

# From Information Commons to Trans Labs -The Challenge/Opportunity in Serving Inter- and Trans- disciplinary Scholarship

Xuemao Wang  
Associate Vice Provost, Emory Libraries

Annual Meeting of University and College Librarians  
Taiwan, May 13-14, 2010



## Today's Presentation/Discussion Outline

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- Introduction of Emory University and Emory Libraries
- From Info/Learning Commons to Trans Labs: concept, issue and trend
- Planning thoughts, models, practices (both Emory and others), and implications
- Personal reflections, comments, and discussion/conversation

# Emory University Facts

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## Schools

### Undergraduate

Emory College of Arts and Sciences

Goizueta Business School

Nell Hodgson Woodruff School of Nursing

Oxford College

### Graduate

Goizueta Business School

James. T. Laney School of Graduate Studies

School of Law

School of Medicine

Nell Hodgson Woodruff School of Nursing

Rollins School of Public Health

Candler School of Theology

# Emory University Facts (Cont')

<b>Students</b>		
<b>Enrollment, Fall 2009</b>		
	Total	12,930
	Undergraduate	6,980
	Graduate and Professional	5,950
<b>Emory College of Arts and Sciences</b>		
SAT	Middle 50%, Fall 2009	
	Verbal	640-730
	Math	660-750
	Total	1320-1460
ACT	Middle 50%, Fall 2009	29-33
<b>Degrees Awarded (2008-2009)</b>		3,838
	Undergraduate	1,987
	Graduate	1,408
	Professional	443
<b>Varsity athletic teams, NCAA Division III</b>		18

# Emory University Facts

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## Employees

### Employees (as of Sept. 1, 2009)

Total, Emory University and Emory Healthcare	23,408
University Faculty and Staff	12,265
Emory Healthcare	11,143

Emory is the third-largest employer in the metro Atlanta area and the largest employer in DeKalb County.

[Back to top](#)

## Economic Impact

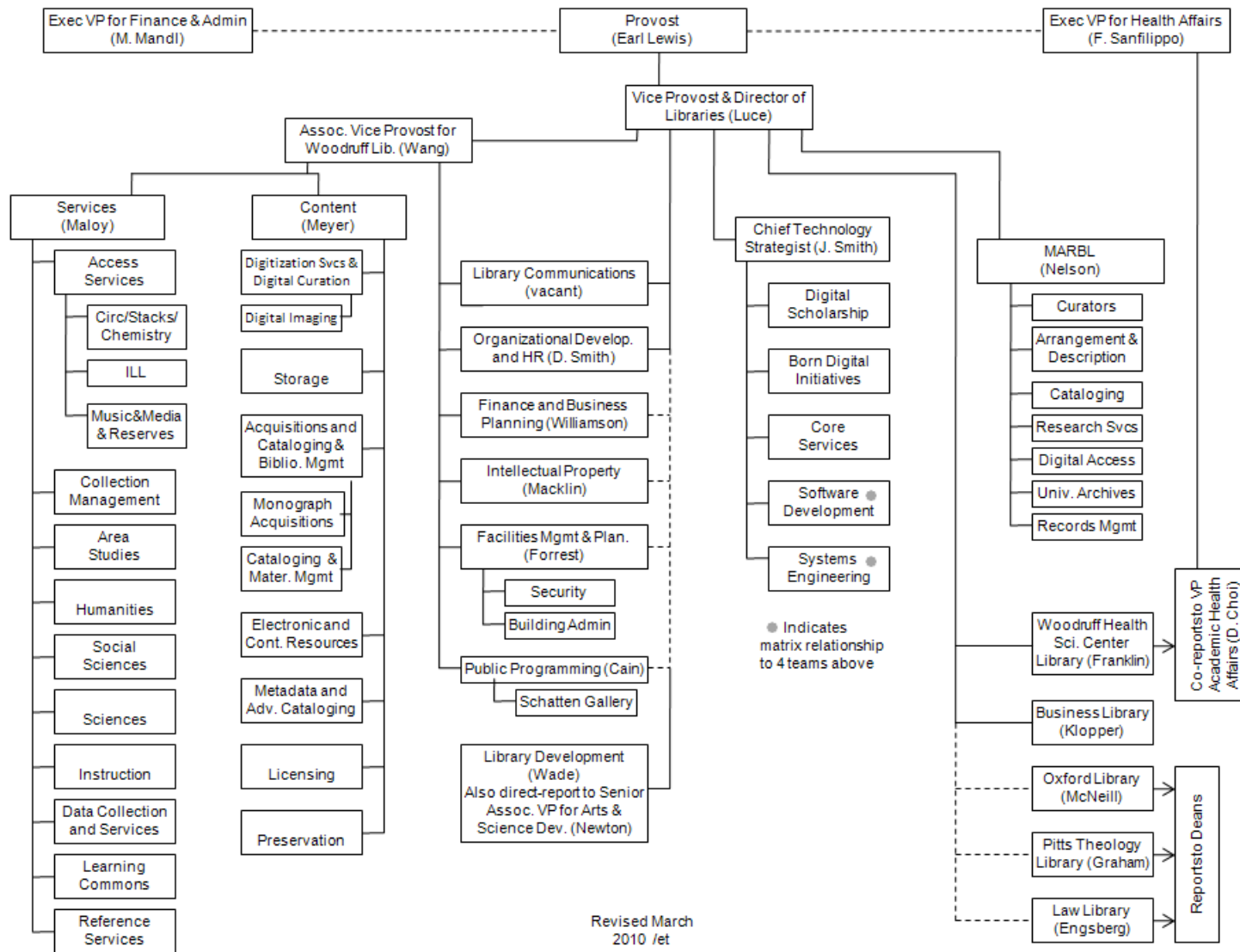
<b>Annual Operating Budget (2009-2010)</b>	\$3.0 billion
Emory University	\$1.4 billion
Emory Healthcare	\$1.6 billion
<b>Endowment and Trust Funds</b>	\$4.5 billion, as of August 31, 2009
<b>Annual Operating Budget (2008-2009)</b>	\$3.0 billion
Emory University	\$1.4 billion
Emory Healthcare	\$1.6 billion
<b>Total Research Funding Awards</b>	\$484.2 million in fiscal 2009

