Leveraging the power of aggregation to achieve an enhanced research environment

IFLA Presidential Meeting 2010
Stellenbosch
“Wikipedia is the Gutenberg printing press of the 21st century” - Anon
Wisdom of Crowds (Collective Intelligence)

- *The Wisdom of Crowds* by James Surowiecki
- *Infotopia* - *How many minds produce knowledge* by Cass Sunstein

“Under the right circumstances groups are remarkably intelligent, and often smarter than the best person in them”

Stellenbosch, February 2010
The Madness of Crowds

- *Extraordinary Popular Delusions and the Madness of Crowds* by Charles MacKay

- Nietzsche: “Madness is the exception in individuals but the rule in groups”.

Stellenbosch, February 2010
The Web is multi-directional

- Greater focus on content users create and choices & preferences they make

- User contribution increasingly important
  - Contributed explicitly by individuals
  - Implicitly - usage data captured by the system (‘clickstreams’)

Stellenbosch, February 2010
Failure is not an option: mission control from Mercury to Apollo 13 and beyond

Author: Gene Krantz

Subjects: Kranz, Gene -- Career in aerospace engineering; United States National Aeronautics and Space Administration; Manned space flight -- Systems engineering -- United States -- History; Ground support systems (Astronautics) -- History

Publisher: Simon and Schuster

Related Titles: Series: New series in NASA history

Language: English

Creation Date: 2000

Format: 415 p. ill., 25 cm.

Reviews:
- rated this item 1/10 (09/17/08): "This book was heaps good."
- Susan Brown rated this item 5/10 (03/05/08): "no wait I just read a more fascinating book"
- Susan Brown (Aleph) rated this item 1/10 (10/01/08): "Ich denke dieses Buch passt ganz gut für die Hausarbeiten von Prof. Müller."
- Susan Brown (Aleph) rated this item 5/10 (08/20/08): "여러가지 많은 책을 봤습니다만 아폴로 탐사에 관한 가장 좋은 책이라고 생각 합니다. 강추해념."
- rated this item 1/10 (08/25/08): "I quite liked this book. It was very informative."
- Yutaka Masuda rated this item 8/10 (10/30/08): "著者は日本遺伝と思われる。"
- Yutaka Masuda rated this item 1/10 (10/30/08): "NASAについて詳細に説明している文献です。"

Tagging:
My tags for this item
- Cloud / List
- Assign/remove tags

Everybody's tags for this item:
tech and society nasa rocket science space apollo 13 engineering 야생 동물의 지구 탐사 moon あとで読む aerospace apollo mission near disasters 항공

Tags page
Implicit user contribution

- Circulation data
- Actions
  - Item viewed
  - Item downloaded
  - Item sent
  - Item bookmarked
  - Item printed
  - Item stored
- Clickstreams, recording a search process

Stellenbosch, February 2010
Great interest in usage-based measures

- COUNTER – www.projectcounter.org
- SUSHI - www.niso.org/workrooms/sushi
- JISC MOSAIC – www.sero.co.uk/jisc-mosaic.html
- Metrics for scholarly evaluation:
  - UKSG Usage Factors project
    - uksg.org/usagefactors
  - Project MESUR - www.mesur.org

Stellenbosch, February 2010
Clickstream Data Yields High-Resolution Maps of Science.
Potential uses of implicit contribution

- Collection development
- Evaluation
- Trend analysis
- Relevance ranking
- Recommendations
Recommenders are everywhere

I’m glad you enjoyed that. People who liked that technique also enjoyed these other sexual techniques:...
Stellenbosch, February 2010

Hello, Jenny Walker. We have recommendations for you. (Not Jenny?)

Jenny's Amazon | Today's Deals | Gifts & Wish Lists | Gift Cards

Customers Who Bought This Item Also Bought

- Give a Little: How Your Small Donations Can Transform Lives by Wendy Smith
- Why Good Things Happen to Good People: How God Works for Good in the Lives of普通 People by Stephen Garrard Post
- Why Good Things Happen to Good People: How God Works for Good in the Lives of普通 People by Stephen Garrard Post
- The Courage to Give: Inspiring Stories of People Who Made a Difference by Jackie Waldman
- Think Confident, Be Confident: A Four-Step Program to Build Self-Confidence by Marc Fox

36 new from $3.09 | 19 used from $7.75 | 1 collectible from $32.50

Formats
- Hardcover: $13.57 | Prime: $8.09 | Normal: $7.75
- Audio, CD, Unabridged: $40.15 | Prime: $37.12 | Normal: $5.32
- Audio, Download: $10.47 or less with new Audible membership

Additional options:
- Express Checkout with PayPhrase
- Jenny's Rural House
- Create PayPhrase
- More Buying Choices
- 56 used & new from $7.75
- Have one to sell? Sell yours

