

# “Every book its reader”: recommendations in Aleph



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# Every book its reader

*“While well thought out shelf-arrangement is necessary, it is by no means sufficient to get for EVERY BOOK ITS READER. The catalogue can also be of immense help in this matter.”*

*Ranganathan, S. R. (1931) The Five Laws of Library Science.  
Madras Library Association (Madras, India), p. 307*

**s/catalogue/Integrated Library System/;**

What Ranganathan is emphasising in his Third Law of Library Science is that librarians need to be active in promoting stock, in helping the books to discover their readers.

No doubt today Ranganathan would be referring to the Integrated Library System rather than the catalogue.

# How can we recommend books?

- reader's subject of study; course; modules
- reader's past borrowing history
- the e-shelf as a clue to reader interests
- readers' search patterns collectively
- reader's saved searches; alerts / SDI
- reader ratings of material
- usage of electronic material

This slide is really about “what do we know about the reader which might help us recommend stuff?”.

By “readers' search patterns collectively” I am thinking that we can keep logs of what search terms users as a whole have used. It is then possible to recommend to users search terms to try which are similar to the search terms they have entered, but which yield broader or narrower result sets. A good example of this in practice is the University of Huddersfield OPAC. Try <http://webcat.hud.ac.uk/> and search for something vague like “ethics” or “management”. At the top of the results the system will suggest refinements based on successful searches made by a number of other users.

Usage of electronic material is a problem, as we cannot easily identify the materials which have been used by the same individual. This makes it harder to provide recommendations on a personal level. Nevertheless, if done properly, such as via a gateway service like SFX, useful recommendations can be made (e.g. bX service).

## What does Aleph already provide?

- SDI (selective dissemination of information)  
= search alerts
- But that's about all

# Problems with Aleph SDI

- Reporting of items which aren't actually new
  - e.g. if process status set and then cleared
  - but it's a lot better from Aleph 18 onwards
- Not reporting items which are new
  - e.g. if several copies are received at once
- Not reporting material without items (for example, e-books)
- Reporting new journal issues but not telling you which issue is new
- RSS feeds have no <pubDate> for new items: cannot sort in IE
- Alert e-mails are not XSL based, so inflexible

# Aleph SDI technical background

When an item is added or updated, and its process status is clear, a Z324 is created if it doesn't already exist. New items are recorded at each sub-library and globally.

Z324_REC_KEY	BIB no. + Z324 sequence
Z324_ENUMERATION_A to _D	Enumeration of highest numbered item (serial)
Z324_LOCATION	ALL / ADM / sub-library
Z324_DATE	Date item was new
Z324_HOUR	Hour item was new

The infrastructure for the Z324 which lies behind the alerts system is good, but its implementation is a little faulty. If we can get the Z324 working right, we can exploit the data in many ways.

## Fixing the SDI problems

- Custom service to run just before p\_sdi\_01
- Deletes the Z324 for items
  - with very old arrival dates
  - with very old open dates
  - in closed collections undergoing retrospective cataloguing
- Creates Z324 records for new e-books
- Resulting system is much more usable.

This custom service is available on EL Commons.

