

SENATE COMMITTEE ON INFORMATION TECHNOLOGIES (SCIT)
MINUTES OF MEETING
FEBRUARY 7, 2012

[In these minutes: Academic Support Resources (ASR) in Graduate Education, Video Ecosystem, Identity Management]

[These minutes reflect discussion and debate at a meeting of a committee of the University of Minnesota Senate; none of the comments, conclusions or actions reported in these minutes represent the views of, nor are they binding on, the Senate, the Administration or the Board of Regents.]

PRESENT: Ted Higman, chair, Allison Jacobsen, James McDonald, Benton Schnabel, Sue Van Voorhis, Noel Phillips, John Butler, Susan Geller, Billie Wahlstrom, David Arendale, Sean Conner, Brent Larson, Yuk Sham, Shashi Shekhar, Bonnie Westra

REGRETS: Ann Hill Duin, Mary Vavrus, Nolan Shen, Myron Lowe

ABSENT: Luqman Anshuur, Tiffany Beauford

OTHERS ATTENDING: Bernard Gulachek, Toni Pangborn

GUESTS: Frank Blalark, director, Academic Support Resources - Office of the Registrar; Arash Forouhari, John H. Miller, director, Office of Networking and Telecommunications - OIT

I). Professor Higman called the meeting to order and welcomed all those present.

II). Professor Higman introduced the first agenda item, Academic Support Resources (ASR) in Graduate Education. Sue Van Voorhis, director, ASR, began by noting that ASR is in the process of automating as many paper graduate education forms as possible. Communicating changes to faculty is an important component of this project, and, as a result, she asked members to start thinking about suggestions for how ASR can best communicate with faculty. Ms. Van Voorhis then introduced Frank Blalark, director, ASR – Office of the Registrar, who is managing the graduate education transition project.

Mr. Blalark stated that ASR's role in this project is to assist in the transformation of business processes and to facilitate the development or modification of automated systems. As background, he noted that this project stems out of the graduate education work group reports that recommended streamlining the Graduate School by:

- Moving the locus of authority for programmatic decisions back to the colleges.
- Identifying more efficient and user-friendly administrative processes.
- Leveraging enterprise technology resources for efficiency and effectiveness.
- Removing duplication of efforts and inefficiencies at the central and program levels.
- Making the collegiate Deans and the Office of the Registrar accountable for quality and effectiveness of administrative processes.

The Graduate School has approximately 300 majors and the goal is to move students out of the Graduate School and into the collegiate units. Unlike undergraduate education, the Graduate School is the only school that does not own its academic programs. Mr. Blalark then highlighted the system updates and data practices changes that have been made or will soon be made:

- Modifications were made to the enterprise Program and Curriculum Approval System (PCAS), which handles approvals for new programs and modifications to existing programs. Course data is currently in the process of being entered into the system. The system is expected to go live this spring.
- Changes were made to the graduate education reports on UMReports, which took about a year to complete. These changes were necessary because of the collegiate affiliations of graduate programs and students changed.
- Moved data from the Graduate School custom tables into the delivered PeopleSoft tables. The goal was to eliminate custom data fields for graduate students in the system in an effort to improve upon the system's cost effectiveness, functionality and reporting.
- In the process of updating ImageNow, the University's comprehensive imaging and document management system, so that all collegiate units will have access to the Graduate School ImageNow drawer.
- Automation of paper-based processes. Sixteen paper-based processes that record student progress are being automated using WorkflowGen. All 16 forms are expected to be automated by the end of 2013. For example, the registration exceptions process was automated and has reduced the time students spend on submitting a request from 2 – 3 hours to 11 minutes.
- Moving forward, there will be a data conversion from software in the Graduate School to PeopleSoft.

Project challenges, noted Mr. Blalark, include but are not limited to management of historic and current paper files, maintenance and continuity of academic record data, and offering a coherent web-based presence for graduate student information.