# Emory University Libraries Facts

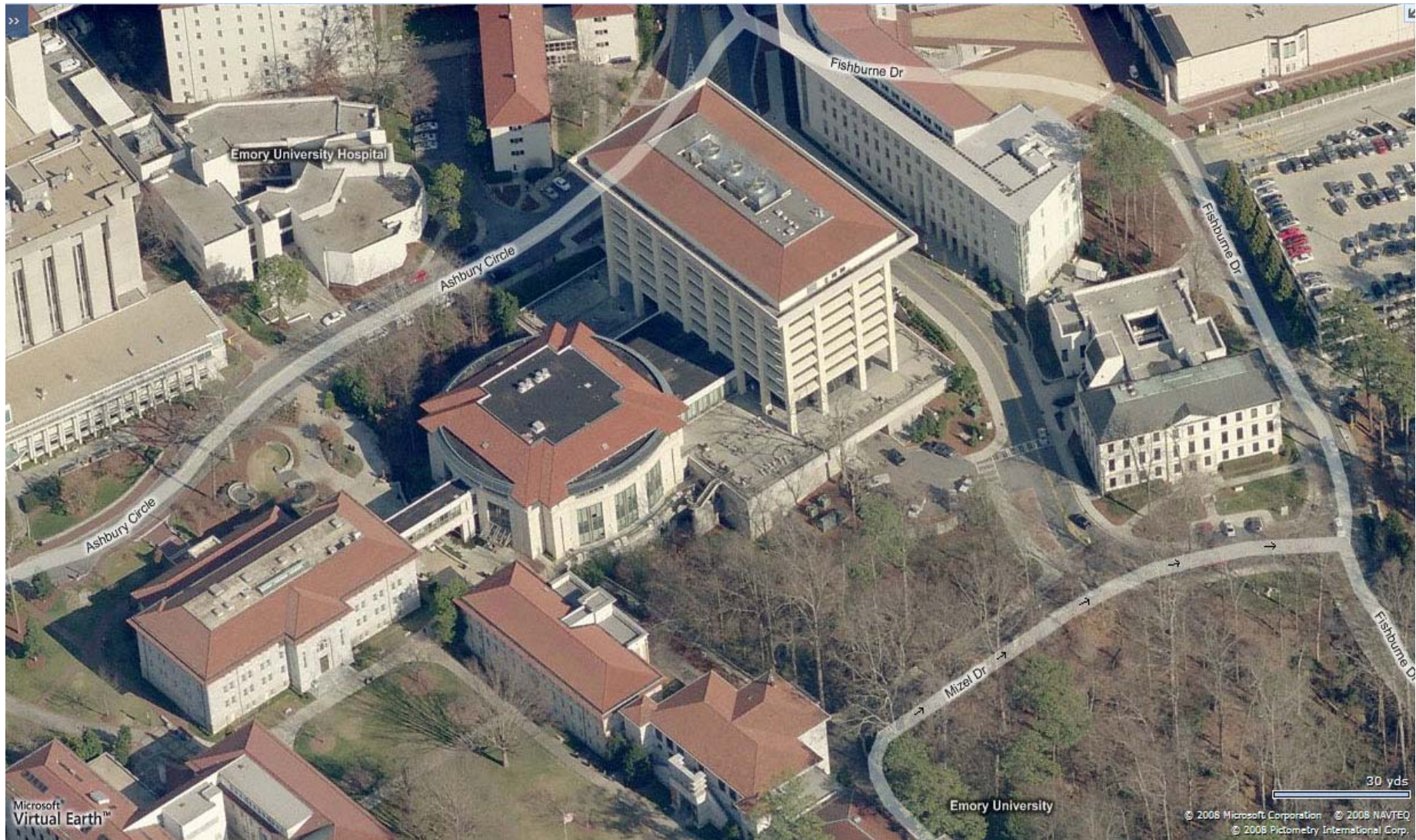
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- Total all Emory Libraries collection holdings: 3.4 M, more than 55,000 e-journal titles
- Manuscript, Archives, and Rare Book Library (MARBL) rich collections: Irish literary, twentieth-century American, British and Irish poetry; and African American literature, history, and culture, esp. American South, with a particular emphasis on Georgia and Atlanta
- Pitts Theology Library, the second-largest theology library in the country. The Woodruff Health Sciences Center Library. Hugh F. MacMillan Law Library. Oxford College Library.
- Annual budget for all Emory Libraries \$34.7M. EU Library \$26M
- Emory Libraries employ 283 FTE. University Library staff 149

# Governing and Management Structure



# Emory University Woodruff Library - Birds Eye View











ROBERT W. WOODRUFF LIBRARY

# Emory University Libraries - ARL Data Ranking

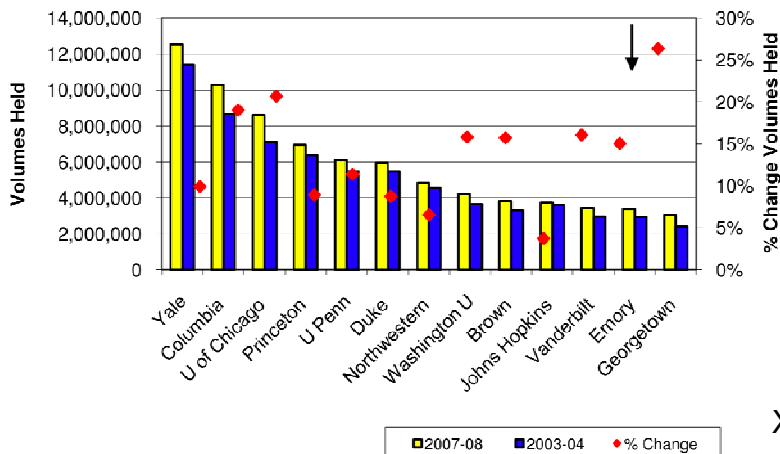
**7a. Association of Research Libraries Investment Index Rank\*  
Emory and Peer Universities**

University	2007/08	2006/07	2005/06	2004/05
Yale	2	2	2	2
Columbia	4	3	3	5
Princeton	10	12	13	12
Duke	20	17	18	22
U. Penn	21	20	20	19
U. Chicago	28	28	24	28
<b>Emory</b>	<b>29</b>	<b>21</b>	<b>25</b>	<b>23</b>
Washington U.	40	39	26	15
Johns Hopkins	36	29	33	26
Northwestern	35	34	37	31
Georgetown	46	48	46	46
Vanderbilt	51	45	51	50
Brown	74	71	67	65

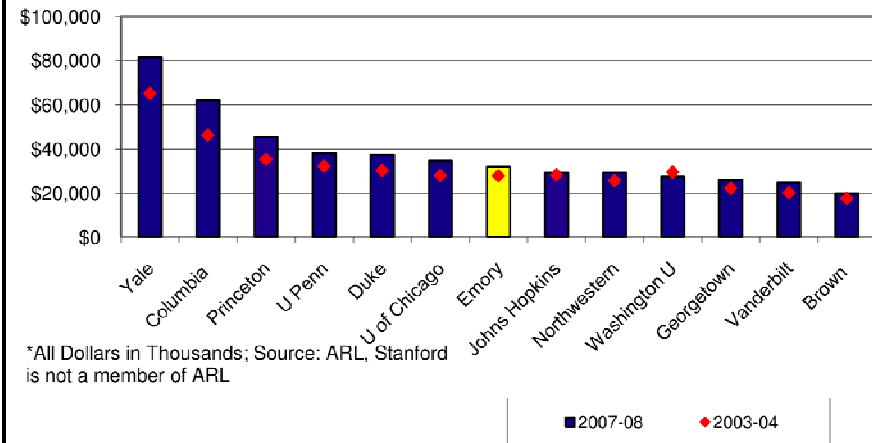
Source: ARL, Note: Stanford is not a member of ARL

\*Using four data elements: Total Library Expenditures, Salaries and Wages of Professional Staff, Materials Expenditures, Professional + Support Staff

