The Evolving Digital Library
What Must be Done to Stay Relevant

George Machovec
Associate Director
Colorado Alliance of Research Libraries
george@coalliance.org

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Welcome and Introductions

- George Machovec
  - Associate Director, Colorado Alliance of Research Libraries, 1993-present
  - Head of Library Technology & Systems, Arizona State University 1987-1993
  - Science Reference Librarian, ASU 1977-1986
- Managing Editor, The Charleston Advisor 1999-present
- My cultural heritage is from the Czech Republic, Moravian region
Who Are We?

- Colorado Alliance of Research Libraries
- A non-profit consortium of 13 libraries founded in 1974 – 12 academic libraries and 1 public library
- History of innovation
  - CARL ILS (sold in 1995) – now TLC
  - UnCover (sold in 1995) – now Ingenta
- No relationship to current TLC/CARL
Who Are We?

- Member of ICOLC
- What does our consortium do?
  - Database licensing, shared collection development
    - > $10 million (USD) in shared licensing
  - Prospector Union Catalog and other hosting services
    - With over 40 libraries (public, academic, special)
  - Alliance Digital Repository
    - Fedora/Islandora open source institutional repository service for seven libraries
  - Gold Rush
    - Electronic Resource Management System (ERMS)
    - A-Z/Open URL Link Resolution/Content comparison
    - A hosted service licensed to about 80 libraries in North America
University of Denver Library

- Peak of Spring Semester 2011
  - Books/Journals are in perfect order
  - No faculty/staff/students
  - Where are the people?
- Repeated at academic libraries all over the United States
Reference Collection is online, people want computer access to everything.

Refreshments

Reference Desk
Where is the collection going?

The University of Denver is moving 80% of its collection to offsite storage

- 20% of high use items will remain
- Special Collections

Building is being renovated for people

- Collaboration
- Study areas
- Workstations
- WiFi and Power
- Media Development
- Research Assistance
- Group Meeting Spaces
- Galleries
Regional Catalogs for Patron Initiated Borrowing

Prospector

Search

Find books, movies, music, and more! Keyword Search

Popular Searches

Interesting Facts About Prospector

- Welcome to our new look
- We have incorporated facets for limiting results, book jackets and other design elements
- If you prefer our classic interface it is still available
- Prospector has over 10 million unique titles and 30 million copies
- Status of Denver Public Library

Prospector News

Six New Libraries Join Prospector
May 2nd, 2011 3:39pm
On May 2, 2011 Eagle Valley Library District, Garfield County Public Library, Grand County Library District, Gunnison County Library District, Town of Vail Library and Wilkinson Public Library went live in the Prospector system. This means that their library holdings are available for lending and patrons of each of these libraries may now borrow from...

Temporary Deactivation Of University Of Denver
Penrose For Lending
April 19th, 2011 10:39am
In preparation for the exciting re-building of Penrose Library at the University of Denver, Penrose will turn off Prospector Lending from April 18 through April 30. It's a first step in the tremendous task of moving its collections while construction gets underway. Patrons from DU will be able to continue to borrow items through Prospector...

Adams State College Joins Prospector
April 1st, 2011 4:14pm
On April 1, 2011 Adams State College went live in the Prospector system. This means that their library holdings are available for lending and...
Discovery Interfaces

Efficient Consolidation in Research
What has made print largely obsolete in many disciplines?

- **Journal Literature**
  - Most scholarly content now online by publishers (began in mid-1990s)
  - Many major publishers have digitized their backfiles

- **Backfile Projects — such as**
  - JSTOR, 1,400 titles back to their inception

- **High Speed Interlibrary Loan to the Desktop**
  - RapidILL (http://rapidill.org/)
  - IDS Project (http://idsproject.org/)
What has made print largely obsolete in many disciplines?