Questions/comments from members included:

- Can the student registration exceptions that faculty receive be batched into a single request? If not, please look into allowing the system to have this capacity. No, stated Mr. Blalark, the exceptions are not batched because they are individual to students. He, however, agreed to take this suggestion back for further consideration.
- How many students a semester, on average, use the registration exception process? There are approximately 300 unique requests per term for programs that were in the Graduate School pre-fall 2011, noted Mr. Blalark.
- Regarding storing DGS information, the suggestion was made to include the term length of each DGS given the turnover.
- With the electronic forms, will faculty have the ability to require a student to come to the faculty member's office if they want face-to-face interaction? It depends on who initiates the process, e.g., student initiated, DGS initiated, PLC initiated, stated Mr. Blalark.
- Metrics on degree progress should be available to students online.

- Eventually, will the Graduate School be completely eliminated? No, stated Ms. Van Voorhis, the Graduate School will not cease to exist, but its role will change as the locus of authority for programmatic decisions goes back to the collegiate units.
- In response to Ms. Van Voorhis' earlier question about how best to communicate with faculty about these system changes, the problem stems from the fact that many faculty are so confused about where the Graduate School sits that any system changes to support it are even a further afterthought. The suggestion was made to start connecting with small groups of interested faculty who really want these changes successfully implemented.
- Training for new DGS staff should be offered.
- Besides having a comprehensive web-based resource for graduate students, a site should be developed for DGS's too. Mr. Blalark stated that a series of best practice sessions are being developed, and they are being rolled out as they come in.

Professor Higman thanked Ms. Van Voorhis and Mr. Blalark for their presentation.

III). Next, Professor Higman welcomed John Miller, director, Office of Networking and Telecommunications – OIT, who was invited to provide a video ecosystem update. Mr. Miller began by distributing a couple handouts to supplement his presentation, and shared background information on video technology and its history. Mr. Miller noted that while some technology standards exist, there are a number of factors that come into play when using video technology, and these include, but are not limited to:

- Some technology is proprietary.
- Interoperability issues.
- Lack of a common video directory/phone book.
- Constantly changing desktop environment.

The University's video environment, noted Mr. Miller, ties in to a number of different networks, e.g., National Lambda Rail (NLR), Learning Network of Minnesota (LNM), State of Minnesota Regional ITV, etc. Regarding video, in general, for the State of Minnesota, there are regional networks set-up across the state that work together. For more information about these networks, members were directed to the following websites:

- <http://nets.crk.umn.edu/> - NETS
- <http://www.neatedu.net/a/schedule/> - NEAT
- <http://www.smsu.edu/shot/> - SHOT
- <http://cmdln.stcloudstate.edu/> - CMDLN
- <http://www.metnet.edu/comet/index.html> - COMET
- <http://www.metnet.edu/index.html> - METNET

These networks work together to support video conferencing and distance education across the state. The University of Minnesota is a member of each of these organizations and has board seats on most. In the beginning, each organization had its own video switching equipment, but when the equipment aged and the time came to replace it, the groups worked together and pooled their resources and centralized the equipment, which is now housed at the University in WBOB. Mr. Miller added that regarding video, if it is being switched over the wide area network, it requires quality of service (QOS), which reserves bandwidth for video and other special applications.

Next, Mr. Miller shared information about a variety of OIT video efforts and support on campus, e.g., support of six ITV classrooms on the Twin Cities campus, support of MediaMill, and MediaMagnet applications developed within CLA, Camtasia Relay screen capture application support, etc.