**7b. Library Volumes Held  
Emory and Peer Universities**

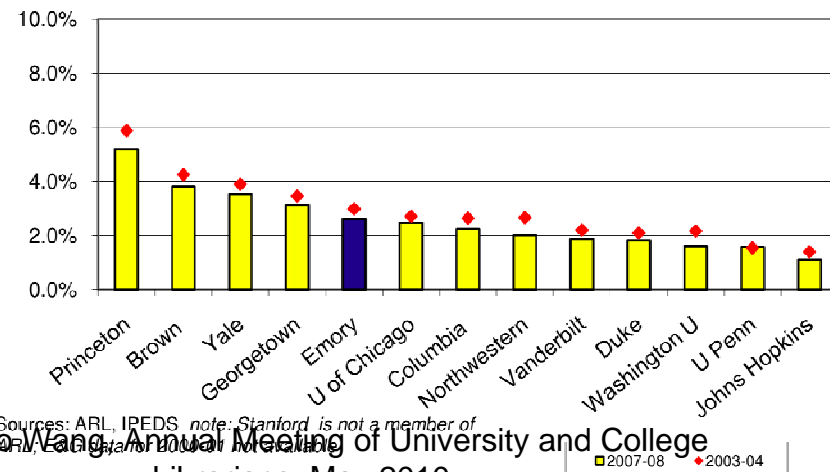


**7c. Total Library Expenditures  
Emory and Peer Universities**



\*All Dollars in Thousands; Source: ARL, Stanford is not a member of ARL

**7d. Library Expenditures as a Percent of  
Total E&G Budget, Emory and Peer Universities**



Sources: ARL, IPEDS, note: Stanford is not a member of ARL



# Information Commons/Learning Commons

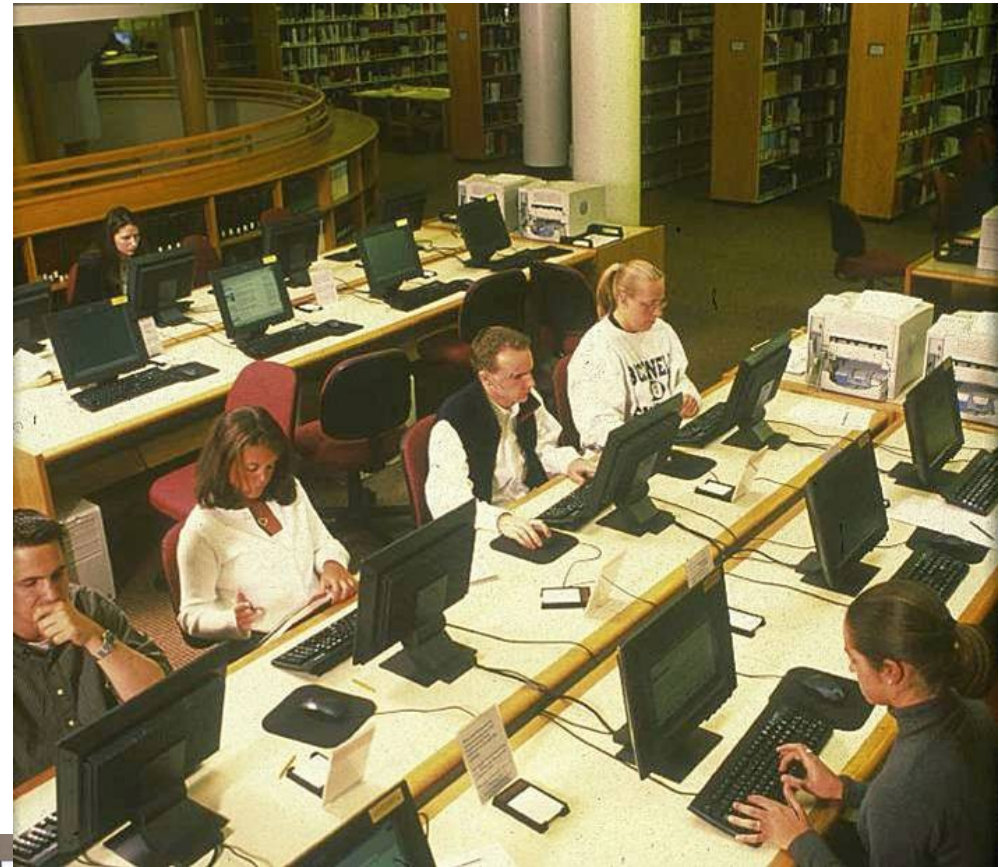
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*“A virtual or physical space that is conducive to the **effective sharing of ideas and information**”*

[www.syberworks.com/glossary/i/i1.htm](http://www.syberworks.com/glossary/i/i1.htm)

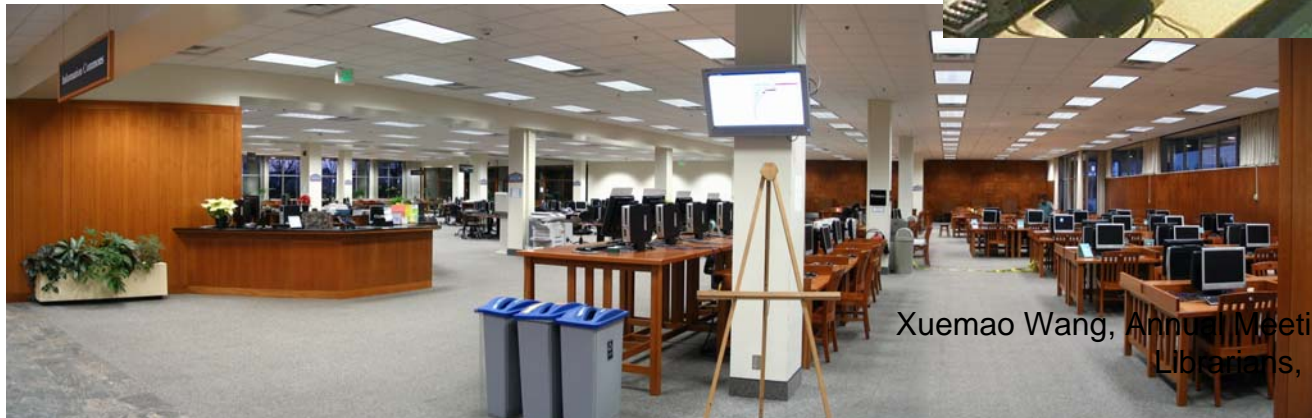
# Info/Learning Commons – Evolving ...

