March 11, 2009

e-Science @ the University of Massachusetts

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Available at: https://works.bepress.com/maxine_schmidt/10/
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Rebecca Reznik-Zellen, Maxine Schmidt, Cecilia Mullen, Raquel Rivera
e-Science @ UMass

• What is e-Science?

• UMass System Libraries’ efforts to anticipate and support e-Science

• e-Science at UMass
What is e-Science?

The creation, sharing, curation, and storage of data throughout the research enterprise

- Data intensive
- Information intensive
- Collaborative
- Distributed
- Interdisciplinary

(Borgman, 2005)
Responding to the Life Sciences Initiative

- Commonwealth of Massachusetts $1 billion Life Science Initiative spurs system-wide Life Sciences Task Force.

- UMass System Library Directors convene with Science Librarians to prepare response and recommendations.
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Top-down and Bottom-up Approaches

- As a by-product of shared e-Resources, which impacts licensing, document delivery, and authentication

- As a set of services structured around data, which focuses on supporting the creation and curation of non-traditional research output
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Addressing the Life Sciences Task Force

• Committee (A) contributes to a formal proposal for enhanced library services across the campuses, with a focus on resource sharing.

• Committee (B) drafts Principles for e-Science based on ARL Model Principles.
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Principles Fundamental to the Role of UMass Research Libraries for e-Science

- Collaboration
- Curation of Scientific Primary Data
- Digital Stewardship and Preservation
- Metadata Standards and Creation
- Virtual Communities
- Communication
- Open Access
- Professional Development and Investment
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Identifying Opportunities and Engaging our Communities

• Committee is exploring where UMass System Libraries can position ourselves as partners in scientific research.

• Events! Events! Events!
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UMass and New England Area Librarian e-Science Symposium

• A collaborative event for library professionals to discuss e-Science and identify opportunities to investigate/develop/act upon
  o Sponsored by Lamar Soutter Library, NN/LM-NER, and BLC
  o Morning and afternoon sessions will feature a panel discussion, presentations, and breakout sessions

• Securing Funds
  o Express Outreach Award- sponsored by the NN/LM-NER
  o Scope of award clearly supports project; worth pursuing
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Science Boot Camp

• To be held at UMass Dartmouth
• Instruction geared to educated non-specialists
• Computer lab sandbox to play with 2.0 technologies
• Fun stuff!
  o “Non-Sensible Shoes” evening
  o Tour of UMass Dartmouth campus
  o Clambake??
e-Science at UMass

• Engineering Research Center for Collaborative Adaptive Sensing of the Atmosphere
  o Multinational research effort supported by NSF
  o Multidisciplinary group of engineers, computer scientists, meteorologists, sociologists, industry and government partners
e-Science at UMass

Organized into three research thrusts:

• Sensing
  o The radars and their beams

• Distributing
  o Data movement, data storage, archival processing
  o Optimizing so that all the system resources are dynamically employed to meet end user data needs.

• Predicting
  o Computer architecture that controls the system in response to changing weather and competing user needs
e-Science at UMass

InterNano

An NSF-funded information clearinghouse for the nano-manufacturing community

www.internano.org
e-Science at UMass

InterNano
5 Year Plan (2006-2011)

Phase 1 :: Framework
www.internano.org

Phase 2 :: Core Features, Collection- and Expertise-building

Phase 3 :: Research Components, Standards, Community Integration
Informatics Laboratory and Data Analysis, Partner on National Standards

Phase 4 :: Statistics-based, Self-sustaining business model
e-Science at UMass

**InterNano**

- Libraries were approached by the Directors of the Center for Hierarchical Manufacturing during the grant proposal writing process.

- Libraries provide staffing, hardware support, and contribute to the overall design and continued development of InterNano.
The Ad Hoc Committee

Amherst
Jay Schafer, Director
Paulina Borrego
James L. Craig
Naka Ishii
Cecilia Mullen
Rebecca Reznik-Zellen
Maxine Schmidt

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Paige Gibbs
Frances Schlesinger

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Sharon Weiner, Director
Mary Adams
Elizabeth Winiarz

Lowell
Patricia Noreau, Director
Marion Muskiewicz

Worcester (Medical School)
Elaine Martin, Director
Raquel Rivera
Resources

• Agenda for Developing e-Science in Research Libraries, ARL (November 2007)

• Principles Fundamental to the Role of the University of Massachusetts Research Libraries in e-Science (June 2008)

• e-Science Resource Bibliography (March 2009)
Thank you!

- Your input is important to us!
- Click on “Evaluate This Session” on the Mid-Atlantic Regional program page.