Provocations on The Library’s Future

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Greensboro, NC
May 20, 2009
What is at the heart of libraries?
These are exciting times.

Choose between achieving a dynamic and exciting future vision or longing for a nostalgic past.
Completed in 2003, the Human Genome Project (HGP) was a 13-year project coordinated by the U.S. Department of Energy and the National Institutes of Health. During the early years of the HGP, the Wellcome Trust (U.K.) became a major partner; additional contributions came from Japan, France, Germany, China, and others. See our history page for more information.

Project goals were to

- identify all the approximately 20,000-25,000 genes in human DNA,
- determine the sequences of the 3 billion chemical base pairs that make up human DNA,
- store this information in databases,
- improve tools for data analysis,
- transfer related technologies to the private sector, and
- address the ethical, legal, and social issues (ELSI) that may arise from the project.
This page provides an up to the minute summary of data currently available in the database. Parameters reported include minimum and maximum reported genomes sizes (in picograms), mean genomes sizes with standard error (SE), total number of species assayed, and the methods, cell types, and standards used for all available records. Note that the statistics reported here are based on all records in the database -- for maximum reliability, you are encouraged to evaluate the data for your particular group of interest directly. Note also that these C-value summaries do not currently account for instances of polyploidy (though this will be updated in the future).

Because these statistics refer to the database as a whole, they must be cited as follows if used in a publication:


Please select your group of interest from the list:

- **Entire Database (i.e., all animals)**
- All Chordates | Amphibians | Birds | Fishes | Mammals | Reptiles
- All Invertebrates | Annelids | Arachnids | Crustaceans | Echinoderms | Flatworms | Insects | Molluscs | Nematodes
- Methods, Cell Types, and Standard Species

(Other invertebrate groups are insufficiently represented for summary stats)

**Entire Database**

| Number of species/subspecies available: | 4890 (3191 Vertebrates, 1699 Non-Vertebrates) |
| Smallest animal genome size: | 0.02 pg, Pratylenchus coffeae, Plant-parasitic nematode |
| Largest animal genome size: | 132.83 pg, Protopterus aethiopicus, Marbled lungfish |
Welcome!

Who We Are
The Organization for Human Brain Mapping (OHBM) is the primary international organization dedicated to neuroimaging research. The organization was created in 1995 and has since evolved in response to the explosion in the field of human functional neuroimaging and its movement into the scientific mainstream. One of the primary functions of the organization is to provide an educational forum for the exchange of up-to-the-minute and groundbreaking research across modalities exploring Human Brain Mapping. It does this through a growing membership and an annual conference, held in different locations throughout the world.

The 15th Annual Meeting of the Organization for Human Brain Mapping
June 18-23, 2009 in San Francisco, California

Dates to Remember:
Deadlines
Advance Registration – May 15, 2009
Hotel Reservation – May 28, 2009

Important Notices:
Don't forget to renew your membership for 2009!
Poster and Oral Session acceptance notification has been sent out. Please visit the
The Future Discovered

- Stem Cells
- Cloning
- Wind and other energy
- Nanotechnology
- Robotics
- Book Digitization
- Music
- Streaming Media
- Seed Bank
Diabetes Online

Yes, Stephen did just say Lizard Spit
What don’t folks know?
What’s Your Biggest Problem?

- Money?
- Time?
- Change Adaptation?
- Energy?
- ?
The Emerging Economy

• Late 1800’s – Industrial Revolution arrived
• And so did a late century depression
• New laws and social modes emerged like unions, labour laws, licensure, etc.
• Nations could control their own destiny
• New professions rose to the top like scientists and engineers
The Emerging Economy

• 1930’s – Financial Revolution arrived
• And so did a mid-century depression
• New laws and social modes emerged like the SEC, Exchange Act, Williams Act, Bank Act, etc.
• Nations could still control their own destiny but international integration of trade and finance starts
• Other professions rose to the top like Bankers, CPA’s, financial analysts, and MBA’s, etc.
The Emerging Economy