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Bucknell University

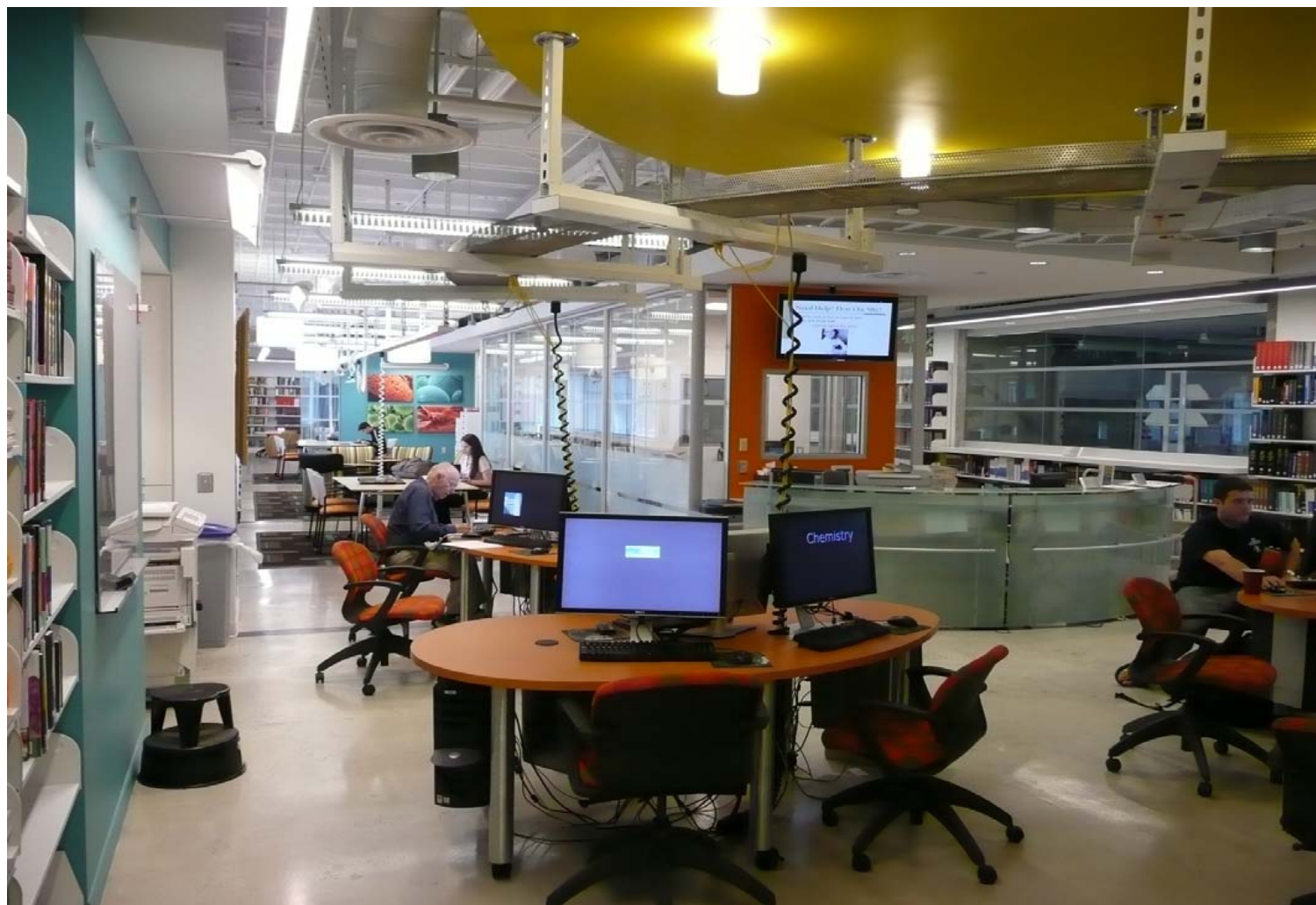
Brigham Young University



Xuemao Wang, Annual Meeting of University and College Librarians, May 2010

# Info/Learning Commons – Evolving ...

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EMORY  
LIBRARIES

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LIBRARIES

















# Information Commons – Evolving ...

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# Classroom – Yesterday...

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# Classroom – Today...

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# Classroom – Today...

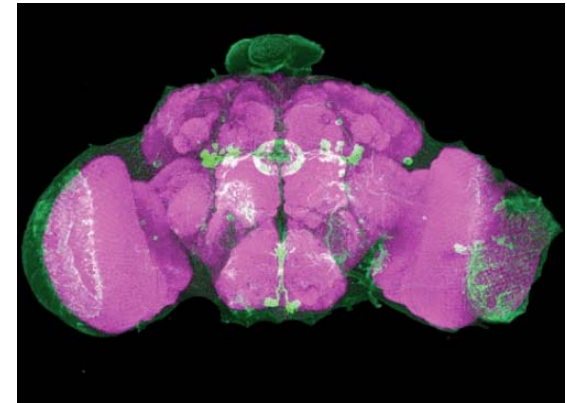
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## Interactive collaborative software board

# What We've Focused On: From Learning Spaces to Learning Laboratories

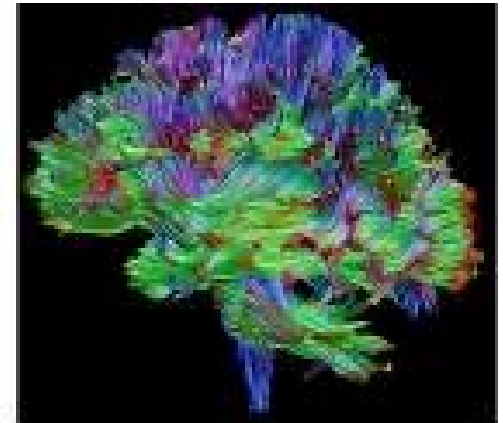
- ❑ Info/Learning Commons: reflect student needs, tech savvy, flexible and service orientated
- ❑ Technology-infused group study rooms and project-development spaces. Spaces designed to be easily reconfigured in response to new technologies and pedagogies.
- ❑ Accommodate the sound of learning—lively group discussions or intense conversations over coffee.

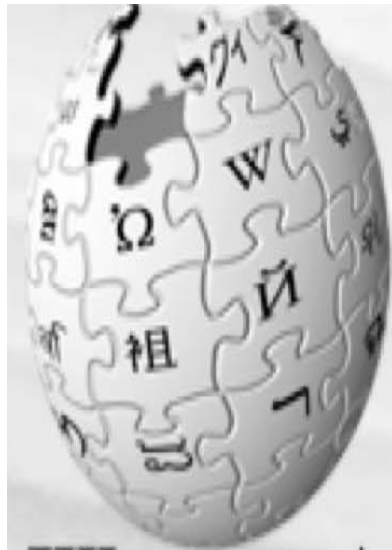


# What We Will Focus On: From Learning Commons to Research Laboratories

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- Engagement academic/research program: to bring “producers” into the “commons”
- Partner with faculty, hybrid organization, entrepreneurial outlook scholarship and research driving, cutting edge tech experimentation
- What are driving forces behind?





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*The Free Encyclopedia*

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# Transdisciplinary studies

From Wikipedia, the free encyclopedia

(Redirected from [Transdisciplinary Studies](#))

**Transdisciplinary Studies** are an area of research and education that addresses contemporary issues that cannot be solved by one or even a few points-of-view. It brings together academic experts, field practitioners, community members, research scientists, political leaders, and business owners among others to solve some of the pressing problems facing the world, from the local to the global.



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## Interdisciplinarity

From Wikipedia, the free encyclopedia

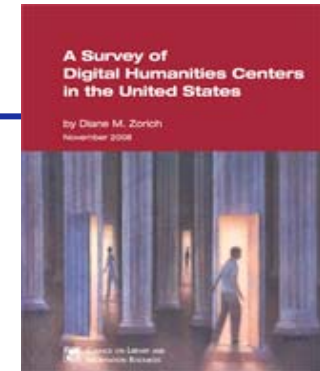
An **interdisciplinary field** is a field of study that crosses traditional boundaries between [academic disciplines](#) or schools of thought, as new needs and professions have emerged.

Originally the term interdisciplinary is applied within education and training pedagogies to describe studies that use methods and insights of several established disciplines or traditional fields of study.

Interdisciplinarity involves researchers, students, and teachers in the goals of connecting and integrating several academic schools of thought, professions, or technologies -- along with their specific perspectives -- in the pursuit of a common task. The [epidemiology of AIDS](#) or [global warming](#) require understanding of diverse disciplines to solve neglected problems. "Interdisciplinary" may be applied where the subject is felt to have been neglected or even misrepresented in the traditional disciplinary structure of research institutions, for example, [women's studies](#) or ethnic area studies.



# One Engagement Example: Digital Humanities Center (DHC)



Examples: <http://www.clir.org/pubs/abstract/pub143abst.html>

American Social History Project—Center for Media and Learning

Ancient World Mapping Center

ArchNet

Center for Digital Humanities, University of California, Los Angeles

Center for Digital Research in the Humanities, University of Nebraska

Center for History and New Media, George Mason University

Center for Literary Computing, West Virginia University

Center for New Designs in Learning and Scholarship, Georgetown

University Collaboratory for Research in Computing for Humanities,

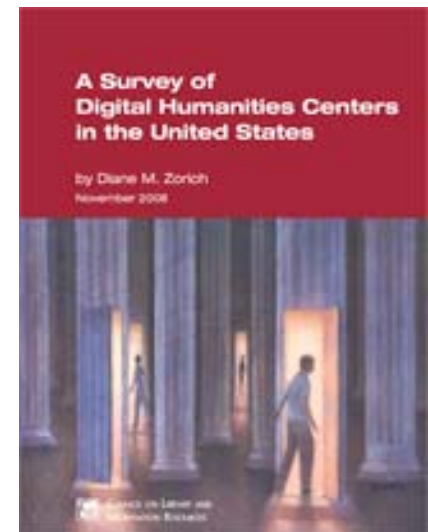
University of Kentucky

Computer Writing and Research Lab, University of Texas

DXARTS (Digital Arts and Experimental Media)/CARTAH...