Additional salient highlights from Mr. Miller's presentation included:

- Video Conference Standards and Guidelines are available at - https://docs.google.com/a/umn.edu/document/d/1fqmTwZ9mnBsKi9nt9b2X-5GI4BSScSwrsU5YzVvb30Y/edit?hl=en_US
- An endpoint audit was conducted in the summer of 2011 to determine what video endpoints existed on campus. There were over 125 endpoints identified on the Twin Cities campus. With permission, the goal will be to have the owners or administrators of these rooms allow others to use them. Unfortunately, there is currently minimal agreement to posting information about these rooms online or allowing use of the rooms outside the immediate department. Phase two of this audit will look to document video endpoint locations on the coordinate campuses.
- OIT implemented a "master control" room late last year. "Master control" facilitates remote control, monitoring and support of OIT supported ITV and conferencing rooms.
- Several years ago, the University's fiber connections were centralized (codec farm). Unfortunately, no budget existed to sustain these efforts, and, as a result, the central infrastructure has become outdated. A RFI is being developed to determine how best to support these venues on campus for video transmission.
- OIT has been working with CLA to support the MediaMill and MediaMagnet applications. Since the developer of these media management systems left the University, support for these systems has been problematic. As a result, a RFP was issued and recently awarded to Kaltura to facilitate the transition from MediaMill and MediaMagnet. The University will be partnering with the Learning Network of Minnesota (LNM) to implement SaaS (Software as a Service), an "on-demand software" version of Kaltura. Kaltura integration with Moodle, and Camtasia Relay will take place this fall. Additional integrations are also being planned for iTunesU, etc.
- The University receives a fair number calls from organizations every year that are interested in using the University's fiber optics to get to TCF Bank Stadium, Mariucci Arena, etc. Given this interest, OIT plans to issue an RFP to determine the value that these University fiber assets are worth to these companies, or others within the institution. It is unclear at this time whether the RFP will actually be awarded, but if one of the vendors comes back with something that would benefit the University in terms of value, the RFP could be awarded.
- OIT worked with Housing and Residential Life to implement their cable television needs. Details were shared with members.
- OIT has staff working on QOS for video network support and ENUM, the domain name system support needed for video and other applications.
- With a look to the future, there is an interest in supporting more streaming events and capturing analytic information, e.g., who is watching and from where. In addition, there will be more protocol standardization, which will increase interoperability. Other future projects include but are not limited to: 1). transition from standard definition to high

definition, 2). scalable ability to “record and archive” video conferences, 3). increase the number of multi-purpose/hybrid classrooms, 4). integration of video conferencing into the Kaltura environment, 5). new room environment control techniques requiring people to authenticate to the room, 6). Unified Communications integrations, 7). implementation of a directory system that allows one to search and interconnect video between endpoints, 8). more video features from Google, Skype, and others.

Questions/comments from members included:

- Is the backbone of the University network made out of fiber and is it all connected? The University’s network connections are based on fiber, stated Mr. Miller; however, not all the strands are connected and used. Mr. Gulachek added that fiber optic cable has many strands. Given the capacity of the cable, the goal is to only place it once. Because the University may have some spare capacity, which may be of value to others inside and outside the University, it is going to issue an RFP to look into its fiber assets.
- Are there any legal implications for selling fiber optic cable strands that were purchased with public funds to private entities? The Office of the General Counsel will be involved in any such discussions if it comes to that point.
- Based on Interim Vice President Ann Hill Duin’s meetings with the Deans, video conferencing is a priority for the Deans. With that said, a number of units are interested in building out the infrastructure within a standardized framework. There are a wide variety of solutions for doing this, some very low cost and others very high cost. Are there any reasonable cost solutions? According to Mr. Miller, there are a number of different vendors with their own unique solutions. OIT is looking into identifying a solution or feature sets, and plans to make recommendations based on its findings. Mr. Gulachek added that one reason there is such polarization in solutions is because the market is in flux, particularly when it comes to connecting multiple people. Before doing anything, OIT is waiting for the market to normalize.
- Who will control/own the video content that is stored in the cloud? Mr. Miller stated that ideally Kaltura, the media management system, will integrate in such a way that whoever owns the conference will control the video content that is stored.

Professor Higman thanked Mr. Miller for his presentation.

