

Senate Library Committee  
Minutes of the Meeting  
April 15, 2015

[These notes 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 notes represent the views of, nor are they binding on, the Senate, the Administration or the Board of Regents.]

In these minutes: [Budget/compact process update; digital preservation and University Libraries; OIT practices and policies]

PRESENT: Wendy Lougee, Evan Roberts, Kristen Anderson, Marlo Welshons, Connie Lenz, Neil Olszewki, Michelle Englund, Ron Hadsall, Michelle Brasure, Mary Beth Sancomb Moran

REGRETS: Daniel Pesut, Vicki Graham, David Fox, Elizabeth McDonald, Owen Williams

ABSENT: Andrea Johnson, LeAnn Dean, Matthew Rosendahl, Joan Howland, Bo Hu, Douglas Olson, Jessica Chaika, Elizabeth McDonald, Bailey Seidl

GUESTS: John Butler, associate university librarian for data & technology; Bernie Gulachek, associate vice president, Office of Information Technology (OIT); Heather Noble, associate CIO, OIT

Professor Alexander welcomed the committee.

## 1. Budget Process Update

University Librarian Wendy Lougee updated the committee on the compact/budget process, following up on the preliminary previously reviewed with the committee. These decisions are preliminary, pending the University's final budget appropriations. :

### Budget decisions

- Received support for copyright permissions service, ORCID implementation
- Received support for compensation increases
- Not funded for Experts@Minnesota support
- Not required to implement .9% reduction r
- Collection request \$801,000 not fully funded; received \$344,950

### Experts@Minnesota Support

- 3rd year of pilot; undergoing evaluation
- Experts jointly funded by 11 colleges, OVPR, Libraries); data from Experts used to support collegiate analytics --e.g., Manifold, CEHD, etc.
- Libraries absorbed significant staff support
- Evaluation report to be shared with contributing colleges, OVPR.
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Other budget issues noted, not requested

- Impact of minimum wage - \$100K-\$150K

- Impact of storage and collection management
- Ongoing facility costs (close to 20% of Libraries' cost pool)

#### Collection funding shortfall

- Budget request based on current level of commitments and known inflation forecasts
- Allocation: ~\$15M; expenditure ~\$17M (includes endowments)
- Inflation forecast at 6%; many large publisher licenses have inflationary caps at 3%
- 73% of expenditure now digital
  - Publisher packages often include restrictions on cancellations
  - 3 largest STM publishers represent \$4.3M, 40% of serial expenditure
- Collection leads assessing potential strategies to adjust to funding level --e.g., across the board, elimination of specific acquisition programs (e.g., demand-driven acquisitions), cancellation of redundant indexes
  - In general, for every \$100K reduction =
    - 75 journals cancelled
    - 1300 print books
    - 885 e-books
  - Challenge of aligning with University priorities give cross-use of content
  - In general:
    - Likely larger impact on monographs, due to restrictions on canceling journals
    - Impact on all disciplines
    - Narrower choices for indexes, databases
    - Increased reliance on other libraries; interlibrary loan

Professor Hadsall asked about the shortfall being continuous, and the expectations for next year. Lougee noted the University's announced plan to reduce \$90M in administrative costs, and the Libraries were fortunate to be exempt from the .9% reduction for FY16 (about \$380K). However, Lougee noted, the University has not fulfilled the \$90m reduction yet, so continued reductions are likely. Hadsall noted that considering collections as an administrative cost was inaccurate and not consistent with a university as a knowledge-based institution. The libraries, he said, are the soul and foundation of a university. Lougee said the University Libraries were generally considered administrative costs. When Libraries gets new money, the collection is considered an academic investment but Lougee was not sure if the corollary was considered the same in terms of academic cuts. Lougee then clarified that the collection budget was not reduced; rather, the level of increased funding to sustain the current level of commitments was not fully supported.

To Neil Olszewski's question about consortial licensing of journals, Lougee said UMN had some of the more favorable contracts for journals, but the degrees of freedom often limited because the negotiations are for a group of institutions. What generally happens, she said, is to the extent the number of titles is reduced, the cost per title goes up. Alexander asked if there were situations in which monographs were packaged. Lougee said yes, and added there are a few publishers from whom eBooks are purchased, and they had been able to change profiles for what was automatically received from a publisher for both print and digital. Alexander also asked how many students were employed with the Libraries, and if that might be a possible reduction.

Lougee said they employed between 400-500 students and while they are working to bring everyone up to the new minimum wage, they were not looking to reduce that number.

Alexander wondered how much could be leveraged digitally, and said there is a widespread assumption that as things become digital they are cheaper, which is actually not the case. Lougee said libraries have not seen much of a reduction in costs when a publisher moves to digital. The University has been one of the early institutions to default to digital only for journals rather than sustaining. Lougee said eBooks generally cost a little less if they are limited to one user at a time, but have increased costs if multiple simultaneous users are enabled. Lougee then compared the costs of physical vs. digital storage. They were working with the Committee on Institutional Cooperation (CIC) on a shared physical storage program for journals located at Indiana University. Storage/ retention and preservation costs are likely to be reduced somewhat but this was matched by the continued influx of new materials. Lougee said one growth area is “born again” content: i.e., a publisher takes a body of work in analog form, digitizes it, and licenses the package of digital resources.