- Trusted 3\textsuperscript{rd} party archiving
  - Portico (http://www.portico.com) dark archiving
    - > 12,000 journals from over 120 publishers
    - > 65,000 ebooks
    - > 40 digital collections
  - LOCKSS (CLOCKSS) peer to peer archiving
    - > 6,700 journals from 450 publishers
    - CLOCKSS selected dark archived titles using LOCKSS technology
    - Technology also used for private networks and digital repositories (e.g. MetaArchive)
Trusted Print Archiving
Just in Case

- Center for Research Libraries Print Archives
  - Regional storage repositories and academic library archiving of print
  - Developing standards for journal backfile storage retention
  - Print Archives and Preservation Registry to record who is storing which titles, under what conditions,
  - http://www.crl.edu/print-archives
Ebooks versus the printed monograph

- Thomas Frey, Futurist at the DaVinci Institute predicted that academic libraries will be buying NO printed scholarly monographs in 10 years
  - [http://www.davinciinstitute.com/](http://www.davinciinstitute.com/)
- It may not be true in all disciplines but it will be mostly true if current trends continue
- The explosion of tablets, ereaders and mobile phones has made the difference
Printed Monograph Purchasing at Three Academic Libraries

![Graph showing printed monograph purchasing at three academic libraries over the years 2008 to 2010. The libraries are represented by different lines: Colo State, CU/Denver, and Univ of Wyoming. The y-axis represents the number of monographs purchased, ranging from 0 to 50,000, and the x-axis represents the years 2008 to 2010. The graph indicates a decrease in purchasing over the years for all libraries.]
What these libraries spent in 10 years for monographs

- Purchase statistics for 8 academic libraries in the Colorado Alliance of Research Libraries, 1999-May 2008
- 566,401 titles
- 2.44 copies owned per title (high of 4.91, low of 1.60)
- 1,383,233 books
- 145,603 books purchased annually
- 59,621 titles purchased annually
- $107,892,173 spent (based on avg cost of $78.00)
- $11,357,070 spent annually
Printed Monograph 10 Year Study
Titles Never Circulated
Colorado Alliance

- Colorado State University: 39.14% 278,650 titles
- University of Colorado at Denver: 39.46% 129,914 titles
- University of Denver: 47.77% 208,248 titles
- University of Colorado at Boulder: 49.41% 348,181 titles
- Colorado College: 50.89% 67,250 titles
- University of Northern Colorado: 51.57% 116,799 titles
- Regis University: 52.41% 55,848 titles
- University of Wyoming: 59.62% 133,645 titles
Patron Driven Acquisitions

- A very popular way to purchase ebooks
  - A body of MARC records usually loaded in a catalog
  - As patrons use titles short term loans or purchases are triggered
- A library only pays for what is used
- Pay at the point of need
- More titles can be exposed to the reader
### University of Denver EBL Pilot

<table>
<thead>
<tr>
<th>Description</th>
<th>List</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>255 titles purchased</td>
<td>$19,510</td>
<td>$19,510</td>
</tr>
<tr>
<td>2,988 titles with STL*</td>
<td>$39,831</td>
<td>$214,974</td>
</tr>
<tr>
<td>5,397 titles with browse</td>
<td>$0</td>
<td>$436,691</td>
</tr>
<tr>
<td>Total (8,640 titles)</td>
<td>$59,341</td>
<td>$671,175</td>
</tr>
<tr>
<td><strong>Savings</strong></td>
<td><strong>$611,834</strong></td>
<td></td>
</tr>
</tbody>
</table>

*includes titles with an STL and auto-purchases, 63,000 MARC records loaded in the pilot*
Discovery Interfaces
Portals into our Digital Holdings
Google Scholar

- Alex Verstak and Anurag Acharya began looking at a consolidated super index
- Beta launch in November 2004 – still has a “beta” designation in 2011!
- A separate search island from the main Google index with some overlap
Google Scholar