Share your own customer images
Search inside this book

Done
iTunes

Stellenbosch, February 2010
Stellenbosch, February 2010

So why not here?
Library Book Recommendations

Stellenbosch, February 2010

BOSTON COLLEGE
QUEST LIBRARY CATALOG

Full Record View

Record 1 of 1:  Add to My List  View My List  Save/Email Record

Choose record view:  Full View  Brief View  MARC Tags View

Author:  Stegner, Wallace (1909-
Uniform Title:  Short stories
Title:  Collected stories of Wallace Stegner
Deser.:  xvi, 525 p.; 25 cm.
All Locations:  Availability
ISBN:  0394584090
Format:  <Book>
SystemNumber:  0006585410
Google Books:  More on this title via Google Book Search

BibTip:  You might also be interested in...
- A man for all seasons / by Robert Bolt
- April 1865 / Jay Wlink
- Crossing to safety / Wallace Stegner
- Down in New Orleans / Billy Sotom... photographs by Nikki Page
- Lucky Jim / Kingsley Amis: with an introduction by David Lodge
- The first Jesuits / John W. O'Malley
- Wheat that springeth green / J.F. Powers

Waiting for http://library.bcl.edu/BCLDESKTOP/
Stellenbosch, February 2010

InvestiGator Catalog

New Search | Library Account | Suggest a Purchase | Quick Contacts | Help

Microform Request | Databases | EReserves | ILLiad

Start Over | Request Item | Save to Book Bag | MARC Display | Return to List | Limit & Sort | Another Search | Links + Search of

LIMIT search to available items

Record 3 of 3

Result page

Author: Schwartz, Randal L.

Link to:
An electronic book available to SFSU Students & Faculty

Publ/Date: Sebastopol, [Calif.] : O'Reilly, c2008.
Subject: Perl [Computer program language]

Availability

More Information

LibraryThing Recommends

LibraryThing Recommends

Programming Perl by Wall, Larry.
Mastering regular expressions by Friedl, Jeffrey E. F.
Advanced Perl programming by Srinivasan, Sriram.
Programming the Perl DBI by Descartes, Alligator.
Perl in a nutshell by Patwardhan, Nate.
Mastering algorithms with Perl by Orwant, Jon.

Subjects:  Psychiatric nursing
Edition:  People who borrowed this item, also borrowed (show more or everything):

- The child with epilepsy (1986) by Dinnage, Rosemary
- Gerontological nursing (7th edition, 2010) by Eliopoulos, Charlotte
- Essentials of gerontological nursing (2008) by Wallace, Meredith, PhD, RN

Useful links:
Amazon UK: http://library.hud.ac.uk/per/amazon.pl?0335222936
Scholarly Recommender Service

Need to:
- Focus on scholarly materials – particularly articles (core unit of use)
- Be based on structural analysis of usage and not just based on popularity

Stellenbosch, February 2010
bX from Ex Libris

• A service which taps into the power of the networked scholarly community to generate **recommendations based on article usage**

• Based on data mining and structural analysis of **aggregated usage data**, across libraries and scholarly information environments
  – Massive repository of user data - growing

• Derives from **research** done at Los Alamos National Laboratory by Johan Bollen and Herbert Van de Sompel

Stellenbosch, February 2010
An architecture for the aggregation and analysis of scholarly usage data.

Johan Bollen  
Digital Library Research & Prototyping Team  
Los Alamos National Laboratory  
Los Alamos  
NM, 87545  
jbollen@lanl.gov

Herbert Van de Sompel  
Digital Library Research & Prototyping Team  
Los Alamos National Laboratory  
Los Alamos  
NM, 87545  
herbertv@lanl.gov

ABSTRACT

Although recording of usage data is common in scholarly information services, its exploitation for the creation of value-added services remains limited due to concerns regarding, among others, user privacy, data validity, and the lack of accepted standards for the representation, sharing and aggregation of usage data. This paper presents a technical, standards-based architecture for sharing usage information, which we have designed and implemented. In this architecture, OpenURL-compliant linking information of a specific resource is made available, as well as information of a specific usage event that of recommendation services. The introduction of a wide range of successful evaluation and recommendation services which rely in some shape or form on the analysis of usage data has fundamentally changed how users interact with online resources. The impact on the scholarly community is profound, as online journal usage data has had a far-reaching effect on the research and development of scholarly communication systems. The Medical Subject Headings (MeSH) database, for example, has benefitted greatly from the retrieval of usage metrics, and the CiteSeer research portal has used user-centered techniques to improve the retrieval of scholarly communication units [3], and trend analysis [14, 5]. Especially for the latter two applications,
More about bX

- Built on the OpenURL Framework:
  - Harvesting usage log files from link resolvers (SFX)
- Using OpenURL context-object format
- Using OAI-PMH protocol for harvesting
- Building a (very large) aggregate of usage data
- Mining the aggregate to derive scholarly recommender services

Stellenbosch, February 2010
Recommendations in Primo


2. Ellison, Nicole NB. *European Politics: A Comparative Introduction, 2nd edition (Comparative Government and Politics)* Communication research; 2006-04-01; vol 33; iss 2; p. 152

