are people turning the machines off at 1 am or 2 am? PSTools, Centurian Guard?

How about a sign to turn computers monitors off in the lab? Lab monitors in the room already go around and turn off computer monitors in Ross. Could have a sign that says this is a green lab and what we are already doing? [Stephanie] Trying to find ways to add positive prompts and will be glad to go into this in the future.

[Russ Hoffman] Is this an ongoing experiment? [Stephanie] We have been monitoring building energy use to see if these efforts are effecting a change. Targeting all occupants of 24 buildings.

[Jim Wellman] As far as computers are concerned, an automated solution will be more effective than changing user behaviors. [Stephanie] Is there something that we could do to target the lab managers to get those changes made? [Response] This is the group to contact for this. Signs are not the solution; the solution needs to be automated.

[Marie Mayer] You have funding you are trying to use. Could the sign money be used to purchase software to reduce energy use in labs? [Stephanie] Not sure, she will ask
her group. Funding was for specific things; there is a chance that we will not be able to do this.

[Dan Carlile] First research project here has certain hypotheses that it will modify people’s behavior. May want to do a followup study that looks at the technology and automation component of energy savings. Many people in this room would lend some effort to such a study.

[Jim Wellman] Signs are an educational device. Could the funding be redirected to educating this group on better ways to conserve power in those labs and on user desktops. [Mike Lohrbach] That is what we were hoping to see from this group, what different people are doing to provide energy saving in labs. There are Green Loan funds available if a department has plans. [Dan Carlile] CHS did get one of those green loans and will be sharing their results when they are further along on that process.

So far the focus has been on the labs. Is there a way to include staff as well? Many do not turn off printers and computers even when gone for break. [Stephanie] FP&M has videos and information on how to do this; the education needs to go out to a wider audience.

IV. Next Meeting
The next meeting is on December 22 at 2 p.m. in 206 Durham Center.