- Millennium – Information and Knowledge Economy arrives (Yes it arrived a decade ago)
- And so does another new century depression
- New laws and social modes are emerging like copyright, DRM, privacy, and social networking sites
- Nations are not in control but participate in a global mosaic – Globalization - Glocalization
- New professions will rise to the top like librarians, information scientists, archivists, experience and learning software developers and CI pros, etc.
The Emerging Knowledge Economy

• It’s Global and International
• It’s interdependent
• Social neighbourhoods and nations
• Communities of practice and professional networks
• Interdisciplinary, cross-disciplinary discovery dominates (e.g. genome, life, stem cell, nano, etc.)
• Multi-ethnic, multilingual, multi-cultural
• Massive generational shift
• All major industries will be knowledge based
The Emerging Knowledge Economy

• Examples of Industries that are more knowledge dependent:
  – Agriculture – from R&D to market, Genetic engineers
  – Mining – from discovery through commodity trades
  – Energy – Petroleum, Hydro, Nuclear, Wind, Solar, etc.
  – Forestry, Pulp & Paper – Sustainability and Green
What's Your Bread and Butter?
"BARTOONS" by HARROD

PUBLIC LIBRARY
LIKE WIKIPEDIA, ONLY IT TAKES 4 HOURS

BAD CIVIC AD CAMPAIGNS #32
KNOW WHAT? DOWNTOWN THERE'S THIS GUY CALLED A REFERENCE LIBRARIAN!

YOU ASK HIM ANY QUESTION AND HE KNOWS IT. IF HE DOESN'T KNOW IT, HE LOOKS IT UP FOR YOU. AND IT'S FREE!

I ASKED HIM WHY THE WHOLE WORLD DIDN'T KNOW ABOUT HIM.

HE'S HAVING TO LOOK THAT ONE UP.

AH.
Publishers! Writers!
Shelf Check Presents:
Nonexistent Books
That, If Written, Should
Be Wildly Popular with
the Public, Given
the Number of Failed
Library Catalog Searches
On Their "Titles"...

...Exhibit A!

DAIRY OF A
WIMPY KID
Get a clue @thelibrary
Can we keep up with change?
Build in Format Agnosticity
No Quick Fixes
What is the scariest scenario for libraries?
I have an archaeology background . . .
Professions

• Big desktop savings!
• Accountants
• Lawyers
• Doctors and Allied Health pros
• Military
• Psychotherapy
The Academic Opportunity

• Copyright
• API’s and Book Digitization
• Scholarships
• Research, e.g. Energy, cars, nanotech, cloning, stem cell, etc.
• Partnerships
• Collaborations
People are Changing

• Or our understanding of them is improving!
• The new human genome (Shyness, dyslexia, math, music, etc.)
• Human understanding – Bloom’s taxonomy
• MRI’s of reading
• Eye tracking, etc.
• And of course increases in IQ and decreases in fact-based knowledge and mechanical skills.
Viewing

Listening

Speaking

Generating verbs

Imaging techniques allow us to see which areas of the brain control these functions.
Eye Movement Changes
The BIG PICTURE Changes

How much of your activities related to information fluency and related to these and are your communities prepared?
Social Graph Platform Wars

- YouTube?
- iGoogle
- Bebo
- Facebook
  - "Rebel Alliance"?
- RockYou
- PhotoBucket

- Gmail?
- Google / Open Social
  - "The Empire"?, "Coalition of The Willing"
- Friendster
- Orkut
- MySpace
  - "Clone Army"?
- Hi5
- Flixster
- Slidex
- iLike

- LinkedIn
- Widgets
- Gigya
- ClearSpring
- Widgetbox

🌟 = announced Platform / API
🌟 = unannounced Platform / API

& AMAZON

Platform Wars insanity: Dave McClure, 12/12/07
The Conversation
The Art of Listening, Learning, and Sharing

http://www.flickr.com/photos/briansolis/273540
The new Web 2.0 era distribution models remain largely untapped

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Potential Reach Power and Network Effect
(Lowest Cost Per Customer/Partner)

* = estimated

The Sharing Economy
“Web 2.0 generally refers to a second generation of services available on the WWW that lets people collaborate and share information online.” Wikipedia

- Shared Pictures = flickr
- Shared Knowledge = Wikipedia
- Shared Bookmarks = del.icio.us
- Shared News = Technorati
- Shared Videos = YouTube
- Shared Everything = myspace.com
Get Good at The Cloud

Yahoo!