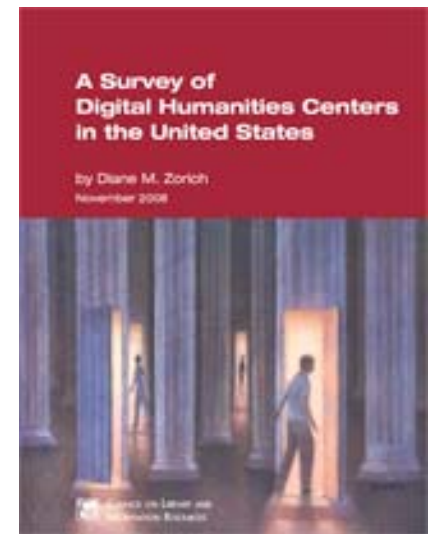
# What Is the Digital Humanities Center

*An entity where media and technologies are used for humanities-based research, teaching, and intellectual engagement and experimentation. The goals of the center are to further humanities scholarship, create new forms of knowledge, and explore technology's impact on humanities based disciplines.*



# What Is the Digital Humanities Center

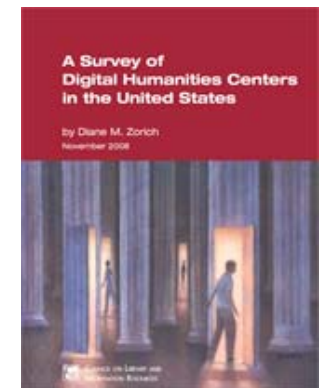
An entity where *media and technologies* are used for humanities-based *research, teaching, and intellectual engagement and experimentation*. The goals of the center are to *further humanities scholarship, create new forms of knowledge, and explore technology's impact on humanities based disciplines*.



# What DHCs Do: Major Activities of DHC

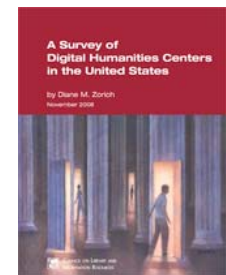
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- builds digital collections
- creates tools
- manages the research processes
- offers digital humanities training
- offers lectures, programs, conferences, or seminars
- creates a zone of experimentation and innovation for humanists
- Provides IT support for humanities



# DHC Organizational and Staffing Models

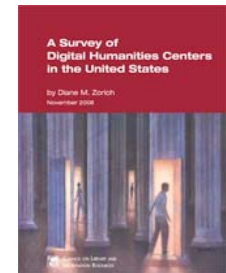
- Center-focused (more physical): organized around a physical location
- Resource-focused (more virtual): organized around a primary resource
- Staffing: leadership, business/grant management, IT – esp. developer, media specialist, geospatial specialist, metadata librarian, and digital archivist
- Academic and research scholars



# DHC Product, Program and Service Model

Products examples:

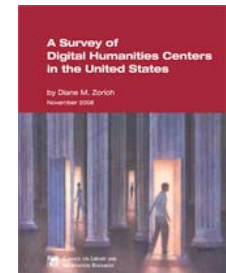
- Teaching materials and resources
- Digital workspaces: wikis, blogs, and virtual environments
- Publications: online newsletters and e-journals, white papers and articles
- Tools: plug-ins, conversion tools



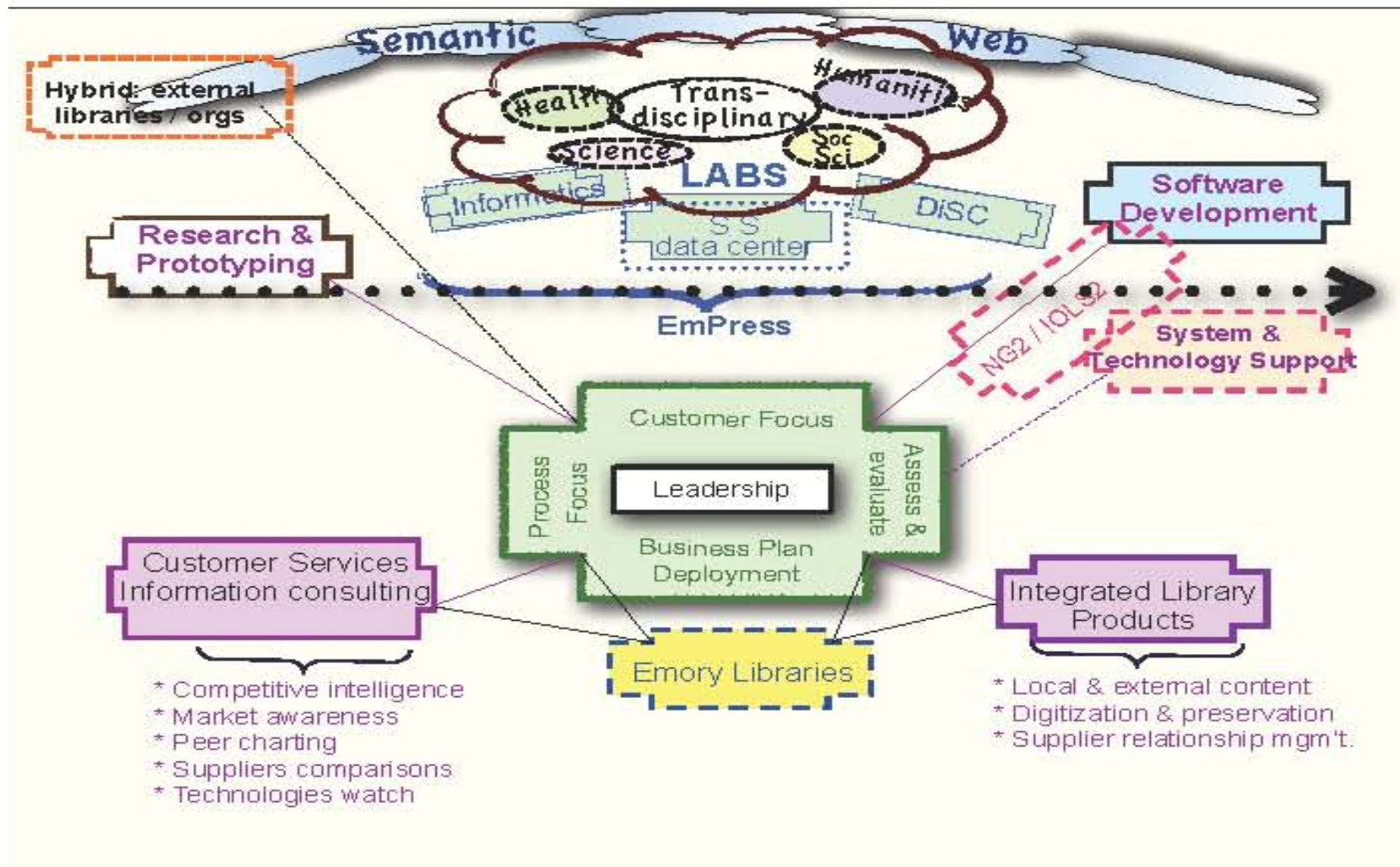
# Product, Program and Service Model of DHC (Cont')

Services examples:

- Consultation: digitization, learning and course initiative, etc
- Facility management: language labs, helpdesk, etc
- Technical assistance: new media editing, metadata, GIS
- Web support: web hosting, designing, etc
- Preservation assistance: migration plan
- Educational and pedagogical services: curricular assessment and instructional method
- Academic programs: degree and certificate in digital scholarship and media



# Emory Libraries' Vision - Rick Luce





# Emory Libraries Inter/Trans-disciplinary Approach

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- *Integrated system for quantitative and geographic analysis for interdisciplinary inquiry*
- Canonical database (35K voyages) chronicling the five centuries of the transatlantic slave trade
- Statistical and geographic charting for interdisciplinary research
- Digital culmination of decades of historical research by an international team of scholars
- Creating web infrastructure for international collaboration on assembling primary research knowledge bases
- Technologies behind:

- Primary Language: Java2 Enterprise Edition (J2EE)

- Apache Tomcat: Serves the main J2EE portions of the application

- Database: PostgreSQL

- Database Abstraction Layer:

Java Hibernate connects the application to the database and manages queries and more.

