

## University Council for Academic Technologies (UCAT)

September 11, 2009, 9:30-11:00 am

Notre Dame Room, LaFortune

### Meeting MINUTES

#### Members:

Walker Anderson – UG Student, Ed Bensman – Engineering, Rob Easley – MCoB, Mike Hildreth – Science, Nathaniel Hollingsworth – Grad Student, Bill McDonald – MCoB, Olaf Wiest – Science

**Members Absent:** Ed Edmonds – Law School, , Krupali Uplekar –Architecture

#### Members Excused:

Lance Askildson - A&L, Mark Dehmlow – Library, Ted Mandell – A&L, Patrick Flynn – Engineering, Michael Kirsch – Law School.

#### Ex-Officio Members:

Kevin Barry – Kaneb Ctr., Craig Brummell – OIT, Jarek Nabrzyski – CRC, Peggy Rowland—OIT, Don Steinke for Harold Pace—Registrar, Paul Turner – OIT, Gordon Wishon - OIT

#### Ex-Officio Members Excused:

Dan Marmion – Library

#### Guests:

Craig Fitch – OIT, Rob Kelly—Dir., Procurement Services, Dave Seidl--OIT, Paul Van Dieren, Asst. Controller, Payment and Procurement Services, Lenette Votava—OIT Director Of Communications

### 1. Welcome

Craig Brummell opened the meeting at 9:38 a.m. because Gordon Wishon was delayed at another meeting. Brummell invited new members to introduce themselves to the committee.

The two new student representatives are Nathaniel Hollingsworth, graduate student representative, and Walker Anderson, undergraduate representative and member of the Student Government and chair of the Student Technology Committee. Kevin Barry, Interim Director of the Kaneb Center, is assuming an ex-officio position, and Don Steinke was in attendance in place of Harold Pace, Registrar. Jarek Nabrzyski is the new director of the CRC, and Ed Bensman is the new Director of Research Computing and a new member from the College of Engineering.

Brummell welcomed the new members and then gave a brief overview of the agenda items to be covered in this first meeting of the new semester. He noted that the agenda has been amended to

make room for invited guests Rob Kelly and Paul Van Dieren from Procurement to present an update on the Lenovo contract. The report from Dan Rousseve will be rescheduled. Dave Seidl and Lenette Votava are also invited to make a presentation on the Intrusion Detection / Intrusion Prevention Project.

Wishon, on arrival, apologized for being detained. He added his welcome to the new members and to all members at this start of the academic year.

## **2. Approval of May 11, 2009 Minutes**

Brummell asked for any comments or changes to be made to the May 11, 2009 minutes which had been emailed to members earlier. No changes were suggested. Rob Easley made a motion to approve the minutes; it was seconded by Michael Hildreth, and all were in favor.

## **3. Committee Reports**

### Course Management Systems, Rob Easley, Chair

Easley noted that the committee has not met yet in this new academic year. He gave a brief overview of topics that will be on its agenda. These include a focus on planning for the upcoming assessment of learning management systems, which will begin in the next year, in anticipation of replacing the current system (Blackboard Vista). As part of that planning, other issues will also be examined, such as considering how to introduce add-ins to Concourse, disconnecting online quiz tools tied to textbook publishers, and ePortfolios.

Brummell reported that Laura Geckler, OIT liaison to faculty for effective use of Concourse, has said the orientation of new faculty went quite well, with many showing serious interest in using Concourse in ways that push past the standard uses such as posting syllabi and files. There is strong potential for an expanded breadth of usage; the data on types of uses is being collected and evaluated to better understand any developing trends.

### Learning Spaces, Lance Askildson, Chair

Chair Askildson was not in attendance, so Paul Turner gave a brief overview of the items on the committee's agenda for this year. The first concern is to finalize a proposal for creating a technology-enhanced classroom, a project begun in the 2008-09 academic year. In addition, the committee will focus on enhancing capabilities for lecture capture in some of the larger classrooms on campus. Peggy Rowland added that a working proposal for updating some of the non-computerized classrooms in DeBartolo may come before the LS committee, and if endorsed, submitted for funding consideration during the annual budget process

There is also a possibility of enhancing the scope of the committee to include all campus learning spaces. A university committee has been formed, looking broadly at campus learning spaces. Wishon noted that OIT is involved in that new committee, so he will report back as the scope of its focus is further defined. It is possible that the LS subcommittee could be modified or that it will collaborate in some way with the broader university committee.

