

LEC Notes 2019-06-25

Agenda

- Digital preservation and the environment discussion with Shawn Nicholson
- Status update on leadership format change
- Follow-up items from last month's meeting:
 - Recycling at Remote
 - Bee-Friendly campus
 - By-laws comparison with Ergo

Attending: Tans, Nicholson, Kendall, Perentesis, Magar, Calvert, Lorenzo, Spaniolo

Attachment below, following minutes: Recommendations for Reducing the Environmental Impacts of the MSU Libraries (Report)

Digital preservation and the environment discussion with Shawn Nicholson

Shawn's comments:

It's not easy bein' green

"Green computing" considers whole life cycle:

- Energy efficiency
- Production
- Disposal

Does not appear to be a "green computing" initiative at MSU

HPCC recently upgraded their HPC to the top 500 (i.e., it counts as a "super computer")

It also is in the top 500 Green List. Defunct group, used to look at environmental consequences of computing.

Laconia

Crescent Road data center \$46m.

Budget: claim that it will be more energy efficient

PUE: Power utilization. Ratio of total amount of energy vs. total amount for computing.

Industry best is around 1; MSU appears to be aiming for 1.3. (1 is best.)

Consolidating tiny data centers around campus to gain efficiency.

IPF was promoting energy efficiency more than IT.

The Library

2013, Cliff Haka asked Jim Hensley, Terry Link, Shawn Nicholson to write a report about the Library's role in environmentalism. What could we do? Not a deep effort. Worked with IPF to think about water use, electrical use, solid waste.

Educational component of energy and resource conservation.

Small, micro level things, in aggregate, can make a difference.

Get everyone to shut down, or use auto shutdown software.

Energy star equipment

Refresh cycles

4-5 year refresh cycle for machines

5-6 year refresh cycle for servers

Handme down cycle -- sent to campus IT to use

Maintain longevity for equipment while making sure it keeps up with technology cycles

WG26 is a small data center in the Library.

Gigantic air conditioner. Air cooling is typically 30% of total operation of a data center.

Analysis with temperature sensor says we are efficient.

Virtualization helps: single box pretends to be a bunch of computers.

PUE. We can have an efficient data center but it is still an energy hog. That is, the ratio of cooling to overall consumption is low, which means more of the energy is going to computation than cooling.

SLA service level agreement with campus IT to move service level activities to Crescent Road data center. Could aid our efficiency.

Will keep our data center for disaster recovery (for 3-5 years anyway) and move the rest out to Crescent Road.

Air conditioner. Do we need to keep it as cool as thought? New research says maybe not.

Ryan Ward (?) moved from Natural Sciences to ITS.

Notes on Keith Pendergrass's talk to the National Digital Stewardship Alliance, which was what prompted us to invite Shawn.

Question insatiable desire to have everything digital.
Analog works well, though inconvenient to distance users.
Exciting new collection, but does it need to be digitized right away, if ever?
Digitize because item is fragile. Internet archive and game emulation.
Critical appraisal for items before digitization
Why? What's the long term?
What about disposal?
Deaccessioning digital objects. How different from paper?

Discussion

“Digital” things (like books) being billed as “green”

Collection development? How different?
Collection management. Format migration since scriptoria.
Indiana University Digitization project. Fear of losing unique content. Triage. Which things? Rare, unique, vulnerable?

150 audio items/month but accessibility reduces output by 70%

Vulnerable tapes. 1972-1982, tape was poorly made. Bake at low temperature to remove water.

How digitization decisions get made
User expectations
Legal and technical limitations
Special handling for vulnerable collections

Status update on leadership format change

- Bylaws still need to be drafted

Follow-up items from last month's meeting:

- Recycling at Remote
 - Pizza boxes are ok! Even greasy. Goes into mixed paper recycling.
- Bee-Friendly campus
 - Jonah will follow up
- By-laws comparison with Ergo
 - Still in process

- Let's try to keep it simple -- basic operating procedures, elections, recording.
- Hesitant to call it "bylaws"

**Recommendations for Reducing the Environmental Impacts of the
MSU Libraries
November 2014**

Director of Libraries Charge to the Task Force on the Environment September 2013:
Raise awareness and make achievable recommendation to reduce environmental impact in the areas of energy, waste and water.

Task Force Members: Jim Hensley, Terry Link and Shawn Nicholson

The Task Force engaged MSU Infrastructure Planning and Facilities staff, sponsored a series of educational sessions, communicated to the standing Library Environmental Committee, and released of an interim report to the entire staff in an effort to raise awareness of environmental impact at an individual, Library System and University level. In preparation to advance the second portion of the charge (make achievable recommendations), the Task Force first confronted the findings that the Library, individually and collectively, has been quite successful actors in pursuing environmentally sustainable projects and programs. While these activities remain robust, we seek to offer a set of recommendations based upon available data, observations, stakeholder discussions and review of emerging best practices from other institutions of higher education. In considering how to organize the report, we focus on three major domains: energy, waste and water. We further divide the recommendations into three implementation categories: individual, organization and collaborative.

ENERGY

Individual

Power management of equipment

Computers and other equipment should be powered down when not in use.

Reduce lighting use

The Retro-commissioning study contracted by IPF identified areas of over-lighting. Lighting is reduced or turned off in unoccupied spaces, especially the restroom spaces.

Heating and Cooling

Utilize IPF Loaner program for individual comfort. IPF offers via a pilot small energy efficient appliances such as foot warmers.