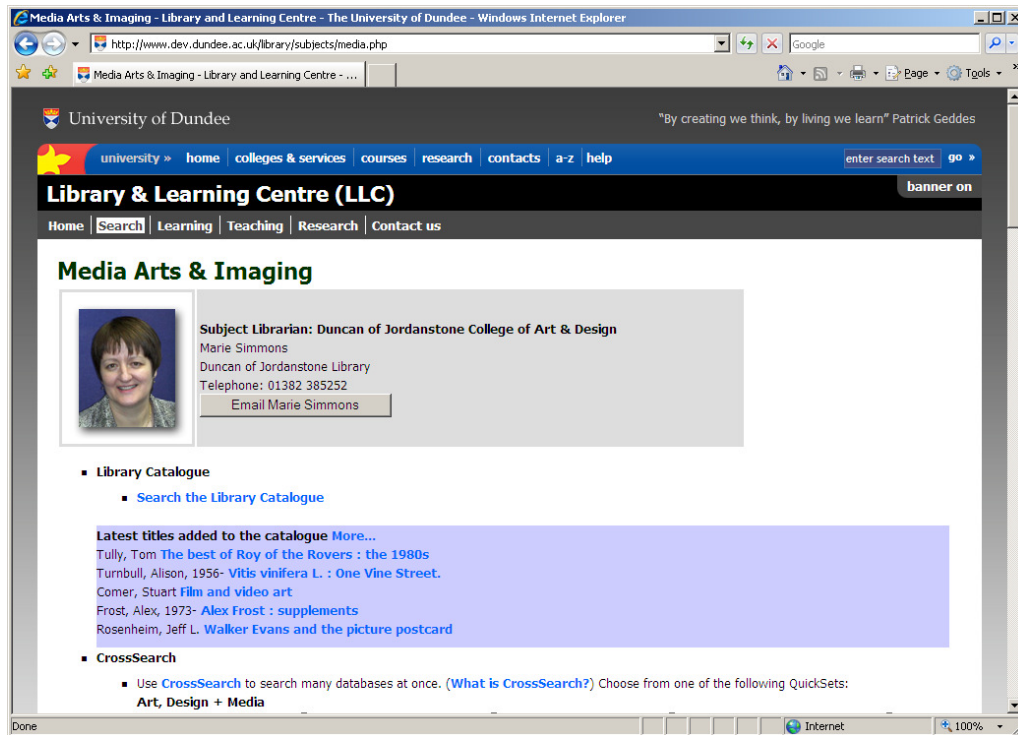
## New books pages and RSS

- Use Z324 to discover the new material
- Custom service to build pages for each subject of study
  - HTML for inclusion in OPAC
  - Atom feed (similar to RSS)
  - updated via the job\_list several times a day
  - XML-based configuration allowing testing of MARC fields, item data and order records
  - uses SFX API to link to new e-journal issues

We have written a custom service which uses the Z324 information to provide new books lists for each subject.

This custom service is not yet available on EL Commons. Please contact me if you are interested.





Here is an example from our web site. (The URL shown is from our development web-site. Go to <http://www.dundee.ac.uk/library/subjects/media.php> to see the public version.)

The blue panel “Latest titles added to the catalogue” is based on the RSS feed we have generated for that subject. Links from the titles lead to the catalogue. The “More...” link leads to the page shown on the next slide.

University of Dundee - New Acquisitions - Windows Internet Explorer

http://library.dundee.ac.uk/func=file&file\_name=dun-new-books-mai

Library catalogue

Search Results List Previous Searches Special Collections Make an ILL Request

Sign-in  
End Session  
My Library Card  
My e-Shelf  
Help

What's new - Media Arts and Imaging

News feed of this page.

**This week's new titles (16 Aug 2009 - 21 Aug 2009)**

Tully, Tom	<a href="#">The best of Roy of the Rovers : the 1980s</a>	2008
Storer, Russell	<a href="#">Video Logic [published on the occasion of the exhibition held at the Museum of Contemporary Art, Sydney, 19 August - 2 November 2008] : [Guest curator: Russell Storer]</a>	[2008]
Turnbull, Alison, 1956-	<a href="#">Vitis vinifera L. : One Vine Street.</a>	2008
Comer, Stuart	<a href="#">Film and video art</a>	2008
Frost, Alex, 1973-	<a href="#">Alex Frost : supplements [published on the occasion of the following exhibitions, "Adults" held at Galerie Sandra Bürgel, 23 June - 27 July 2007 and Milton Keynes Gallery, 22 September - 4 November 2007;" Format Wars" held at the Tramway 8 July - 6 August 2008; "BBO" held at ArtSway, 23 February - 6 April 2008]</a>	2008
Rosenheim, Jeff L.	<a href="#">Walker Evans and the picture postcard [published on the occasion of the exhibition held at The Metropolitan Museum of Art, 3 February - 25 May 2009]</a>	2009
Poledna, Mathias, 1965-	<a href="#">Mathias Poledna : Crystal Palace [published to accompany the exhibition held at Hammer Museum, Los Angeles 28 January - 22 April 2007; Museum of Contemporary Art, Chicago, 16 February - 14 May 2008; New Museum of Contemporary Art, New York, September 2008 - January 2009]</a>	c2007
Zuckerman, Andrew, 1077	<a href="#">Wisdom</a>	2008
Lapinski, Lisa, 1967-	<a href="#">MOCA focus : Lisa Lapinski : the fret and its variants [published to accompany the exhibition held at The Museum of Contemporary Art, Los Angeles, 26 June - 25 August 2008]</a>	c2008
Hughes, Ann d'Arcy	<a href="#">Printmaking : traditional and contemporary techniques</a>	2008
Kubo, Tite, 1977-	<a href="#">All colour but the black : the art of Bleach</a>	2008