AOL

Microsoft

News Corporation

Facebook

zotero

Zoho Docs

delicious

Google Chrome
Science Info on the Go:
Enhancing Traditional Sci-Tech Library Services w/ Mobile Devices
- Joe Murphy - Yale Science Libraries - joseph.murphy@yale.edu

Mobile devices help libraries meet the evolving information needs of the sci-tech community by expanding traditional services and exploring new opportunities.

Enhancing / Expanding Services

Mobile Reference = Answers on the go
Mobile librarians to meet the diffuse information needs of our specialized clientele.
- Email
- Instant Messaging
- Phone
- In person and outreach

New Opportunities

Text Messaging Reference
- Answers from anywhere by SMS
- Expert assistance at point of need

Social Networking
Mobile devices facilitate library 2.0 and social networking initiatives.
- Twitter
- Facebook
- Flickr

Considerations
- Choosing a technology
- Identifying New Workflows
- Establishing Management Models: Staffing, Training
- Exploring Best Practices for a Quality Service (shifting communication styles and user expectations)
Be Where Your Users Are

orkut beta facebook bebo

mixi version myspace.com a place for friends

plaxo Ning LinkedIn

knol A unit of knowledge.

MySpace Developer Platform a place for developers

opensocial
## LIBRARY 2.0 MATRIX

### Resource Environment
- Library 2.0 user
- Library catalogue - MARC compliant
- **Web 2.0 platform 24/7**
  - adaptable user interface
- **Information services**
  - Online, Virtual Learning spaces
- **Blended digital Web Collections**
- **Blended digital repository**
- **Digital access for personal organisation**
  - E-reserve
  - Borrower loan access
- **Digital access for licensed collections**
  - e-books, videos & multimedia,
    images, learning objects, etc
  - specialist online databases
- **Federated searching**
  - Z39.50
- **Taxonomy** - supported by global metadata standards

### Web 2.0 as Platform
- Library 2.0 user
- **E-learning 2.0 environment**
  - LMS, ELGG, LAMS etc.
- **Social Networks**
  - MySpace/Facebook
  - Blogs & Wikis
  - Read/Write web functionality
  - Social Bookmarking
  - Images & multimedia sharing
  - Podcasting & vodcasting
- **Folksonomy**
  - Tagging for personalisation
- **Searching**
  - Browser and desktop API
  - Blogs & social networks
  - Visual & metasearch engines
- **Mobile computing**
- **RSS feeds and Mashups**

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Groups include consumers participating in at least one of the indicated activities at least monthly.
The Library Rebooted

• “The Library Rebooted” by Scott Corwin, Elisabeth Hartley & Harry Hawkes (Booz & Company)

• *Strategy + Business*, Spring 2009, pp. 78-89

• “Reinventing the Role of Research Libraries” by Paul LeClerc, Pres/CEO, NYPL

• “Why Libraries are Good Investments” by Stephen Schwarzman, Chm/CEO, The Blackstone Group ($100 million gift to NYPL)
7 Imperatives for Library Leadership

1. Rethink the operating model
2. Understand and respond to user needs
3. Embrace the concept of continuous innovation
4. Forge a digital identity
5. Connect with stakeholders in ways that pure internet companies cannot
6. Expand the metrics
7. Be courageous
Literacy

- Reading literacy
- Numeracy
- Critical literacy
- Social literacy
- Computer literacy
- Web literacy
- Content literacy
- Written literacy
- News literacy
- Technology literacy
- Information literacy
- Media literacy
- Adaptive literacy
- Research literacy
- Academic literacy
- Etc.
What are the Real Challenges?