Rowland reported that redesign of the computer lab in LaFortune is still in progress. The committee is moving ahead with budget considerations.

### Software Acquisition and Distribution, Olaf Wiest, Chair

The committee meets generally via email. It has already received three major software acquisition requests this academic year; there is indication that two more requests are forthcoming. Two initial requests received approval by the committee; the third did not.

For the two approved by the subcommittee, the next stage is one of budgeting—who will pay for the purchases. Each of the approved requests is expensive. One request is for renewal of a campus site license for ChemOffice and the second is for Camtasia Studio/Camtasia/Relay. Camtasia Relay would be used in A&L, College of Engineering, College of Science and the College of Business. Rowland noted that thirteen individual copies of ChemOffice exceed the cost of an unlimited site license. The approval of these purchases amounts to a renewal of already owned software. She also noted that because of the timing of the requests, coming at the beginning of the semester, there has not yet been time to finalize a formal budget request and examine funding options. Because the purchases would involve significant costs, the next step is to seek budget – or in-kind - contributions perhaps in the case of Camtasia Relay hardware support from the colleges to host Relay for the first year until it's use grows across campus. In addition, the subcommittee needs to review all current centrally funded software to ascertain if some currently funded software might be eliminated or are no longer needed, thus opening up some additional dollars to fund new software requests. Wishon asked if there were any deadlines impacting the finalization of these requests. Wiest said the current version of ChemOffice is licensed until the end of 2009, so there should be sufficient time.

Wiest said that the budgeting procedure for the subcommittee is due for a review, as it has been in place for three years, since the creation of the committee. The OIT manages a fixed budget for campus wide software purchases and maintenance, and there is a consistent tendency to run over-budget. This will be an agenda item during this academic year. Wiest said the software subcommittee is concerned primarily with assessing the value of software acquisition requests, rather than with determining funding. It will not insert itself between the acquisition requester and OIT.

Ed Bensman noted that there might be some funding available through the College of Engineering. Bill McDonald recalled that the question of cost-sharing has been broached before.

### Committee on Research Computing (CRC) Advisory Council, Mark Stadtherr, Chair

As Stadtherr was not in attendance, Jarek Nabrzyski gave a brief report of the committee's agenda. He said that the Advisory Council has been in existence for three years in support of CRC. To further the effectiveness of this support, a discussion is underway to modify the membership, reducing from four to three the number of members from each college. This decrease in size will make it easier to convene the committee. Also the Council is seeking a broader representation across the academy. There is a strong computational representation presently, but some voices are missing from other areas of the faculty. Fresh perspectives might also be of benefit to the CRC. CRC wants to extend an invitation to the Mendoza College of Business to appoint their representatives to the Committee. The first Advisory Council meeting has been scheduled for the current membership.

Nabrzyski reported on the CRC agenda. Currently the number one project for CRC is a new lease with the Union Station. New terms of the lease have been negotiated to achieve a better quality of service. The new agreement will become effective in October 2009.

In parallel the CRC works on a major system upgrade. Three compatible high-performance computing (HPC) environments will be available for CRC users in fall 2009. These are based on the core, general access HPC environments also available in fall 2009, and include:

- Three hundred and sixty nodes with AMD Istanbul processors (a total of 4,320 cores). This is a distributed memory Linux cluster environment for high throughput computing (HTC) based on HP, Dell or IBM hardware with gigabit Ethernet interconnections.
- Around five hundred Intel Nehalem processor cores with high speed interconnect (InfiniBand). This is a distributed memory Linux cluster for highly parallel computing.
- A multi-processor, shared memory system—each processor with multiple cores and up to 256 gigabytes of RAM.

