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Future of the Library? Turning Conflicting Pressures into Compelling Opportunities

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Future of the Library? Turning Conflicting Pressures into Compelling Opportunities

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SCUP-46, July 2011, National Harbor, MD
UMass Libraries Challenges

- Tallest library building in the country: 26 Stories!
- Stacks full to capacity
- Aging building systems, code challenges
- A successful Learning Commons—but with long lines
- Unmet user needs and demands of increasing mobility
- Pressures to transform the library to meet 21st Century needs
- And... Campus pressures for more space for other functions
Session Learning Outcomes

1. Recognize functions compatible with future libraries and their mission.

2. Identify forces for change on research libraries and space implications for new facilities.

3. Compare short and long term stewardship demands on campus planning.

4. Recognize variation in attitudes about change in libraries, from staff to faculty.
My Favorite Quote

In “A Letter to His Kids,” Wired's Founding Editor Recalls the Dawn of the Digital Revolution:

In the very first issue (March 1993) I wrote, “The Digital Revolution is whipping through our lives like a Bengali typhoon.” Got a lot of grief for that typhoon reference — as if it were a pretentious exaggeration instead of the understatement it turned out to be. Should have said the Digital Revolution was ripping through our lives like the meteor that extinguished the dinosaurs. Practically every institution that our society is based on, from the local to the supranational, is being rendered obsolete. This is the world you are inheriting.

Louis Rossetto
Attributed to Charles Darwin:

“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.”
The Information Age and the Printing Press: Looking Backward to See Ahead

James A. Dewar
Rand Report P-8014. 1998

http://rand.org/pubs/papers/P8014/index2.html
Looking backward to see ahead...

- Information Age is defined by networked computers
- Internet dates back to 1962 when concept of packet switching and ARPANET (Advanced Research Projects Agency Network) was developed to maintain connectivity of the military command and control network in case of nuclear attack.
- World Wide Web – 1990
- Google released – 2000
Looking backward to see ahead...

Communication before the printing press: 

*One to One*

Communication with the printing press: 

*One to Many*

Communication in the Information Age: 

*Many to Many*
Looking backward to see ahead...

The parallels between the printing press era and today are sufficiently compelling to suggest:

Changes in the information age will be as dramatic as those in the Middle Ages in Europe.

The future of the information age will be dominated by unintended consequences.

It will be decades before we see the full effects of the information age.
Social Media Sparked, Accelerated Egypt’s Revolutionary Fire

By Sam Gustin  February 11, 2011 | 2:58 pm  Categories: People, Politics, Social Media
Get short, timely messages from Charlie Sheen.

Twitter is a rich source of instantly updated information. It's easy to stay updated on an incredibly wide variety of topics. Join today and follow @charliesheen.

Sign Up

Charlie Sheen (@charliesheen)

Mortals; charity raffle tickets NOW! backstage, onstage, party, flights, rooms, swag... ME. What else do you want? Go! http://bit.ly/ftthrY

about 12 hours ago via Twitterator

"... about a 1/2 mile out I put on the music. I play Wagner; scares the hell outta the Trolls, my boys love it... (cont) http://deck.ly/~CLKMin

7:22 AM Mar 28th via TweetDeck

ReyDavidRamos We as the faithful followers of the true WARLOCK WARRIOR shall forever be indebted to the great philosopher that is @charliesheen
Today’s undergraduates...

- Thrive in a digital, graphical, gaming, noisy, and multitasking world
- Always-on, interactive life that blends the social and academic with food
- Multiple and integrated communication modes (cell phones, pdas, IM, RSS, blogs, podcasts, etc.)
- Learn experientially (by trial and error and through collaboration with their friends, normally in groups)
- High-achievers
- Expect choices, customization, self-service, and instant gratification

*Mantra: Get us what we want, only what we want, in the format we want it and do it now*
Today’s students require libraries to take risks to...