- Template Language & Library: Java Server Pages & Java Server Faces

- JavaScript: Used throughout the site but most notably to produce the interactive map in the Voyages Database search interface



# Voyages Database

The Trans-Atlantic Slave Trade Database

## Voyages

Voyages Database   Assessing the Slave Trade   Resources   Educational Materials   About the Project

Home   Sitemap   FAQs   Demos   Glossary   Legal



North America  
Caribbean  
Brazil  
Europe  
Africa

Roll over names of designated regions on the map above for descriptions of the role of each in the trans-Atlantic slave trade.

### The Trans-Atlantic Slave Trade Database has information on almost 35,000 slaving voyages that forcibly embarked over 10 million Africans for transport to the Americas between the sixteenth and nineteenth centuries. It offers researchers, students and the general public a chance to rediscover the reality of one of the largest forced movements of peoples in world history.

**Search the Voyages Database** ▶  
Look for particular voyages in this database of documented slaving expeditions. Create listings, tables, charts, and maps using information from the database.

**Examine Estimates of the Slave Trade** ▶  
Slaves on documented voyages represent four-fifths of the number who were actually transported. Use the interactive estimates page to analyze the full volume and multiple routes of the slave trade.

**Explore the African Names Database** ▶  
This database identifies over 67,000 Africans aboard slave ships, using name, age, gender, origin, and place of embarkation.

**Special features** ▶ Introductory Maps ▶ Timeline and Chronology

**Sponsors**  
EMORY UNIVERSITY  
National Endowment for the Humanities  
W.E.B. Du Bois Institute (Harvard University)

**Partners**  
Emory University Libraries (USA)  
The University of Hull (UK)  
Universidade Federal do Rio de Janeiro (Brazil)  
Victoria University of Wellington (New Zealand)

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*Public access to the canonical database chronicling five centuries of the transatlantic slave trade*

Xuemao Wang, Annual Meeting of University and College Librarians, May 2010

# Emory Libraries Inter and Trans Approach (Cont')

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- Online archive - joint project with Emory University Libraries, the Rollins School of Public Health, and the Centers for Disease Control and Prevention (CDC)
- Searching and browsing, the Smallpox and Guinea Worm Chronicles are organized by type of content, geography, person names, and date.
- Technologies behind:
  - Fedora Commons Repository - all content is stored in a Fedora repository
    - \*MODS descriptive metadata stored in the repository with the binary files
    - \*makes use of Fedora services/behaviors to provide on-the-fly conversions of files, i.e. preview thumbnails for images and videos, plain-text previews of MS Word files
  - PHP with Zend Framework
  - Apache Solr - information about the Fedora content is indexed in a Solr instance for search and browse.
  - JavaScript/ Dojo - used for the administrative metadata entry form

## The Global Health CHRONICLES

An inside look at public health efforts to prevent, control and eradicate global disease

# The Global Health CHRONICLES

An inside look at public health efforts to prevent, control and eradicate global disease

Choose a Chronicle ▾

🔍 Search All Chronicles



Using a bifurcated needle, an Indian health worker vaccinates a child. The bifurcated needle was a simple technological advance that became essential in the eradication of smallpox. Unskilled workers could be trained easily to administer vaccine in surveillance and containment activities. Benjamin Rubin of Wyeth Laboratories developed the bifurcated needle, and gave the patent rights to the World Health Organization.



**Smallpox:** Global eradication of smallpox, by any measure, ranks among the great achievements of humankind.



**Guinea worm:** A painful and debilitating infestation contracted by drinking stagnant water contaminated with Guinea worm larvae.



**Malaria:** The origin of CDC's disease prevention and eradication programs.

[Admin Login](#)



Emory Global Health Institute

Robert Wood Johnson Foundation

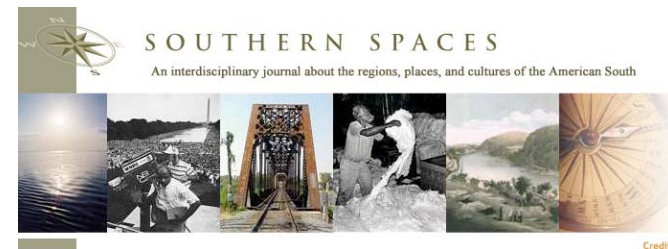
Xuemao Wang, Annual Meeting of University and College Librarians, May 2010  
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# Emory Libraries Inter and Trans Approach (Cont')

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- *Southern Spaces* is a peer-reviewed, open access e-journal. Using ideas of place and space as organizing principles. Interdisciplinary journal that employs emerging technologies to produce innovative scholarship about the American South. It publishes essays, gateways, events, conferences, interviews, and performances.



- Interdisciplinary: geography, southern studies, regional studies, African American, Native, and American Studies, women's studies, LGBTQ studies, and public health.

- Technologies behind:

- Primary Language: PHP -Drupal 6.x as the primary Content Management System.
- Several public Drupal Modules including LDAP, URL Alias, WYSIWYG and a few more.
- Python scripts were used to harvest and transform content from the previous static site to import into Drupal-Custom Drupal Module created for Peer Review and Publication Workflow



# SOUTHERN SPACES

An interdisciplinary journal about the regions, places, and cultures of the American South



[Credits](#)

*Southern Spaces* is a peer-reviewed, online journal exploring the real and imagined places of the American South and their connections with the wider world. We welcome submissions from scholars, photographers, and visual artists in such areas as geography, southern studies, regional studies, African American, Native, and American Studies, women's studies, LGBTQ studies, and public health.

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- :: [about the forum](#)
- :: [editorial board](#)
- :: [weblinks](#)
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### [Gratz Park after Rain](#)

Louis Bickett  
Lexington,  
Kentucky  
2009

### [Image Archive](#)



### [Locations](#)

Saralyn Chesnut, Amanda C. Gable, and Elizabeth Anderson explore the history of Charis Books and More, Atlanta's feminist bookstore. [Read more...](#)

### [What's New](#)

[Call for Submissions: Migration, Mobility, Exchange, and the U.S. South](#)

### [Insistent Traces](#)

Readings by Claudia Emerson

### [A Sleight of History: University of Alabama's Foster Auditorium](#)

A short film and essay by Sarah Melton

### [Mountaintop Removal in Central Appalachia](#)

A short essay by Shirley Stewart Burns

[E-Alerts](#)

[RSS](#)

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ANDREW W. MELLON  
FOUNDATION AND  
EMORY UNIVERSITY

AN EMORY UNIVERSITY  
DIGITAL LIBRARY  
RESEARCH INITIATIVE

© 2004-2009 Southern Spaces  
ISSN: 1551-2754

*Southern Spaces* encourages innovative work in digital scholarship and new media. By providing electronic archiving for our published materials, *Southern Spaces* creates a stable digital presence for internet scholarship.