All these resources will be available for the CRC Cluster Partnership Program. Under this program the CRC provides specification/acquisition expertise, space (in an appropriate and secure operating environment), all necessary infrastructure (e.g., power, cooling, networking, rack space, switches, power strips, and cabling), system administration, and server/hardware support (e.g., error diagnosis and warranty work) and the faculty provide just computing nodes. Given the CRC's provision of infrastructure and services, our partner researchers are able to leverage their capital resources to purchase approximately 50% more compute nodes while significantly reducing the overhead of internal system administration. In return for infrastructure and services provided by the CRC, when partner compute resources are not being used by the partner they are automatically available to other "trusted" partner program users within the University's computational community.

Partners who are able to bring at least one rack of (32) 1U InfiniBand servers or at least 2 nodes for HTC system are welcome to participate.

CRC has been formulating a software policy for the purchase of research software which is posted at the CRC website. CRC has a budget for software and provides support as well, as part of its mission.

All CRC policies are available at: <http://crc.nd.edu/information/index.shtml>

Don Steinke, representing the Registrar's office, reported on the student grades upload project. The pilot project, run in the Spring 2009 semester, was very successful. The grade upload application was designed at Georgia Institute of Technology, which is in the process of rewriting the application because of a recent upgrade to Banner 8. The new code from Georgia Tech should be available to ND at the end of September; changes to implement the changes with Banner 8 should be minor. The Registrar hopes to roll it out for a full scale test at the midterm grading period.

Wishon thanked all committee chairs for their reports.

#### **4. Student Updates**

Wishon welcomed the two new student representatives, noting that UCAT appreciates the opportunity to hear the student perspective and to update members on student government technology projects.

#### Graduate students – Nathaniel Hollingsworth

Hollingsworth reported a minor concern for graduate students: while the graduate student listserv is supposed to be updated automatically with the names of new incoming students, anecdotal evidence indicates that this is not occurring. Rowland said that Hollingsworth had contacted her last evening about this problem and that OIT is following up with the graduate school to better understand the problem and possible solutions.

#### Undergraduate students – Walker Anderson

Anderson reported on the student government technology committee agenda. Of high priority is the project of incorporating student input into improving the existing campus wide events calendar. A student working group begins meeting next week to offer ideas and goals from the student perspective for this project. A second topic is developing student content for iTunes U, in collaboration with OIT Academic Technologies who is leading the design and implementation of faculty and student uses of iTunesU which require authentication via a valid Notre Dame netID. Work also continues on the course registration project, in concert with the Registrar's office. Student usability was tested; the committee looks forward to further testing of any new online registration software, as it comes available.

Students are also in discussion with OIT and Google to conduct a Tech Night, to demonstrate emerging products and apps. In part, the goal is outreach to promote Google apps and to give OIT more visibility at the undergraduate level. Turner noted that Dewitt Latimer will be attending the Google Education Steering Committee meeting in early November, so he would be able to offer as an agenda item this proposal for a Tech Night.

Last, polling will be done to elicit feedback from students about the newly installed and improved printing capabilities in dormitories.

An emerging concern for students is the further development of mobile device technology and applications which can take advantage of mobile delivered services on campus. Students are increasingly using smart phones. Can they be incorporated into classroom uses, and if so, how? Anderson noted the iStanford application developed for Apple iPhone, and that faculty/student collaboration could be encouraged through smart phone apps. Wishon said that student concern on this issue could be merged with a broader portfolio of interests on campus in mobile device application development. OIT is monitoring campus use of mobile devices, and is interested in both student and faculty needs. He said one concern is what kind of support stakeholders expect from the university for mobile technology. Bensman asked what percentage of students are using smart phone devices. Wishon said that a survey three years ago established that more than 95% of students use cell phones; however, the data on smart phones still needs to be collected. Steinke noted that 85% of incoming students list a cell phone number as their local phone; this number continues ramping up. Rowland spoke of an ImproveND student survey for graduate and undergraduate students to be conducted later in this academic year from which data such as smart phone usage will be harvested, among many other kinds of student input. Bensman said that the proposed Camtasia software could facilitate the survey process.