Alexander asked about the research value analytics and how they were measured. Lougee indicated most publishers provide data on usage; these data are used in decisions to cancel or continue resources. However, licensing agreements may restrict what is possible vis-a-vis cancellations during the period of the license contract.

Alexander thanked Lougee for the information.

## **2. Digital preservation and University Libraries**

John Butler, associate University Librarian, discussed digital preservation and also introduced Heather Noble, associate CIO, OIT, who had been assisting them in developing a University IT Capital Planning proposal for digital preservation. Butler began with an overview of IT capital planning and directed committee members’ attention to a presentation which included the following highlights:

- Any IT project over \$1M from any University unit
  - New process, revised version of the Six-Year IT Plan process
- To ensure alignment of University investments
  - Investments support President’s goals and U mission
- Review committee:
  - Provost, VP Research, VP Health Sciences, VPCIO, VP Services, CFO, Enterprise Architect, two senior academic leaders (deans/vice-chancellors)
- Financial aspects managed by CFO Richard Pfutzenreuter
  - Considers U-wide funding sources, including requesting unit contribution. Initiated as pilot in January 2015.
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  - 17 proposals have so far been queued for the committee’s review

Butler discussed the digital preservation proposition, saying:

- Foundation of knowledge creation is the scholarly record
- The record is increasingly digital
- As such, the record is at considerable risk of loss if not thoughtfully preserved

As such, Butler continued:

- Digital content is highly dynamic quantitatively and qualitatively
- Digital content does not lend itself to benign neglect
- Its preservation requires active and purposeful management

Butler highlighted the need for digital preservation, saying in digital libraries/file systems, the risks are:

- Lost/corrupted media
- Obsolete/missing rendering application
- Unidentified file format
- Catastrophic loss

Active digital preservation includes:

1. Ensuring bit integrity
2. Ensuring content health
  - a. Format viability
  - b. Complete metadata
  - c. Provenance
3. Averting single points of failure
  - a. Organizational
  - b. Technical
  - c. Geographic

Butler discussed the digital preservation framework:

Policy:

- Collection priorities (coordination w/ CIC, ARLs, others)
- Economics (feasible, scalable, sustainable)
- Legal (rights to replicate, distribute, disseminate)
- Institutional Policy (Research Data Management)

Tools:

- Ingest – format validation, fixity data
- Repository – metadata management (descriptive, preservation)
- Asset management -- integrity monitoring

Technology:

- Storage devices (SAN, NAS, Fabric)
- Processing (high computational throughput)
- Networks (Fiber, 10GB Ethernet)

Butler went on to review the IT capital planning proposal for the digital preservation management system:

- Three-year implementation project, with UMN-broad impact (i.e., Libraries, Bell Museum, U-Spatial, Minnesota Supercomputer Institute, research centers, others)
- Three options presented:
  - OIT Data Center

- Libraries data center
- Developing national options: *Digital Preservation Network* and *Academic Preservation Trust (AP Trust)*
- Total project costs over 3 years (\$1.25M to \$2M) include:
  - Digital preservation management system (software)
  - Infrastructure (servers, storage, network)
  - Staff (systems administration)
- Preferred option to be approved by the Enterprise Architecture Technology Review Board (technology and security review)

The committee discussed the information presented.

Olszewski asked about big data versus small data. He said he has a lot of digital data, however, he still has lab notebooks and he wondered how it would all stay connected. Data will be stored, but without the notebooks it is fragmented and meaningless, Olszewski said. Butler said they had been in discussions about ELMs (electronic lab notebooks) with faculty and vendors. Stopping points in the past were dramatic differences in preferences and behaviors at the discipline level, Butler said. Thus, a common solution was difficult to discern. Lougee added that research protocols for validation and approvals, how those are tracked over time, and credentialing the person is difficult. Once ORCID (Open Researcher and Contributor ID) is in place it will be easier to organize the data and associate the lab notebook and other information to the responsible researcher.

Butler said that since the research data management policy went into effect approximately 20 research data sets had been curated, a good number of those from faculty who are submitting a manuscript for publication. They need to reference the data set, Butler said, and they are assigned a DOI (digital object identifier) so they can reference it for publication. There are many identifiers, which ultimately provide this kind of distributed access model through persistent linking, he noted.