This page is generated by the custom service and is stored on our Aleph server, using the same templates and layout as our OPAC.

[Search](#)
[Results List](#)
[Previous Searches](#)
[Special Collections](#)
[Make an ILL Request](#)
[Help](#)
[My e-Shelf](#)

### What's new - Computing

 [News feed of this page.](#)

**Last week's new titles (16 Aug 2009 - 22 Aug 2009)**

	<a href="#">Computer Bulletin</a> v. 17: no. 1 (2009: June) <a href="#">View online</a>
	<a href="#">Journal of speech, language and hearing research</a> v. 52: no. 4 (2009: Aug.) <a href="#">View online</a>
ACM Symposium on Access Control Models and Technologies (14th: 2009: Stresa, Italy)	<a href="#">SACMAT'09 - proceedings of the 14th ACM Symposium on Access Control Models and Technologies, Stresa, Italy, June 3-5, 2009.</a>
	<a href="#">IEEE transactions on visualization and computer graphics</a> v. 15: no. 5 (2009: Sept./Oct.)
	<a href="#">IEEE security and privacy</a> v. 7: no. 4 (2009: July/Aug.)
	<a href="#">IEEE design and test of computers</a> v. 26: no. 4 (2009: July/Aug.)
	<a href="#">Computer (IEEE Magazine)</a> , v. 42: no. 7 (2009: July)

**Titles added between 23 July 2009 and 15 Aug 2009**

	<a href="#">Artificial Intelligence</a> v. 173: no. 15 (2009: Oct.) <a href="#">View online</a> For off-campus access select Institution login, and UK Access Management Federation
Association for Computing Machinery	<a href="#">Journal of the Association for Computing Machinery</a> , v. 56: no. 4 (2009) <a href="#">View online</a> For off campus access select the UK Higher Education group, followed by the University of Dundee, and login with your username and password.

For journals, the custom service interrogates SFX when it builds the page. If the SFX API identifies that we have full text available for a journal issue, a link is provided. Of course, depending on the target, this does not always lead to exactly the right issue.

The screenshot shows the JSLHR website interface. At the top, there is a navigation bar with links for Search, Results List, Previous Searches, Special Collections, Make an ILL Request, and Help. Below this, a search bar is visible with fields for Author and Keyword(s), and buttons for Go and Search. The main content area features the JSLHR logo and the text "Journal of Speech, Language, and Hearing Research". A navigation menu includes links for HOME, HELP, FEEDBACK, SUBSCRIPTIONS, ARCHIVE, SEARCH, and TABLE OF CONTENTS. The current page is titled "Table of Contents (August 1 2009, 52 [4])". A red box highlights the text "Aug.)" in the right-hand sidebar. The main content area displays the following information:

**Receive this page by email each issue:** [\[Sign up for eTOCs\]](#)

**Contents: August 1 2009, Volume 52, Issue 4** [\[Index by Author\]](#)

- [Editor's Page](#)
- [Language](#)
  - [Articles](#)
- [Hearing](#)
  - [Articles](#)
- [Speech](#)
  - [Articles and Reports](#)
- [Research Note](#)
- [Errata](#)

Below the list, there is a search box with the text "Find articles in this issue containing these words:" and a "Search ALL Issues" button. At the bottom, there are links for "Table of Contents (PDF)", "Editorial Board (PDF)", "Front Matter (PDF)", and "Back Matter (PDF)". A note at the very bottom states: "To see an article, click its [Full Text] or [PDF] link. To review many abstracts, check the boxes to the left of the titles you want. and click the 'Get All Checked' button."