IV). Professor Higman introduced the final agenda item, identity management, and welcomed Arash Forouhari. Mr. Gulachek then took a minute to introduce Mr. Forouhari who, he explained, is working with a team of his colleagues to replace for the University’s identity management system, X.500, which is very dated.

Mr. Forouhari stated that the goal is to replace the current X.500 system with an industry standard packaged solution that will provide improved integration, delegation of user rights, and self-service functionality. The RFP for this project was issued in 2010, and the contract was awarded to Oracle.

After reviewing and retiring a number of services, the next big change will be a new sign in page, which will be implemented on Wednesday, February 15. Along with this change, there will also be a new authentication platform that is based on SAML (Security Assertion Markup

Language). This will allow the University to integrate and federate with other entities. The University plans to use Shibboleth, a standards based, open source software package, for the implementation. The current authentication platform, CAH (Central Authentication Hub), a cookie-based authentication system, will be retired June 15th.

The next step will be migration of the current LDAP (Lightweight Directory Access Protocol) servers to Oracle Directory Server. Then, lastly, the product, Oracle Identity Manager (OIM), will begin design production this summer.

The challenge will be to integrate the new product with the current X.500 system, which has lots of moving parts. Mr. Forouhari then turned members' attention to a high level architectural diagram to explain how the current system works. OIM is a J2EE web-based product from Oracle Identity Management Suite that manages various tasks associated with user provisioning, self-service, workflows, and integration with a central identity repository (LDAP), noted Mr. Forouhari.

Next, Mr. Forouhari walked members through the four phases of the project:

- Phase 1 – implement all provisioning and de-provisioning of the users, which includes self-service.
- Phase 2 – automation of data feeds in real time versus batch feeds.
- Phase 3 – rollout LDAP University-wide.
- Phase 4 – implement a naming service for centrally managing the University's servers.

A high-level diagram of the new platform was shown to members.

Questions/comments from members included:

- Are the LDAP servers an Oracle product? Yes, the LDAP servers are Oracle LDAP servers.
- How customizable will the LDAP servers be in light of the fact that many departments have their own LDAP servers? Will there be a connection between locally operated LDAP servers and the Oracle LDAP servers? Mr. Forouhari stated that the goal will be to get feeds from other LDAP servers so that OIT owns all the groups and roles within the LDAP environment. OIT is also looking into providing an admin tool on top of the LDAPs so departments can create their own groups and roles and assign users to them.
- Would the admin tool allow departments to connect with other universities, for example? Mr. Forouhari stated that OIT would need the identities that are assigned to a role or group. Mr. Gulachek stated that the federated identity piece of this initiative is very important and explained how it works. Another important piece of the new system is the workflow, which is automated. Mr. Forouhari stated that a good example of federation is Google Mail.
- Mr. Gulachek explained that the use of Shibboleth enables the University to not share its X.500 passwords with Google for the use of UMN Google Apps via a web browser. Fat clients such as Apple Mail, Thunderbird, iCal, Outlook, etc. are incompatible with Shibboleth. Therefore, when users use these applications they need to set up a second 'Google Desktop' password, separate from their X.500 password. Mr. Forouhari added

that the reason a second password is needed, is because these apps do not use the same protocol as the web-based applications.

- Is Shibboleth a cookie-based system? No, stated Mr. Forouhari, Shibboleth is not a cookie-based system.
- When running several different apps, sometimes it is necessary to sign back in and other times it is not necessary, why? Mr. Forouhari explained that the reason for this is that it depends on how the app is implementing single sign-on. If logged into a SAML-based system and then moving to another system that is not, signing on again will be necessary. Once migration to the new University platform is complete, there will be single sign-on across all applications.
- How does the University's identity management efforts compare to other institutions? SAML is the standard going forward, stated Mr. Forouhari, and eventually all institutions at some point will need to migrate to SAML.

Professor Higman thanked Mr. Forouhari for his presentation.

V). Hearing no further business, Professor Higman adjourned the meeting.

Renee Dempsey
University Senate