- Provide near 24/7 access to resources, services, and facilities (remote and in building)
- Create spaces that can be flexibly transformed by students to meet their needs
- Study new technologies our students are using to see if they have potential for enhancing our services (Facebook, Twitter)
- Study emerging technologies; look at what other libraries are doing with technology
Our users require we take risks to...

- Revolutionize our services and systems
- Consolidate service points (make most efficient use of our prized staff and minimize run around, come back later, and referrals that students find frustrating)
- Add convenience for users
- Simplify services
- Self-service and on demand options
What Will Characterize the 21\textsuperscript{st} C Library?

Building on the strengths and traditions of librarianship, academic libraries will:

- Work with our communities to collect, organize, analyze, and preserve information and data resources
- Create spaces that can be flexibly transformed to meet the changing needs of students and faculty
Collaboration with Partners

WITH CAMPUS COMMUNITIES:

- Re-utilize library space that formerly held print collections
- Bring together compatible service providers
- Integrate library services and collections into teaching and research mission in a new way
- Maintain visibility of library services and collections

WITH OTHER LIBRARIES:

- Utilize both fiscal and human resources to maximize efficiencies
- Maintain high level of services with reduced resources
- Reassign existing personnel to “21st Century Library” needs
Five Colleges Libraries Collaboration

Five Colleges Consortium

- Amherst College - 1,600 students
- Hampshire College - 1,400 students
- Mount Holyoke College - 2,200 students
- Smith College - 2,600 students
- UMass Amherst - 27,016 students

Existing collaborations

- Shared online catalog
- Easy borrowing of books with 1 day courier service
- Shared East Asian librarian (cataloger and liaison)
- Shared off-site shelving facility (remote storage)
- Cooperative collection development
- Collaborative technical services
Shared Offsite Print Depositories

- High density storage facility for lesser-used items
- Retain only one copy
- JStor archive
- Other archives ACS, IEE/IEEE, ProjectMuse
- Affiliate members
The Library’s Goals for the Project

• Convert underutilized space into new functions
• Revitalize the Library facilities
• Enhance the library as a learning center
• Support graduate students more effectively
• Support advanced research and e-science with new services
• Explore partnerships for integrated services
• Enhance staff services, efficiency & effectiveness
The Campus Planning Perspective
Campus Context

- UMass Amherst Strategic Plan for 2020
- Emphasis on research
- Growth projections
- Pressure for more classroom space and modernization for more active ways of learning
- More effective use of existing space
UMass Amherst Summary Facts

### Students

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td>Undergraduate &amp; Stockbridge</td>
<td>20,126</td>
<td>22,500</td>
</tr>
<tr>
<td>Graduate</td>
<td>4,214</td>
<td>5,214</td>
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<tr>
<td><strong>Total Students (excl. CPE)</strong></td>
<td><strong>24,340</strong></td>
<td><strong>27,714</strong></td>
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### Staff

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<tr>
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<tbody>
<tr>
<td>Tenure-Stream Faculty</td>
<td>1,554</td>
<td>1,776</td>
</tr>
<tr>
<td>Executive, Administrative, Managerial &amp; Professional</td>
<td>1,777</td>
<td>2,031</td>
</tr>
<tr>
<td>Classified</td>
<td>2,088</td>
<td>2,386</td>
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<tr>
<td><strong>Total Employees</strong></td>
<td>7,969</td>
<td>8,823</td>
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### Space

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<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
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<tbody>
<tr>
<td>Academic</td>
<td>3,727,700</td>
<td>4,576,300</td>
</tr>
<tr>
<td>Residential</td>
<td>3,443,000</td>
<td>3,943,000</td>
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<tr>
<td>Student Life</td>
<td>686,900</td>
<td>701,700</td>
</tr>
<tr>
<td>Recreation</td>
<td>644,700</td>
<td>704,700</td>
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<tr>
<td>Administrative</td>
<td>1,924,100</td>
<td>2,014,800</td>
</tr>
<tr>
<td>Parking</td>
<td>390,500</td>
<td>595,500</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>10,816,900</strong></td>
<td><strong>12,536,000</strong></td>
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## Building Conditions