Xuemao Wang, Annual Meeting of University and College Librarians, May 2010

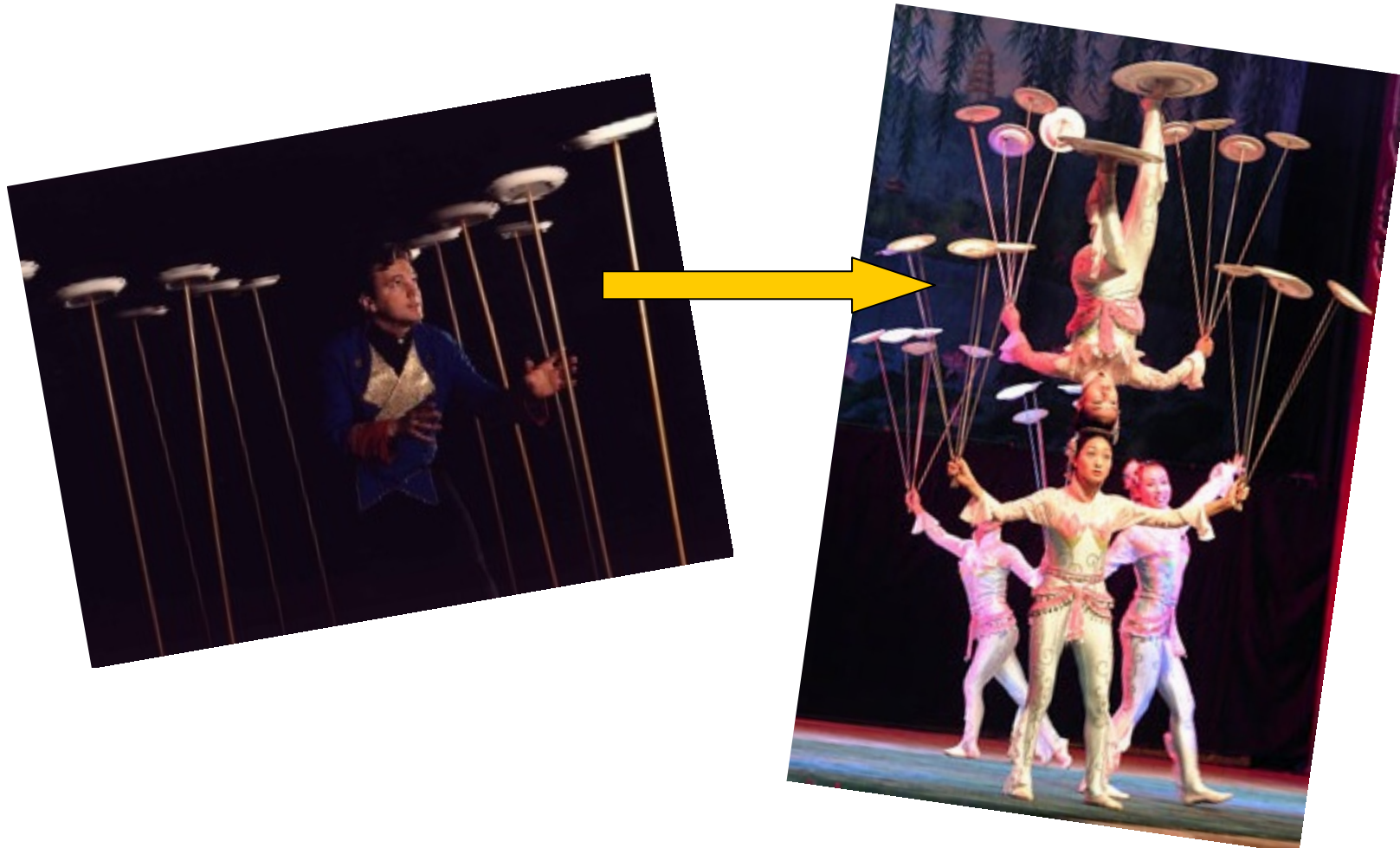
# Inter & Trans Approach - Impact to Libraries

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1. Hybrid organizations
  - ❑ Subject specialists → intra-disciplinary teams (one-to-many)
  - ❑ Organizational structures → inter / intra institutional teams
  - ❑ From library / office → lives in project space; virtual lab
2. Dynamic and diverse teams -- skill set assembly and deconstruction. Staff profile diverse: more PhD hiring
3. Geographically distributed colleagues requiring and enabling collaboration support
4. Space planning: agile, flexible, reconfigurable, and incorporate technologies
5. IT infrastructure: flow up to “clouds”, leverage commodities, and refocus on niche specializations

# Do You See the Difference?

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# Inter & Trans Approach - Leverage Special Collections

## 1. **Create an intellectual center and a leading edge laboratory for the humanities**

- Celebrate significant scholarly activity focused on MARBL's world-class collections
- Showcase scholars using technology to engage rare and unique primary research materials

## 2. **Inspire learning and researches across disciplines and stimulate trail-blazing research**

- Excite and inform students, scholars, the community, and society by bringing one-of-a-kind resources to life in exhibitions, public programs, and research opportunities
- Create stimulating teaching spaces that enrich the undergraduate experience

# MARBL Special Collections Highlights

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## Groundbreaking acquisitions

- ❑ Salman Rushdie papers
- ❑ Alice Walker papers
- ❑ Southern Christian Leadership Conference collection
- ❑ Billops-Hatch archive



October 28, 2002

### **Special Collections receives donation of Hatch-Billops holdings**

By Deb Hammacher

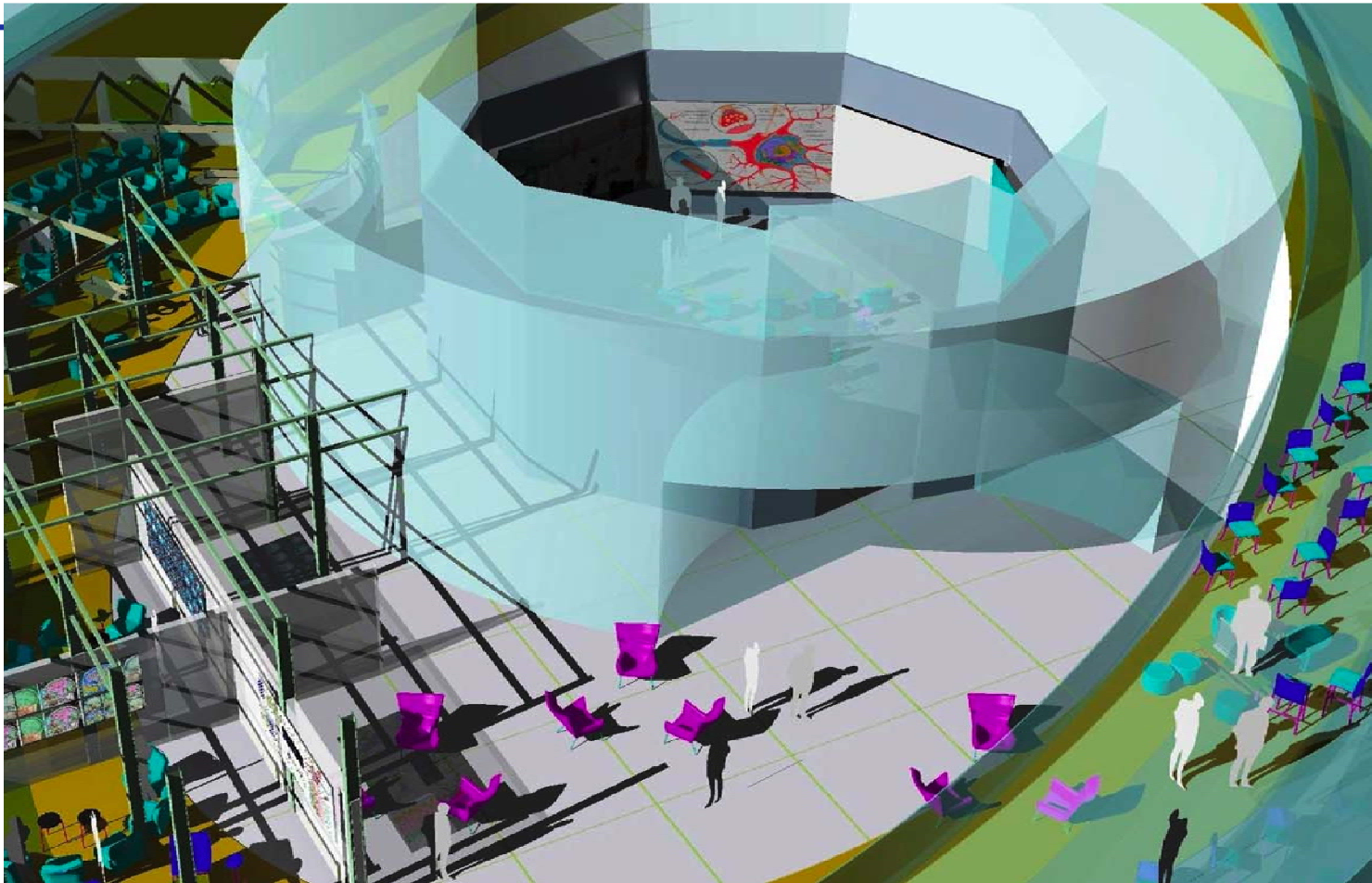
In what will greatly enhance teaching and research opportunities in 20th century African American studies, a portion of the Hatch/Billops Collection in New York—an extraordinary collection assembled during the past 35 years—has been donated to