For journals, the custom service interrogates SFX when it builds the page. If the SFX API identifies that we have full text available for a journal issue, a link is provided. Of course, this does not always lead to exactly the right issue, depending on the target.

```

<!-- COMPUTING -->
<page id="comp">
  <description>Computing</description>
  <or scope="any">
    <budget><code test="like">AE-CMP-%</code></budget>
  <!-- LC -->
    <classification type="lc" test="range">
      <from>QA 75.5</from>
      <before>QA 101</before>
    </classification>
  <!-- UDC -->
    <classification type="udc" test="range">
      <from>001</from>
      <before>007</before>
    </classification>
    <classification type="udc" test="range">
      <from>774.6</from>
      <before>776</before>
    </classification>
  <!-- Dewey -->
    <classification type="dewey" test="like">794.8%</classification>
    <classification type="dewey" test="regexp">/^00[3456]</classification>
  </or>
</page>

```

This slide shows examples of the many configuration options available in our new books script, allowing testing of item data, orders and budgets, as well as the MARC record.

```

<!-- COMPUTING -->
<page id="comp">
  <description>Computing</description>
  <or scope="any">
    <budget><code test="like">AE-CMP-%</code></budget>
  </or>
  <!-- LC -->
  <classification type="lc" test="range">
    <from>QA 75.5</from>
    <before>QA 101</before>
  </classification>
  <!-- UDC -->
  <classification type="udc" test="range">
    <from>001</from>
    <before>007</before>
  </classification>
  <classification type="udc" test="range">
    <from>774.6</from>
    <before>776</before>
  </classification>
  <!-- Dewey -->
  <classification type="dewey" test="like">794.8%</classification>
  <classification type="dewey" test="regexp">/^00[3456]</classification>
</or>
</page>

```

Testing budgets used  
for purchase of  
material

This slide shows examples of the many configuration options available in our new books script, allowing testing of item data, orders and budgets, as well as the MARC record.

```

<!-- COMPUTING -->
<page id="comp">
  <description>Computing</description>
  <or scope="any">
    <budget><code test="like">AE-CMP-%</code></budget>
    <!-- LC -->
    <classification type="lc" test="range">
      <from>QA 75.5</from>
      <before>QA 101</before>
    </classification>
    <!-- UDC -->
    <classification type="udc" test="range">
      <from>001</from>
      <before>007</before>
    </classification>
    <classification type="udc" test="range">
      <from>774.6</from>
      <before>776</before>
    </classification>
    <!-- Dewey -->
    <classification type="dewey" test="like">
    <classification type="dewey" test="regex">
  </or>
</page>

```

We don't use LC classification but the 050 field appears in most e-book records. Example shows testing for values within a range.