3. Hardey, Michael M. *European Politics: A Comparative Introduction. Information, communication society;* 2004-06-01; vol 7; iss 2; p. 207

4. Whitty, Monica MT. *European Politics In Transition With European Union Constitution Supplement* Human relations; 2003-07-01; vol 56; iss 7; p. 869

5. Tidwell, Lisa LC. *The Government and Politics of the European Union Human communication research;* 2002-01-01; vol 28; iss 3; p. 317
Exploring the Sociopolitical Dimensions of Global Warming

By: Troy D. Sadler, Michelle L. Klosterman
Format: Article Peer Reviewed
Year: 2009
Published in: Science Activities: Classroom Projects and Curriculum Ideas, 45(4), p. 8-13
Database: ERIC (EBSCO)

Summary

The authors present an activity to help high school students conceptualize the sociopolitical complexity of global warming through an exploration of varied perspectives on the issue. They argue that sociopolitical issues such as global warming present important contexts for learning science and that the social and political dimensions of these issues must be featured along with the underlying science. The activity is structured as a jigsaw in which learners explore multiple perspectives on the issue of global warming as they work to develop recommendations for national policy. (Contains 1 table.)

People who read this article also read:

Energy, Environment and Sustainable Development
Summary

The authors present an activity to help high school students conceptualize the sociopolitical complexity of global warming through an exploration of varied perspectives on the issue. They argue that socioscientific issues such as global warming present important contexts for learning science and that the social and political dimensions of these issues must be featured along with the underlying science. The activity is structured as a jigsaw in which learners explore multiple perspectives on the issue of global warming as they work to develop recommendations for national policy. (Contains 1 table.)

People who read this article also read:

- **Energy, Environment and Sustainable Development**
  - Article
    - By Abdulm, Mustafa Omran M.O.
    - Renewable & Sustainable Energy Reviews vol. 12 iss. 9 (2008)
    - Full text available

- **Global Warming**
  - Article
    - By Cartoni, Craig C.
    - Full text available

- **Oil Lease Sales Begin Despite Polar Bear Concerns**
  - Article
    - By [Author],
    - Issues in Science and Technology vol. 24 iss. 3 (2008)
    - Full text available

- **The Child in the Garden: An Evaluative Review of the Benefits of School Gardening**
  - Article
    - By Blair, Dorothy D.
What do users say?

“JSTOR meets Amazon!?”
- ELUNA twitterer

“On May 5, Ex Libris rolled out the shiny new fabulousness that is bX. ... (turns) the Services Menu into a point-of-need discovery tool. I think this is awesome.”
- Jamene Brooks-Kieffer, Kansas State Univ.

“I found exactly what I wanted. I've already found even more relevant articles in 10 minutes than I've found in the last 10 months using more traditional methods of research.”
- Ph.D. student, Arizona State University

Stellenbosch, February 2010
“The Web, they say, is leaving the era of search and entering one of discovery. What's the difference? Search is what you do when you're looking for something. Discovery is when something wonderful that you didn't know existed, or didn't know how to ask for, finds you.”

Jeffrey M. O’Brien, "The race to create a 'smart' Google"
Simple, Fast, Easy

Stellenbosch, February 2010
Scholarly search today

Users expect:

- A compelling and intuitive interface
- Single search across multiple types of metadata (representing all of the library’s collections)
- Excellent response time
- Excellent relevance ranking

Stellenbosch, February 2010
Today’s environment

• Technology has improved dramatically

• Information providers are keen to enhance and promote the discoverability of their collections

• Time to build mega-aggregates of content—wisely and carefully

Stellenbosch, February 2010
Wisely and carefully?

- Remember who the user is
- Build scholarly offering around institutional nucleus
- Help the user focus
- Complement searching with additional tools such as recommendations and links to related materials
- Provide relevant services

Stellenbosch, February 2010
Federated Search
(aka ‘Web-Scale’ Discovery)
Primo Central
Community and Cognition in Pride and Prejudice

Title: Community and Cognition in Pride and Prejudice
Author: Deresiewicz, William
Subjects: Austen Jane, 1775-1817 Pride and prejudice ; Community in literature.
Source: Project MUSE
Identifier: ISSN: 1064-1834

Jane Austen's Pride and Prejudice: A Sourcebook (review)

Title: Jane Austen's Pride and Prejudice: A Sourcebook (review)
Author: Davan, Kathleen Viola
No full text

The Pride and Prejudice of Don West

Title: The Pride and Prejudice of Don West
Author: Duggar, Jeff
No full text
From the Field....

• ‘Returning the Researcher to the Library’ (*Recent Library Journal* webinar title)

• ‘Get better value out of our resources that don’t start with the letter “A”’ (*Ron Berry, Grand Valley State University*)

• ‘Casts a wider net: more results from greater breadth, with facets narrowing to the most appropriate resources’ (*Ron Berry, Grand Valley State University*)

Stellenbosch, February 2010
Thank You!

Jenny Walker
jenny.b.walker@gmail.com

Stellenbosch, February 2010