## View Down Asbury - the Concept of new MARBL



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Create Health/Life Science Knowledge Center to replace the Health Science Library!



**Concept Image from Above:** This image is taken from above the mezzanine level looking down to the Mixing Chamber and The Think Tank. The Mixing Chamber grid allows for movable partitions that can carry an assortment of AV/IT tools and is reconfigured by the patrons to the Knowledge Center. The Think Tank is an immersive, 3-dimensional, high definition interactive theater for collaborative presentations or projects. It offers seating on the upper level for spectator views. The Think Tank provides a landmark within the Knowledge Center that orients patrons.



# Information Commons – Evolving ...

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Visualizing data sets



EMORY  
LIBRARIES

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# University of Virginia – Scholar's Lab

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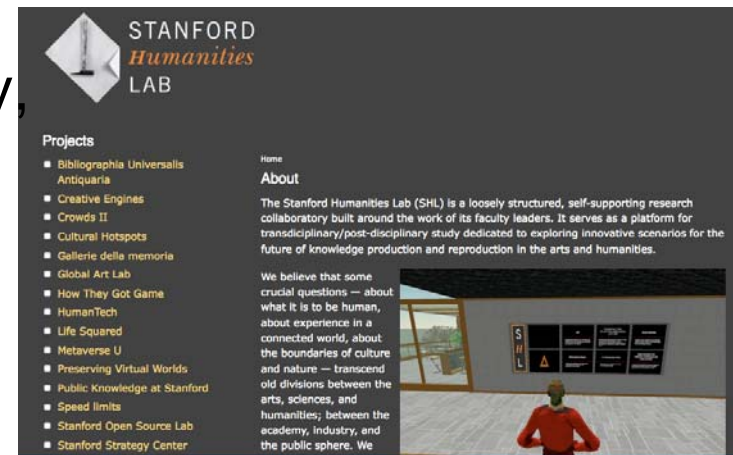
- Located in, and **started with university library**: Electronic Text Center and Geospatial and Statistical Data Center, joined by central IT's Research Computing Support Center
- New model of Information Commons: refocus on to research, interface, digitization, data management
- Expert consultation both classroom and private: project management, best practice in digital humanities, electronic text and images, including OCR, geospatial analysis and GIS applications, data mining and statistical analysis, and computer programming and interface design
- Space for collaboration: designed for both group and solo work
- Digital humanities scholarship and program engagement: graduate fellowship, dissertation in digital humanities, colloquia
- IT trends and Cyberinfrastructure initiative and support for humanities and social science scholars



# Stanford Humanities Lab (SHL)

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- Loosely structured, self-supporting research collaboratory built around the work of its faculty leaders. Multipurposing of scholarship
- Platform for transdisciplinary/post-disciplinary study dedicated to exploring innovative scenarios for the future of knowledge production and reproduction in the arts and humanities.
- **Approach to Big Humanities** and Big Arts: transcend old divisions between the arts, sciences, and humanities; between the academy, industry, and the public sphere
- **More close collaboration with museums than libraries**

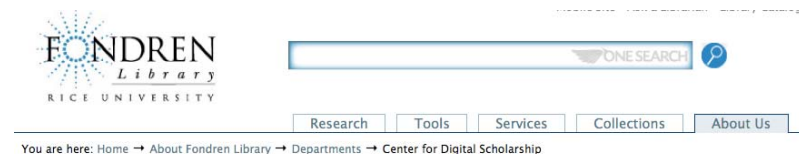




# Rice University Center for Digital Scholarship

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- Center for Digital Scholarship (CDS, **formerly the Digital Library Initiative, DLI**)
- Developed a number of innovative digital collections that include digitized holdings from the Woodson Research Center, digitized private collections supporting faculty research, faculty publications, preservation copies of subscription journals (with publisher permissions), and resources in support of teaching and learning
- CDS is home to the Digital Media Center (DMC), providing a rich environment for the creation and use of multimedia resources
- DMC offers a lab to support capture, creation and conversion of video, audio, digital images and other complex media, along with training to assist users in working with new multimedia tools
- Preservation of digital resources



# University of Maryland MITH

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<http://mith.umd.edu/>

- Collaboration among College of Arts and Humanities, Libraries, and Office of Information Technology
- Located in the McKeidin Library.
- Functions as an applied think tank for the digital humanities: its Fellows' research and its own innovative research agendas.
- Projects: digital tools, text mining and visualization, and the creation and preservation of electronic literature, digital games, virtual worlds.



# George Mason University

## CHNM

<http://chnm.gmu.edu/>

The screenshot shows the homepage of the Center for History and New Media (CHNM) at George Mason University. The header features a logo with the letters C, H, N, and M in a 2x2 grid, followed by the text "Center for History and New Media". To the right of the header are navigation links: "DONATE", "About", "Staff", "Labs", "News", and "Jobs", along with a search bar. Below the header is a navigation menu with three tabs: "Teaching + Learning", "Research + Tools", and "Collecting + Exhibiting". The "Research + Tools" tab is selected. The main content area for "Research + Tools" includes a large gear icon, the text "Research + Tools", and a description: "Developing publications and applications to define digital humanities for a new generation of scholars, librarians and museum professionals." Below this are three smaller images: the Zotero logo, a golden ratio spiral, and a gear icon.

# University of Nebraska Center for Digital Research in the Humanities

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# UCLA HASTAC

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<http://www.hastac.org/tag/ucla>



# Issues and Challenges of DHC – some examples ...

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- Being vulnerable: funding, hard to keep talents
- Becoming “silos”: contradictory to its goal of collaboration
- Can't scale for “large-scale cyberinfrastructure, cutting across humanities among multi institutions

# The Future...Questions for Today's Library Leaders

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- Our role is changing from “serving” to “participating”, and “producing” scholarship? Or even “leading” the trans scholarship?
- Would “labs” idea and innovation apply to all academic libraries?
- What is the “Big Library” question for library and information science?



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# Thank You!

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## Discussion/Conversation...