Comply with temperature guidelines on individual thermostats.

Organizational

Establish and monitor policies for power management of equipment.

All newly purchased equipment should be set for power saving at the start. Power management guidelines for computers and other equipment should be developed, shared, posted, and monitored for all users.

Review and Monitor Thermostat Settings

Where individual thermostats are indeed in place and working, set and post policies on settings. Where possible consider programmable thermostats. Current campus wide guidelines are 68-74 degrees. Considering collection maintenance, and other uses of space review the possibility of raising or lowering by 1 or 2 degrees the settings from standards currently used by the campus.¹

Design label for all thermostats with seasonal temperature range.

Guidelines for out of typical hours workers

Outside normal hours 7-7, consolidate in location considerate of lighting.

Reduce lighting in areas determined to be over-lit

The retro-commissioning study contracted by IPF identified select areas where light availability was above light standards. In areas where removing light bulbs can reduce the oversupply of light without going below the standards, this action should be taken immediately by staff.

Expand use of LED fixtures in retrofit and new spaces.

Purchases of equipment that uses energy

Purchase computers, copiers, printers, projectors, when at all possible, with lowest energy use rating, Energy Star or EPEAT.

Sharing hardware where possible should be emphasized where it can reduce energy consumption.

¹ A perusal of thirteen (Northwestern, Maryland, Brown, etc) other colleges and university policies in our climate zone show many with a summer cooling temperature of 78 degrees and a winter heating temperature of 68 degrees.

Collaborative

Invest in all energy reduction recommendations from the Energy Commissioning study with paybacks of less than five years.

The commissioning study done in 2012 for the Main Library offered numerous places to reduce energy consumption. Those listed with five year paybacks or less should be implanted as funds (either University's or Libraries, or both) become available. These technological improvements will save the university money while reducing greenhouse gas emissions.

Review and Monitor Thermostat Settings

Regular energy monitoring of HVAC operations and pursue random temperature sampling. Make routine use of Data loggers.

Draft and Promulgate Policy on lights and energy and monitor and enforce them

Lighting use policy should be drafted for each separate unit of the library based upon occupancy and existing lighting controls. For example, units that close before the Library closes should have lights turned off when last person leaves. If this requires a technical fix, the cost and payback of that fix should be obtained and pursued. Lighting spaces that are unoccupied for long periods of time is a waste of resources, money, and an unnecessary contributor to greenhouse gas concentration.

Use of manual or sensor switches should be considered.

Mandate custodial work floor by floor when Library is closed to reduce energy consumption.

Develop and Implement Ongoing Education Program

Working with current efforts by the Library Environment Committee utilize and enhance as necessary existing educational materials and efforts of the Energy Education and Be Spartan Green programs to provide ongoing education and feedback to staff and users about reducing energy, water, and solid waste.

WATER

Individual

Discourage purchase of bottle water in lieu of floor by floor filtered water stations.

Organizational

Design Water Education Program

Develop education materials and place near all water devices to educate (remind) users on water usage.

Collaborative

Upgrade Water Saving Technologies

Utilizing research done previously of water use, upgrade water saving devices in restrooms of highest use, with less than 10 year payback.

Provide Water Filtration Stations

Partner with IPF to provide/install high volume water filling stations in areas with highest activity (staff or users) for filling water bottles.

SOLID WASTE

Individual

Bring your own container

Encourage staff to use reusable containers.

Printing

Set printer default to duplex.

Organizational

Monitor Waste Amounts

Visibly track waste accumulation in dumpsters to see if we can reduce the number of trips waste haulers make to the building. Empty only full or nearly full dumpsters.

Share data with users

Hold regular meetings to inform staff of progress

Review Purchasing Guidelines

Review current University purchasing guidelines for items most used by the library and make recommendations to reduce waste and acquire more items with post-consumer recycled content.

Educate staff who make purchases on guidelines and options.

Collaborative

Review Options with Cyber Café

A recent waste sort noted that a bulk of material we are landfilling comes from the Cyber Café. We should approach waste reduction efforts with them using the classic three R's – Reduce, Reuse, and Recycle approach. Part of this may be an educational program for customers and or developing other options for collecting materials for recycling.

HUMAN RESOURCES COMMITMENT

Create a position with responsibility for monitoring and overseeing environmental impacts of operations.

The position should be initially at least a ½ time position. The position should report directly to the Director and EC and be assisted/advised by the Library Environment Committee and Facilities, and be liaison to Campus Sustainability and Energy Education offices. The responsibilities would include monitoring facilities performance and reporting regularly to staff; educating staff and users; drafting policies and guidelines, monitoring their performance and impacts; and monitor ongoing research of best practices. The person should be knowledgeable and committed to environmental conservation, able to work effectively in groups, facilitate discussions, and be willing to involve themselves in campus and national higher education environmental conservation organizations (AASHE , ALA's Sustain RT, etc.). Person would regularly tour facilities including before and after regular hours to identify potential energy and waste that might be reduced through better education, policies, and/or educational efforts. Regular reviewing of data collected by the university on building performance should be reviewed and shared monthly. Semi-annual reports on performance should be shared with staff and users as a feedback mechanism and awareness raising practice.

We feel that given the size, use, and visibility of the Libraries, support from campus administration to help support such a position for at least a two year trial run would be appropriate and worth pursuing. We believe that if the recommendations listed above are going to bear fruit, there must be a clearly visible leader with responsibility to oversee and follow through with the recommendations.