<table>
<thead>
<tr>
<th>Condition</th>
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<tbody>
<tr>
<td>Good</td>
<td>Blue</td>
</tr>
<tr>
<td>Fair</td>
<td>Red</td>
</tr>
<tr>
<td>Poor</td>
<td>Red</td>
</tr>
<tr>
<td>Not Rated</td>
<td>Grey</td>
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*From the Campus Framework Plan - Wilson Architects and Ayers Saint Gross Arch. & Planners*
Buildings of Historic Interest

From the Campus Framework Plan - Wilson Architects and Ayers Saint Gross Arch.& Planners
Detailed Discipline-Based Plans

- Library Master Plan 2010
- Learning Landscape Study 2010
- Campus Master Plan Framework
- Science & Engineering Plan 2008
- Classroom and Academic Plan 2009
- University Health Services 2010

Science & Engineering Plan 2008

Library Master Plan 2010

Learning Landscape Study 2010

Campus Master Plan Framework

University Health Services 2010

Classroom and Academic Plan 2009
Campus Space Needs

- More classrooms
- Renovate lecture halls and accommodate those classes elsewhere during construction
- Introduce team based learning spaces
- Find additional space for administrative offices
- Relocate various functions to enable renovation phasing
Institutional Goals for the Project

- Analyze existing space utilization
- Understand the future print collections needs
- Identify compatible uses and their space needs
- Add classroom capacity
- Identify space that can be repurposed into administrative office space
- Phasing and cost implications
“Supply” Side: The Building Challenges
The Existing Libraries

- **Bartlett Hall Image Collection** - 1,600 sf
- **Du Bois Library** - 436,000 gsf
- **Goodell Building Storage** - 7,300 sf
- **Integrated Science & Engineering Library in Lederle** - 32,100 sf
- **Five Colleges Library Depository** - 250,000 volumes, off-campus
- **Bartlett Hall Image Collection - 1,600 sf**
Du Bois Library Tower

- 26 story Research Library built in 1973 by Edward Durell Stone
- HVAC upgrades are essential and complex
- Exterior wall lacks insulation and requires replacement
- Sprinklers needed throughout
- User accommodations need renovation and power, triggering building-wide systems renovations
- Constrained entry zone
- Loading dock is deficient
Existing Du Bois Structure

- Floors with enclosed study carrels alternate between stack levels
- Stacks are in pairs of self-supporting book stack levels with low ceilings
- User navigation is difficult with alternating locations of stack floors
- Existing toilets are only provided on study carrel floors

Conclusion: Existing carrel floors are the most suitable for enclosed spaces that require mechanical air distribution systems because of the 9’ – 0” high floor to ceiling height.

Typical floor: 11,000 gsf/ 8,900 nsf
Existing Du Bois Constraints

- Stacks are full beyond working capacity
- Enclosed single carrel rooms are in poor condition and seldom occupied
- User seating in the tower is old and needs renovation
- Vertical distribution of functions is heavily reliant on elevator service, which needs upgrading
Du Bois Space Allocation Issues

- Tower floor layouts, although column free, limit desirable adjacencies
- Current restroom locations restrict occupancy capacity on floors and do not meet code
- Narrow windows reduce natural light to interior workspace
Space Utilization Analysis

- “Right sizing” programming exercise demonstrated the space is used quite efficiently
- More space could be freed up by relocation of low usage print materials into storage, but conversion of self-supporting stack zones is problematic
- Any major renovation for any portion of the tower will require that the entire building be brought up to code
- Phased enabling projects will be needed before any space can be converted
Existing Science & Engineering Library