Anderson concluded his report by noting that students are willing to provide feedback on technology issues; he can relay these kinds of requests for information through the technology committee or to the larger student Senate.

## **5. OIT Updates**

Wishon briefly summarized the key areas of OIT concerns to be updated. He welcomed guests who are providing these updates.

### a. Intrusion Detection / Intrusion Prevention Project – Dave Seidl

Dave Seidl of OIT presented an overview of the Intrusion detection/prevention project. The purpose of the project is to automatically respond to cyber threats by stopping or mitigating damage from malicious attacks in real time. He provided members with a brief handout, including a glossary of terms. He explained that the Intrusion Detection/Prevention System (IDS, IPS) is a pair of network security devices installed at the campus border that can prevent or block malicious or unwanted online behavior in real time, before these attacks even cross the border.

The project was begun on the basis of the CITRA (Campus Information Technology Risk Assessment) undertaken about three years ago. Problems due to hostile attacks were identified then, and have increased about 30% in the intervening time. This new system allows significantly quicker identification of attacks.

The scope of the project involves two campus locations, on the campus border and in OIT. The border was manned in the summer, in conjunction with Windows and Mac technological teams and OIT directors. The detection devices were activated in August 2009, allowing us to see attacks but not yet to respond to them. In about two weeks, OIT hopes to have the next stage running. At that point, there will be no blocking of any incoming data for a stated time period so that all stakeholders can be sure that their legitimate processes go through properly. After that testing period, the prevention process will go up. There are two layers to the system to prevent failure.

OIT envisions the benefits of this new system to be that there will be a reduced risk of external scanned attacks by instant detection. In addition, if any new virus comes out, OIT will be able to see it instantly.

To insure that all faculty have input and no faculty is unduly hampered by the IDS/IPS, a rule vetting process has been created and is posted at the OIT website. The vetting process should insure that the detection and prevention procedures do not interfere with legitimate activity. No new rule can be installed without validation by the vetting process, and all stakeholders have the ability to throw a flag if concerned about any proposed new rule. In addition, the process includes the possibility of exceptions being created for any needed activity; this exception can be temporary or permanent. Also, a management model has been crafted to monitor approval processes and document them. On the website will be maintained a list of all approved changes which have been made. Any new stakeholder will be able to access and view this maintained rule list.

The results of this IDS/IPS is that OIT should have better insight into the campus network, and there should be no harm from attacks to legitimate research and activity, and no harm from the detection/prevention systems either.

Wiest asked about methods for alerting faculty to ongoing action from the IDS/IPS. Seidl said there are several venues for publicizing any actions taken. All subscribers to campus technology mailing lists have been notified by Seidl's team. When a new rule is proposed, a general announcement will be sent out to the lists; so too when a rule has been approved through the vetting process. The procedure for a stakeholder to throw a flag concerning a rule is also widely publicized and available at the website. There will be a very short delay between rule approval and implementation, to provide the needed protection. OIT is sensitive to the problem of communication which comes out late Friday afternoon, so firewall changes are planned for Tuesday and Thursday whenever possible; of course emergencies will create exceptions. Wishon said that communication about rules will go through the standard technology contacts in each college and to the staff.

Seidl concluded by stressing that the goal of IDS/IPS is to detect and block malicious or unwanted behavior. His team will be respond very gently to things which look like standard service.

Wishon thanked Seidl and Votava for their presentation.

b. Lenovo contract--Rob Kelly-, Dir., Procurement Services, and Paul VanDieren, Asst. Controller, Procurement.

Wishon introduced Rob Kelly and Paul VanDieren, of Procurement, to update members on the Lenovo contract.

Kelly recapped the December, 2008 meeting when John Affleck-Graves met with UCAT to discuss the Lenovo contract. At that time, it was determined to continue with Lenovo for a one year contract extension, with plans to review the relationship and evaluate future plans. As part of the one year contract extension, Lenovo was told that Notre Dame's 2008 business review indicated some serious issues which Lenovo would need to address before consideration for another longer term contract. While Lenovo met ND's needs in several areas, two major weaknesses were identified: supply chain delivery was terrible, and service needs and repairs were also subpar.