Assistant Professor Roberts said getting people to participate in the process of archiving data was in many ways a cultural shift. Butler agreed, and said they were also being motivated by compliance requirements. There is greater engagement with faculty in the curation process, he noted. Lougee said that among the policies, there was a fair amount of variability about what could be shared, but it was useful to see the common elements. Alexander asked about the idea of “business value” of digital preservation. Butler said digital preservation was a lot about risk management. There are millions of files that are only available digitally, and there is no print or other backup. There have been significant investments in digitizing materials for purposes of accessibility and the like, so it is a matter of protecting those investments. Alexander asked about data that was not necessarily digital, such as hand written notes and photocopies of various items. Butler said the Libraries had another project in the exploratory stage, an electronic records project. More and more of the content of scholars comes on disks and digital media, he noted. He went on to say they were learning how to bring those items into managed environment, how to conduct the forensics to ensure they are not unwittingly exposing any private data that might have been on the personal computer, and doing an archival curation process. Lougee added that many archives the Libraries receive represent someone’s work over time, for example, the print and lab notebooks of Norman Borlaug. They are digitized but they are not actionable, and

Lougee said there were ways to organize analog materials, however the Libraries hadn't taken that on.

The committee discussed the environmental impact of storing digital as opposed to storing physical materials. Olszewski said there was a lot of energy consumption in the digital world. Lougee said there was a report by Paul Courant that looked at all the costs comparing formats, including energy consumption and environmental impact. However, with so many variables, it was difficult to get the entire picture in terms of metrics.

Alexander thanked Butler for the information.

### **3. Information technology practices and policies**

Alexander welcomed Bernie Gulachek, associate vice president, Office of Information Technology (OIT) and Heather Noble, associate CIO, OIT, saying they were joining the committee as part of their annual survey to gather input on practices. Alexander encouraged the committee to raise issues that had to do with the Libraries and information technology.

Gulachek said they were there to understand what the committee thought IT priorities and focus ought to be in the next fiscal year. OIT was beginning the third year of the governance process, which was designed to ensure that IT was listening to the community, he said. Prior to the process beginning in 2012, there was a perception that IT was making up its own agenda and was not well aligned to the needs of the community. Gulachek said they were conducting almost 50 meetings and had heard from over 1300 people in an online survey to ensure IT activities in the next fiscal year were in alignment with what they were hearing from the community and senior leadership. He said they wanted to hear from the committee about challenges regarding technology, such as what services may be lacking, what the committee might be hearing from students and colleagues, and if there were things they should stop doing.

Alexander asked what the relationship was between OIT and the kinds of technology deployed in the Libraries. Gulachek said the two often worked very close together in terms of how applications or platforms worked with each other. Often library applications are running on infrastructure that is managed by OIT, but the application and the configuration in which it works is often something one of the functional units would manage. Butler noted the Libraries no longer wanted to be in the storage/server business as it was not their core value to the University. Alexander asked what would involve OIT if the Libraries wanted to focus on IT. For example, students doing searches do not know how to handle the main entry point of a search, Alexander said. They get thousands of hits and cannot distinguish books from book reviews. There is a learning curve, but who makes the decisions about what shows up for students who think they have found the portal, Alexander wondered. Butler said the Libraries homepage with the main search function was the responsibility of the Libraries. The infrastructure for that, he said, was no longer in OIT. Gulachek said when the University began to use the Google search appliance, OIT worked very closely with the Libraries, as Libraries had a sophisticated understanding of how searches should work that technologists don't necessarily understand. Gulachek said that was an example of OIT running the technologies but looking to its partners for guidance as to how they should work.

Gulachek asked if there were pain points being encountered as they used technology across campus. Roberts asked what the role was for OIT being specialized vs. universal as everything becomes more and more technologized. What were the Libraries responsibilities and what were the responsibilities of another office, he wondered. Gulachek said they were constantly searching for their roles and responsibilities, and conversations such as this one helped inform those decisions. It is a constant dialogue, he said, about what OIT should be providing. Some services become commodities provided by vendors, and some are discontinued. Gulachek referred to [hypecycle.umn.edu](http://hypecycle.umn.edu), which helps OIT identify the emerging technologies, creates forums for sharing ideas, and OIT providing support for them. This is a method of tracking how technologies mature so they have an early indication of what OIT should be paying attention to, Gulachek said. Olszewski said he felt data management and digital preservation were priorities, and there was a significant need for them. Michelle Brasure said one of her frustrations was trying to find a good cloud resource to share with partners. Sometimes they email back and forth, other times they use netfiles but it was a really clunky ways to share data, she said, and asked if OIT had thought about the best ways to deal with that. Gulachek said OIT was considering these issues and said he felt there would be an emerging on-campus solution, but it had not come forth yet. He said Google was a solution that provided storage at no cost. In the due diligence conducted, Google has provided the same assurances as vendors with whom the University puts the same kinds of data, Gulachek said. He noted there were uneven risk tolerances among institutions, and many had expressed caution about Google. OIT was confident in Google's ability to manage data better than they could and provide storage and sharing capabilities without having to go through a technologist.

Alexander thanked Gulachek and Noble for the discussion.

Hearing no further business, Alexander adjourned the meeting.

Mary Jo Pehl  
University Senate