- ISEL location is convenient for its users, on pathway connecting adjacent buildings in the Lederle science complex
- Its “bridge” configuration offers flexibility of layout with potential of daylight exposure on both sides with through views
- Currently 3 floors of stacks, but diminishing demand for print materials onsite
“Demand” Side: The Visioning Process
Visioning Process

- A series of workshops involving representatives of potential compatible uses along with administrators, library staff, students & faculty
- Alternative future scenarios for the library
- Charrette sessions to test alternatives
Drivers for Library Planning

“We live in perpetual beta…”

- **New types of digital scholarship** are developing in the humanities and social sciences
- **Data driven research and e-science** is on the rise, generating need for curation of institutional research data
- **User want new types of services** and support, greater mobility and collaboration using information resources
- **Librarians’ roles are changing** with the shift to electronic resources, balanced with continued responsibility for print collections
Library Space Needs

• Develop new types of services, and offer facilities with specialized support

• Accommodate future growth in the general collections, although diminishing, either on or off-site

• Rationalize the distribution of functions to anticipate future shifting of roles shift from managing print to electronic resources

• Enhance Special Collections and University Archives, enlarge and showcase the collections

• Integrate the image collections and provide facilities to create with media resources
User Space Needs

- Renovate and expand user seating areas
- Better facilities and services for graduate students
- **Center for consultation** on digital scholarship, research support, scholarly communications and data curation services
- Add more seating in the Learning Commons
- Provide more space for library instruction
The Learning Landscape Context
The Learning Landscape Context
Findings about Learning Space Needs

- Imagining future learning experiences
- Changes to Gen Ed curriculum, 4th credit hour virtual
- Desire to transition to team based learning with new kinds of teaching spaces
- Lack of distributed collaborative work areas around campus to work productively in-between classes

*Breakout Auditoriums*

*Learning Studios*
University Space Needs

- **Immediate need for new classrooms** as swing space to enable renovation of large lecture halls
- **More variety in teaching spaces** to accommodate diverse teaching styles
- **Additional administrative office space**, especially for new Dean’s offices and the Office of Research and Engagement
- **Maximize use of existing space on campus**
Prioritizing Competing Demands

1. Alignment with the Library’s mission and compatibility of functions
2. Support for learning and teaching excellence
3. Potential to enhance services for learners, to support them more effectively in out-of-classroom study, research and project activities
4. Services that will benefit from being located in the only facility on campus open 24/7
5. Groups that will enhance existing services by offering even more integrated and convenient services to users (e.g. Center for Teaching in the Teaching Commons)
Opportunities for Partnering: Strategy Development
Concepts for New Facilities

- Research Commons
- Science Commons
- Graduate Hub
- Teaching Commons
- Learning Labs
- Media Hub
- Colloquium Center
- Café

Institutions mentioned:
- Stanford
- University of Chicago
- Johns Hopkins
- Steelcase
- Clemson University
- Apple Store “Genus Bar”
- Rotman School of Business
- JWT

DEGW
A Research Commons

- Centralized research support services
- Data curation, statistical analysis and related consultation/support services for social sciences and humanities
- Research grant administrative support (grant writing, proposal review, budget approval)
- Promote collaboration among researchers, on campus or off

**CAMPUS PARTNERS:**

*Research & Liaison / Scholarly Communications Librarians*

*Vice Chancellor for Research & Engagement*

*Office of Grant & Contract Administration*

*Office of Commercial Ventures & Intellectual Property (Technology Transfer, Patents, Trademarks, etc.)*

*Academic departments (statistics)*

*University Press*
A Digital (Institutional) Repository

- Capture and preserve the intellectual output of the university community
- Provide a mechanism to “showcase” campus research
- Provide an immediate and valuable complement to the existing scholarly publishing model
- Build on a growing grassroots faculty practice of self-posting research online
- Offer a strategic response to systemic problems in the existing scholarly journal system

CAMPUS PARTNERS:

Research & Liaison / Scholarly Communications Librarians

Vice Chancellor for Research and Engagement

Provost, Academic Deans, and Faculty

Graduate School

University Press
Research Commons Concept

CONSULT
- Research + Services Offices
- Research + Engage. Offices
- Consult Rooms
- Incubator Space

WORK
- Graduate Hub
- Project Rooms
- Work Stations
- Bookable Rooms
- Cafe

COLLAB
- Drop-in work zone
- Collaborate zone
- War Room
- Access Grid Room
- Visualization Lab

* = Service Point
Du Bois Research Commons

PROGRAM COMPONENTS

• Scholarly Communications /Research & Liaison Services Librarians

• Collaborative work areas

• Bookable meeting rooms with videoconferencing

• Data services/GIS Lab for statistical related consultation services

• Visualization Lab for Digital Humanities & Social Sciences

• Incubator space for special grant-funded projects or research

A consultation center supporting the full range of the research process, from early grant submission to data curation of the findings, with collaborative settings to promote interdisciplinary work
Du Bois Research Commons

- Incubator suites
- Graduate work areas
- Collaborative spaces
- Consultation zone
- Staff offices
The Science Commons

PROGRAM COMPONENTS

• Integrated service desk
• Offices for Science & Engineering librarians, with specialists in e-science, scholarly communications, data curation, GIS and resources
• Research & Engagement offices
• Quiet and collaborative work areas
• Visualization room, equipped with AccessGrid technology
• Flexible team-based teaching room
• Café with work areas

A consultation center for emerging needs of e-science and scientific data services, with a range of collaborative and individual work settings at a cross roads in the Lederle Science complex.
A Graduate Student Hub

• A central campus place for graduate students to work
• Quiet reading for individual study
• Group work on interdisciplinary projects
• Sharing sessions with peers
• Relaxing between
• Ability to leave materials overnight
• Collaboration space with projection and multimedia technologies

Campus Partners:

Research & Liaison / Scholarly Communications Librarians

Graduate Dean

Graduate School
A Graduate Student Hub

PROGRAM COMPONENTS

• Quiet reading room for individual study
• Bookable meeting rooms
• Collaboration spaces
• Comfortable, informal seating
• Lockers for personal materials

A serene place to concentrate and a comfortable setting to meet other graduate students, adjacent to the Research Commons services
The Teaching Commons

- Consultation with experts about new ways of teaching and developing digital teaching expertise
- Team work involving educational librarians, Center for Teaching staff, instructional designers and academic technologists
- Collaborative work by faculty developing course materials
- Working with media for teaching, including recording audio for podcasts and video editing
- Demonstrations and practice using the latest technologies for teaching

CAMPUS PARTNERS:

Information Literacy/Instruction Librarians

Center for Teaching (Instructional Design)

Office of Faculty Development

Academic Computing (OIT)
The Teaching Commons

PROGRAM COMPONENTS

- Spaces for consultation with expert teams about pedagogy and new digital teaching materials

- **Staff space** for educational services librarians & Center for Teaching staff, instructional designers and academic technologists.

- **Collaborative lounge & workspaces**

- **Media development workstations and editing booths**

- **Innovative/model classrooms**

A central location for consultation on new ways of teaching, with resident expert staff from the Center for Teaching to assist faculty and help develop digital teaching tools.
Expanding the Learning Commons

- Integrates library and other campus services, staff, resources, collections, and technologies
- Enhances services at the heart of the campus
- Integrates social and academic
- Accommodates student lifestyles with long hours and food services
- Provides varied and flexible collaborative spaces that adapt to students’ changing patterns of learning and innovating
- Connects students with resources and support they need to succeed on campus
Expanding the Learning Commons

- Integrates library and other campus services, staff, resources, collections, and technologies
- Enhances services at the heart of the campus
- Integrates social and academic
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CAMPUS PARTNERS:

Academic Advising
Writing Center
Learning Resources Center (Student Tutoring)
Disability Services
Career Services
New Student Orientation (tours)
Office of Info’n Technology (Help Desk and Computer Classrooms)
Food Services (Café)
Learning Labs

PROGRAM COMPONENTS

- Innovative / experimental classrooms
- Flexible furnishings, high ceilings and multiple projection surfaces
- Team screens and whiteboard surfaces for co-creating
- Sub-dividable
- Doubles as meeting space
- Located adjacent to informal learning/spill-over space
- Storage of furniture & equipment

Flexible experimental teaching spaces for team based learning, technology enhanced and supported by the Center for Teaching in the Teaching Commons
A Media Hub

- Support for students – mostly undergraduate – working with multimedia resources
- Creating, editing, listening, viewing
- Specialized staff support with both software and hardware expertise
- Library collections and viewing/listening, equipment check-out
- Printing, plotting, scanning

**Campus Partners:**

*Library Media Collections*

*Academic Computing (Technology services)*

*Campus Audio-Visual Services*
A Media Hub

PROGRAM COMPONENTS

- Media production workstations
- Open collaboration areas
- Integrated services desk
- Hardware lending and demo area
- Staff work areas
- Audio/video editing booths
- Enclosed viewing rooms
- Printers and plotters, copy/print/scan stations

For co-creating, repurposing, producing, listening and viewing media resources with specialized staff support on content, hardware and software.
New Public Amenities

**COLLOQUIUM CENTER**
- Flexible layouts, 150 seats
- Multiple large screens
- AccessGrid technology enabled
- Displays to showcase research
- Adjacent breakout rooms
- Great campus views at top

**CAFÉ**
- New enlarged café where circulation desk used to be at entry
- Working environment with power and range of collaborative seats
- Activity visible from podium, lit at night, views to lake
DuBois Planning Strategy

- Convert underutilized carrel floors
- Retain existing stack floors for collections
- Locate heavy traffic functions on lower levels
- Demolish portions of double stack floors for special destination spaces
- Develop top floor as a shared campus facility
- Consider expansion of the podium level
Proposed Function & Seating Distribution

- Moderate & episodic traffic in higher levels for meeting room and work spaces
- High traffic functions in lower levels - informal study & classrooms for LRC, OIT and Library
Proposed Du Bois Master Plan

- Create additional classrooms in the Learning Commons
- New café at entry
- Remove 3rd Fl. to create the Learning Studio on 2nd
- Convert carrel floors to classrooms & offices
- Create Research Commons on 19-20th
- Expand Special Collections
- Increase user seats
- Colloquium Center on top
Shifting Space Usage

- Library functions decrease from 38% to 25% of the space
- Stacks decrease 43% to 37%, assuming 10 yrs growth off-site

- Commons space increases from 10% to 22% with addition of Research Commons, Media Hub and other new facilities
- Compatible uses increase from 9% to 16% of total space
Complex Challenges for Implementation
Balancing Short and Long Term Needs

SHORT TERM CHALLENGES
- Shifting organizational priorities
- Opportunities that arise in the academic landscape
- Business and physical deficiencies that arise

RESPONSES
- A pool of swing space provided by the campus
- A grasp of the existing space portfolio, and its capacity to serve different functions
- Good communications between planning and business officers
Balancing Short and Long Term Needs

LONG TERM CHALLENGES
• Changes in building codes and functional requirements for research, learning & services
• Deteriorating assets or lack of funding/ability to maintain them
• Energy, land use or other sustainability challenges to the campus community

RESPONSES
• Maintain quality enterprise data
• Plan implementation that monitors short term solutions’ affect on an evolving long term plan
• Develop a culture of integrated planning
Libraries Responding to Change

1. Reality of changing user demands and collection storage costs transform the academic library

2. Consortia will emerge at a regional level to conserve print collections

3. Libraries will evolve to become integrated consultation centers

4. Academic libraries will find opportunities to innovate through creative partnerships
Thank you!

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