• Scalability
• Retreading our colleagues - quickly
• Prejudice about users & Disrespect of users
• Demographic Mosaic Change
• Usability
• Coordination and Sharing
• Vision
• Leadership
• Financial Resources (excuse vs. reason)
Watching The Kids & Their Toys
# Millennial Characteristics

Be honest – They’re different

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>More Friends</th>
<th>More Diverse</th>
<th>Respect Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principled / Values</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimistic / Positive</td>
<td>Internet Natives</td>
<td>More Choices</td>
<td>Format Agnostic</td>
</tr>
<tr>
<td>Balanced Lives</td>
<td>Adaptive / Flexible</td>
<td>Civic Minded</td>
<td>High Expectations</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Nomadic</td>
<td>Gamers</td>
<td>Experiential</td>
</tr>
<tr>
<td>Independent</td>
<td>Confident</td>
<td>Direct</td>
<td>More Liberal &amp; Conservative!</td>
</tr>
<tr>
<td>Multi-taskers</td>
<td>Inclusive</td>
<td>Patriotic</td>
<td>Entrepreneurial</td>
</tr>
<tr>
<td>Healthy Lifestyle</td>
<td>Family Oriented</td>
<td>Graphical</td>
<td>Achievement Oriented</td>
</tr>
</tbody>
</table>

Credit: Richard Sweeney, NJIT
(Not a complete survey. Sizes based on best figures I could find, but involved some guesswork. Do not use for navigation.)
Reminder: 500,000 A DAY!
A sustainable social network for life.
700,000 new ones a day

95% of students in clients like U of Toronto, NCSU, Stanford, etc.

Over 80% of all college and University students in North America.
e.g.
Charlotte Alliance LS
San Jose SU
McMaster
5,000 Library visits every night!
Reading is virtually fundamental in SL

By KATT KONGO
Staff writer

While most Second Life residents are aware of the variety of ways in which SL is used, from educational classrooms to treatment of mental illnesses, most would be surprised to learn that SL is now being used by an institution most think of as conventional — a library.

To be more exact, the Alliance Library System (ALS) is currently providing select services to the residents of SL. Initial services have, so far, consisted of book discussions and programs, such as one held Friday on the topic of “Getting Along with IT stuff for Librarians and Educators.”

ALS, which is based in East Peoria, Ill., will team up with Online Programming for All Libraries (OPAL) and utilize the programs currently offered online to librarians and libraries within SL. The two entities eventually hope to offer a plethora of library services.

In a telephone interview, Kitty Pope, executive director for the ALS, said the goal of their programs within SL is to reach people who might not otherwise go to a library. In giving background information about the ALS, Pope said the organization provides services to 285 libraries and is partially funded by the state of Illinois.

She added that ALS is one of the most innovative organizations, technologically speaking, and their philosophy is to mine new technologies to spread the gospel of library usage. “Innovation equals risk, innovation equals growth,” she stated.

Lori Bell, the ALS’s director of innovation, read about SL in the blog of a librarian who was already a resident. She created an account, logged on with her avatar, Lorelei Junot, and saw a population of almost 200,000.

She found that SL had a few libraries, such as Wandering Yaffle’s blacklibrary, but thought that library services could be expanded. “Since there is web programming through OPAL, why not offer that in SL?” she said.

Librarians from all over the country are gathering in SL to assist in setting up the virtual library. In fact, Pope expected criticism from many library blogs, but instead has found those in the field to be immensely excited about the possibilities afforded by SL.

Bell concurred, saying “The response has been enthusiastic. People are volunteering and doing a

See BOOK, Page 20
What people are doing:

- Creators publish Web pages, write blogs, upload videos to sites like YouTube.
  - Young Teens: 34%
  - Youth: 37%
  - Generation Y: 30%
  - Generation X: 19%
  - Young Boomers: 12%
  - Older Boomers: 7%
  - Seniors: 5%

- Critics comment on blogs and post ratings and reviews.
  - Young Teens: 24%
  - Youth: 37%
  - Generation Y: 34%
  - Generation X: 25%
  - Young Boomers: 18%
  - Older Boomers: 15%
  - Seniors: 11%

- Collectors use Really Simple Syndication (RSS) and tag Web pages to gather information.
  - Young Teens: 11%
  - Youth: 16%
  - Generation Y: 18%
  - Generation X: 16%
  - Young Boomers: 15%
  - Older Boomers: 16%
  - Seniors: 11%