The business reviews undertaken in January 2009, April 2009 and August 2009 have indicated a strong commitment to improvement by Lenovo, due to a number of specific actions undertaken. In the two weak areas, expectations are now being better met. All service level agreements are back where they should be. To meet the supply chain targets, Lenovo created some buffer inventory in the warehouse to meet ND's orders. To better meet service and repair requests, Lenovo took a close look at how quickly it was getting CPU unit orders delivered and improved tracking systems to increase speed. The number of repair calls remains quite low—11 in the second quarter, for some 4500 units. These changes have greatly improved campus satisfaction with the machines. Kelly said the Lenovo product provides a high degree of quality for ND.

Wishon said there is general campus agreement that the response time has improved. Easley noted that there has been improvement but not elimination of delays in delivery.

Kelly reviewed some of the purchasing statics and savings collected. Across the university, use of the standard model personal computer increased from 41% to 80%. Thus there has been a reduction in the requests for specialization of machines. Apple purchases have declined from 33% to 24% of machines

purchased; this change has been realized primarily in administrative usage. These changes resulted in projected savings of \$420,000 for calendar year 2009:

- \$280k in Lenovo efficiencies (standards and pricing)
- \$80k in Apple to Lenovo conversions
- \$60k in Apple efficiencies (standards)

Rowland reported that incoming faculty are still purchasing a significant number of Apple computers, including quite frequently laptops. Affleck-Graves has supported flexibility for faculty in choosing machines. A higher volume of Apple computers are purchased by faculty than by administrative staff. Rowland said data is being collected for future comparison in collaboration with Procurement Services.

Kelly summarized the Lenovo update: the requested changes have been implemented by Lenovo, the quality of the product is high, and the level of service has improved markedly. Based on this, Procurement recommends that ND execute a long term contract with Lenovo as a single vendor supplier to ND. Wishon said that he is in favor of this recommendation. The prospect of a long term contract should induce Lenovo to offer pricing considerations, improving the savings rate. And a long term contract will enable ND to continue to reap the benefits of the time and effort expended in reaching this improved level of service. To contract with a new vendor would be to risk unsatisfactory service again. In addition, while there are further savings to be realized with Lenovo, the percentage of savings is not high enough to balance the costs of seeking a new vendor, given current market conditions.

In response to a question, Wishon said that the possibility of a multivendor option had been weighed, but the conclusion had been reached that we would be well served to continue the ongoing relationship with Lenovo. Easley wondered if some technology needs might be better served with multiple vendors, such as laptop or notebook purchases, since there are so many options available. Kelly stressed that flexibility about faculty requests for special purchases is the standard response of Procurement. He noted, however, that most experts concur that the best choices are gained by bulk purchasing. It is standard practice in his office to benchmark an outsider quote point by point for value. Leveraging volume with a single vendor consistently obtains the better price. Wishon compared the inhouse conversations four to five years ago about laptop purchases when there was a marked volatility in the market. Gains were made with a fullbodied process, but the economic situation has changed that potential. In today's environment of slimmer margins, the volatility in the notebook market is not likely to produce sufficient gains to offset the procedural difficulties of using multiple vendors.

Easley also asked what kind of data is being kept on customization of machines which occurs 'down the road,' a year or more after purchase and with the new longer four year renewal cycle. He spoke in favor of a system to track the costs of later customizations which arise from limitations in the existing Lenovo standard model systems. This kind of data would be useful in assessing true total life cycle savings from the program. Wishon noted that it would also provide a test of the standards process, which will be annually evaluated by an established procedure. The kind of data Easley is seeking will probably emerge from that annual evaluation, as OIT regularly gauges the utility of the standards.

Wishon thanked Kelly and VanDieren for this update of the Lenovo contract.



#### c. OIT Strategic Plan – Gordon Wishon

Wishon said that OIT is in the process of preparing a strategic planning document which will detail the strategy and rationale for OIT for the next five years. The document will be emailed to members in the next two weeks. Rapid member feedback will be solicited.