- Additions to GS over the last few years have included
  - “Cited by” feature which mimics ISI citation indexing but uses Web citing instead
  - Related articles
  - Interaction with local link resolvers through proactively sending holdings via an XML file
  - Citation exporting feature
  - Incorporation of some Google Books content
  - Links to open access and publisher pay-per-view
  - Patents are now included
  - Who knows what will come out of the mind of Google next!
  - Oh yes, and its FREE
And the Problem is ---

• Nobody knows exactly what is in Google Scholar
• Nobody knows the overlap between Google, Google Scholar, Google Books and the other Google islands
• Linking to your local resolver can be very sloppy and you only see the link to what you own
• It’s not branded
• More local integration and control

An opening ➔
Library Discovery Interfaces

- Began with a focus on the traditional OPAC
  - AquaBrowser
  - Encore
  - Primo
  - VuFind (open source)
  - OCLC WorldCat Local
  - Build your own (Lucene, SOLR)
  - etc, etc etc

- After a couple of years a quick realization that we also need a solution for journal literature
Common Discovery Interfaces That Include Everything

- Summon (SerialsSolutions)
- EBSCO Discovery Service (EDS)
- WorldCat Local (OCLC)
- Primo/PrimoCentral (Ex Libris)
- Encore/Encore Synergy (Innovative Interfaces)
Discovery Interfaces

- Puts much of the library digital content in a single search
- Libraries can control what to include
- Libraries can control branding
- Can include journal articles, monographs, digital repository materials – virtually anything digital
- Users can revert to native interfaces or silos if advanced specialized searching is needed
Other Changes on the Horizon

- Integrated Library Systems (ILS)
  - Web Scale Management Systems (e.g. OCLC)
  - Local ILS vendors moving to optional SaaS (software as a service) and redesigned environments
    - Alma for ExLibris
    - Sierra for Innovative Interfaces
  - Open source movement
  - Who will prevail? No one knows but the ILS world is in flux
Digital Repositories

- Digital repositories become the place for libraries/campuses to host their unique content
  - Special collections (photos, manuscripts, audio, video)
  - Theses/dissertations
  - Raw research datasets
  - Virtually anything digital or that can be digitized
Digital Repositories

- Open source solutions are extremely popular
  - Dspace
  - Fedora

- Commercial solutions include
  - ContentDM (OCLC)
  - Digititool/Rosetta (ExLibris)
  - Digital Commons (BePress)

- Cloud hosting as primary or secondary storage
  - DuraCloud (http://DuraCloud.org)
The Role and Impact of Consortia

- Consortia are still hot!!!!
- Almost every library belongs to one or more consortia
- Purchase collectively whenever possible
- Vendors are now aware of collective purchasing
- International Coalition of Library Consortia
  - Two annual meetings – one in Europe and the other in North America
  - ICOLC13th Europe / Asia Meeting in Istanbul, Turkey from 18th to 21st September 2011
Staying Relevant

- Libraries must be the licensing agent for electronic content
  - Journal literature
  - Monographic literature
  - Music and Video content

- Discovery interfaces – make everything easy to find!
  - Simple but powerful interfaces
  - As encompassing as possible
  - Reduce barriers to discovery and access
Staying Relevant

- Digital repository management and services
  - Digitize and consolidate library and campus content and research
  - Be the recognized place to store campus intellectual property – otherwise content will be spread all over and not properly managed
  - Take the lead
Staying Relevant

- Rethink your physical library
  - How can it be redesigned to meet the needs of people
  - What services are necessary
  - Redeploy staff into new roles to maximize their effectiveness
  - What needs to be kept in the building and what can be paged from storage when necessary?
Staying Relevant

- Deploy mobile interfaces
  - Provide user interfaces that work well on mobile phones
- Participate in social networks
  - Provide ability to push library information to Facebook, Twitter, email and other tools
- Develop a presence, where appropriate, on social media
- Keep your Website modern and up-to-date
- Participate in consortial or group purchasing to maximize your buying potential
Staying Relevant

- Without change libraries will become museums
- Without change libraries will decline in value
Thank You!

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http://www.coalliance.org
george@coalliance.org