- Joiners use social networking sites.
  - Young Teens: 51%
  - Youth: 70%
  - Generation Y: 57%
  - Generation X: 29%
  - Young Boomers: 15%
  - Older Boomers: 8%
  - Seniors: 6%

- Spectators read blogs, watch peer-generated videos, and listen to podcasts.
  - Young Teens: 49%
  - Youth: 59%
  - Generation Y: 54%
  - Generation X: 41%
  - Young Boomers: 31%
  - Older Boomers: 26%
  - Seniors: 19%

- Inactives are online but don’t yet participate in any form of social media.
  - Young Teens: 34%
  - Youth: 17%
  - Generation Y: 21%
  - Generation X: 42%
  - Young Boomers: 54%
  - Older Boomers: 61%
  - Seniors: 70%

Data: Forrester Research

Chart by Ann O'Grady
Information Engagement Levels

Stimulate/Live

Present/Teach

Argue/Defend

Act on/ Discuss

Read/View

Dr. Thomas Davenport
SchoolRooms

- **An Example of BIG vision and Collaboration**
- Built by Librarians and Teachers
- Every Lesson
- Every Grade
- Every Standard
- Every Subject
- Every State
- OPAC integration, localization
- Scalable – 10 states started so far plus Boston PL and Philadelphia After-School Program
- 5,000 K-12 Learners, 2600 schools in Ohio
- Award Winning: Scholastic Best in Tech Award
Earth Science Room: The Amazing Sun

corona - the sun's atmosphere
chromosphere
photosphere – the light-producing layer
core – where the nuclear fusion of helium and hydrogen takes place
sunspot – dark patch that makes cooler gases

Explore a new learning portal for the K12 community

SchoolRooms™ by SirsiDynix is a new online portal that encourages K-12 students to explore, discover, and learn anywhere, anytime.

Designed to meet students' needs and to be a tool for parents who play an integral role in helping their children continue learning outside the classroom.

Using SchoolRooms, students can search (all at once):
Bricks, Clicks and Tricks
Are we going to a totally build it yourself world?

Imagine IKEA merging with GM...
Newspapers: Assemble them yourself.
Now: Re-imagine the textbook, coursepack, etc.
Are we ready for the post book world?

http://www.flickr.com/search/?q=book+sculpture&page=44
Can we get our heads out of book-centric content?
What does your best borrowed report look like?

Is Yuma different?

http://www.flickr.com/photos/blu_blue/262096844/in/pool-boo
What does your book and article or website recommendation blog/RSS feed look like?

http://www.flickr.com/photos/matthk/20542
How do your community content reviews do?

http://www.flickr.com/photos/cjanebuy/340249608/in/pool-booksand
How are your web based communities doing?

http://www.flickr.com/photos/mthiesson/17/
Do your users like your video author interviews?

Your YouTube DVD trailers?

http://www.flickr.com/photos/lori_an/31
Do you offer podcasts?

Do you record every story time?
Can you circulate books from anywhere?

Like the parking lot, sidewalk sale, nursing home?

http://www.flickr.com/photos/library_mistress/52
Will Reading Matter?

Audiobooks and eBooks . . . And Google
Growing up from books,
But bringing them along...
Solve a Problem for Your Readers
Who Are Your Stars?

Do Your Users Know Their Names?
Canadian Filmmaker Rob Spence
Embedded Technology
Can the Modern Director Use Data?

I used to think correlation implied causation.

Then I took a statistics class. Now I don't.

Sounds like the class helped. Well, maybe.
METABOLISM

The slower it gets,
the faster it catches up with you.
Have You Updated Your Training?
Describe how your training is evolving.
Are any of your folks still calling it BI?!!
2.0 is about *play*
23 Learning 2.0 Things