As part of the strategic plan, discussions are underway to consider some changes in the UCAT organizational structure and focus. One proposal is a suggestion to refocus the committee's mission. The goal is for OIT representation to all colleges. Another possible change is to decrease the size of the committee, one result of which might be to improve response time for faculty needs. Possible changes to UCAT are also impacted by its central position in the university governing structure.

Completion of the strategic plan is linked to input from each college's assessment of its computing needs, which is still in process. A condensed and summarized version of the planning document has been submitted to John Affleck-Graves, from where it will be sent to the Provost's Office. The full, finalized draft must be submitted to Father Jenkins' office by the end of September. There is still ample time for UCAT members to give input on the plan since the document cannot be finalized until the strategic plans of each college are finished, providing assessment of each college's computing needs.

The strategic planning process will continue through this calendar year. Subsequent steps merge with other plans, to result in a coherent one. Process will proceed through this calendar year.

#### d. Academic Technologies update – Paul Turner

Turner began the technology update by noting that development is ongoing in the following areas: Wiki, iTunesU, Microsoft surface, ePortfolio prototypes, mobile apps and web development. He provided a brief report on Wiki and iTunes U.

Wiki: the pilot project for implementing a campus-wide wiki (Atlassian Confluence) began in January 2009. OIT, Institutional Research, and the Hesburgh Library all provided input through May, 2009, when the Hesburgh Library agreed to take ownership of the wiki service for the campus. The Library staff will now provide level 2 support to all administrative and academic users; the OIT help desk provides level 1 support. There has been a great amount of campus use over the last several months. Turner said there are a wide variety of collaborative situations in which Wikis make sense for users. OIT has assisted in the setting up some 3-4 dozen wiki spaces for campus customers in the last several months. The library is currently the largest wiki user on campus.

iTunesU: OIT and Office of Public Affairs (OPAC) is very close to launching the public iTunes U site for Notre Dame alumni, prospective students, and the general. Availability of the public iTunes U site will be heavily publicized by the Office of Public Affairs beginning in the first week in October. A quiet soft launch of Notre Dame's iTunes U site has already happened. OIT and OPAC News & Information has received excellent early response beta testers. OIT has focused over the summer on creating easy ways for faculty and students to use iTunes U for courses and is beginning to work more closely with students to develop processes for them to publish approved content to Notre Dame's private iTunes U site. There

is every indication that iTunes U is going to be widely used. For instance, the Alumni Association has extensive plans for using iTunes U to reach alumni and parents.

e. MCoB Computer Cluster – Peggy Rowland

Rowland said that members of her team met over the summer with members of the College of Business to discuss the level of use of machines in the computer cluster located in the Mendoza College of Business Building. As of the 2008-09 academic year, 75% of the time usage is below 25% of capacity. Because of this relatively low use—much lower than most computer clusters in other areas of campus—the 15 workstations in the area were streamlined to 8 before the beginning of the academic year. At fall break, in October, usage rates will be checked again. The reason for the low usage is not clear: Is it the location within the building? Is it a lack of discipline-specific apps?

If the usage remains low, one option being considered is to remove all machines—the university will assume ownership of them—and return the use of the space to the College of Business. McDonald noted that if this is the ultimate decision, it would be best for the College to have it happen quickly so that the space can be effectively converted to classroom space over the Christmas holiday.

Rowland noted that usage data for technologies across the campus is posted online at the OIT website, making it very easy to track for interested parties. The url is [http://oit.nd.edu/clusters\\_classrooms](http://oit.nd.edu/clusters_classrooms)

f. Jump start grants for Academic Tech – Paul Turner

Turner reported that OIT has funds available to encourage faculty to explore uses for emerging technologies. The proposal process is deliberately streamlined, with minimal documentation required, and each proposal will be limited to receiving \$1000 or less. Members are encouraged to relay this opportunity to colleagues.

Wishon thanked members for staying to complete all agenda items. He reminded members of the upcoming email containing the strategic planning document on which their input is solicited.

The next UCAT meeting is Thursday, October 29, 2009 1:30 – 3 pm