• Week 1: Introduction and Adult Learning

• Week 2: Blogging

• Week 3: Photos & Images

• Week 4: RSS & Newsreaders

• Week 5: Play Week

• Week 6: Tagging, Folksonomies & Technorati

• Week 7: Wikis

• Week 8: Online Applications & Tools

• Week 9: Podcasts, Video & Downloadable audio
Five Weeks to a Social Library

- **About Five Weeks to a Social Library**
- Blogs
- RSS
- Wikis
- Social Networking Software and Second Life
- Flickr
- Social Bookmarking Software
- Selling Social Software @ Your Library
• Real mobile devices: iPods, MP3 players, video, smart phones, texters, Kindles, Sony Readers, etc.
• Podcasts, Streaming Media
• Special PC’s: disability compliance, streaming media, IM groups, VR (both kinds)
• Gaming stations

Build a Sandbox
Top 13 2.0 Apps for Librarians

1. Google Docs Suite
2. Meebo
4. Worldcat.org
5. Amazon.com
6. Del.icio.us
7. Bloglines
8. Zotero
9. Facebook
10. WordPress
11. MediaWiki
12. Ning
13. Twitter

All FREE
Be a Lab Rat!
Experiment, continuously
We Are Important

Kirk, Spock, McCoy, and Ensign Ricky are beaming down to the planet. Guess who's not coming back.
Inventing the Future

• How much time do you spend having a clear view of it?

• How is it shared with your colleagues and clients?
• You can’t wait for everyone to change at once.
Re-Energizing Libraries
Be The Change We Want to See
A Third Path
The world is going to change with or without you... get ready.
Context is King, not Content.
“You have to sit by the side of a river a very long time before a roast duck will fly into your mouth.”
— Guy Kawasaki
What do we have?

• 19 new product releases and updates in 2 years – on time and specification.
• 40,000 clients
• SirsiDynix Symphony (Unicorn)
• SirsiDynix Horizon
• SirsiDynix Enterprise
• SirsiDynix eLibrary
• SirsiDynix URSA
• SirsiDynix SchoolRooms
• SirsiDynix Consulting
• Third Party integration and Sales
SaaS

- Software as a Service
- Stay Up To Date
- 50% annual savings in Total Cost of Ownership
- Green
- Global – Canada, Scotland, US, Australia, etc.
- Secure – used by US military
- Over 800 clients in thousands of libraries
SchoolRooms

- Built by Librarians and Teachers
- Every Lesson
- Every Grade
- Every Standard
- Every Subject
- Every State
- OPAC integration, localization
- Scalable – 10 states started so far plus Boston PL and Philadelphia After-School Program
- 5,000 K-12 Learners, 2600 schools in Ohio
- Award Winning: Scholastic Best in Tech Award
Faceted Search

- Enterprise
- Patented search display
- Taxonomically Tuneable
- Diacritic smart
- Unicode
- Stackable facets
- W3C Accessibility standard compliant
- Intelligent buckets
- Tested – user experience
API (Application Programming Interface)

- Almost 2 decades of API experience
- API Training
- A huge library of API’s
- Field and tag level access
- Examples: Google API, WorldCat API, etc.
Architecture

• XML
• Multiple servers including Unix, MS and Sun
• Scalability – 50,000 simultaneous users over 7 days at Sun, Unix and MS automated testing sites
• Unicode
• Consortial
• Third Party Certification and commitment (SIP2, NCIP)
Examples of API’s

- DCPL’s iPhone Application
- Topeka and Shawnee PL Facebook integration
- Hennepin / Minneapolis MySpace integration
- Charlotte & Mecklenberg fines ‘bot’ in Second Life
- Alliance Library System Second Life Library 2.0
- U of Huddersfield data integrations + Google Books
- SWIFT or TALIS consortia eLibraries
Portals

- SirsiDynix eLibrary
- ChiliFresh
SirsDynix User Experience

• Faceted Search
• Fines Payment
• Portal
• ChiliFresh
• Syndetics
• SchoolRooms
• BiblioCommons
• LibraryThing
• Military
• URSA
Analytics

- SirsiDynix Directors Station (Wal*mart)
- SirsiDynix Web Reporter
Customer Service Innovation

• Stephen’s Lighthouse Blog
• SirsiDynix Institute (webcasts, MP3’s. iTunes)
• Customer Care Wiki
• Customer Communities
• Customer Tracking from all facets of contact
• App Store
• Customer satisfaction metrics
What is at the heart of libraries?

Learning
Interaction
Community
Innovation
Passion
Progress