This slide shows examples of the many configuration options available in our new books script, allowing testing of item data, orders and budgets, as well as the MARC record.

```

<!-- COMPUTING -->
<page id="comp">
  <description>Computing</description>
  <or scope="any">
    <budget><code test="like">AE-CMP-%</code></budget>
  <!-- LC -->
    <classification type="lc" test="range">
      <from>QA 75.5</from>
      <before>QA 101</before>
    </classification>
  <!-- UDC -->
    <classification type="udc" test="range">
      <from>001</from>
      <before>007</before>
    </classification>
    <classification type="udc" test="range">
      <from>774.6</from>
      <before>776</before>
    </classification>
  <!-- Dewey -->
    <classification type="dewey" test="like">794.8%</classification>
    <classification type="dewey" test="regexp">/^00[3456]/</classification>
  </or>
</page>

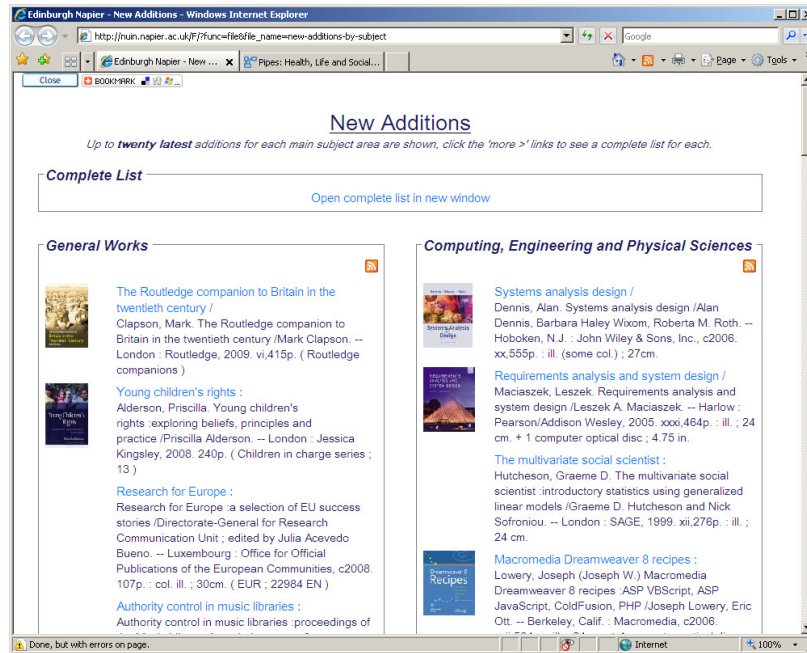
```

We can use Perl regular expressions!

This slide shows examples of the many configuration options available in our new books script, allowing testing of item data, orders and budgets, as well as the MARC record.



# New books at Edinburgh Napier University



Edinburgh Napier have saved searches which identify new material in different subjects. This page is then generated (possibly via the RSS feeds?) and enlivened with cover images licensed from Syndetics.

## New books: techniques

- Complex search in OPAC saved as SDI
  - e.g. Edinburgh Napier: uses standard Aleph
- Complex script and versatile configuration
  - e.g. University of Dundee
- Automatic identification of class numbers based on past habits of students on the course
  - e.g. University of Huddersfield (Dave Pattern)

The various options for producing new books reports.

At Huddersfield, rather than asking subject librarians to identify the classification numbers appropriate to each course, Dave Pattern uses the borrowing behaviour of previous students to identify the class numbers relevant to each course automatically. You could try this in Aleph also. We have not done this yet because our set-up does not store enough information about the patron's course. To do this historically you really need to have accurate patron type information corresponding to the precise course of study. Our patron types are much more vague.

## Automatic patron interest profiles

- Analyse the user's past borrowings
- Look at
  - subject headings (e.g. 600, 650)
  - classification numbers (e.g. 050, 080, 082)
  - authors (100, 700)
- Weight according to overall popularity of the heading, i.e., how specialised is this interest?
- Store interests in an Oracle table

Can we use the user's previous borrowings to identify new material which is of interest automatically? Here are the steps we might follow.


## Automatic patron interest profiles (2)

When a new book arrives:


- compare the headings on the record with the patron's interests in the table;
- calculate a score;
- if it passes a threshold, notify the patron of the arrival of the new book.

Still at the very experimental stage!


**What's new:**  
 You are viewing a feed that contains frequently updated content. When you subscribe to a feed, it is added to the Common Feed List. Updated information from the feed is automatically downloaded to your computer and can be viewed in Internet Explorer and other programs. [Learn more about feeds.](#)

 [Subscribe to this feed](#)


---

**Wringer**  
 17 August 2009, 10:34:00 | Spinelli, Jerry, 1940-   
**Jerry Spinelli.** London : Collins, 2003.


---

**The time traveler's wife**  
 14 August 2009, 17:09:00 | Niffenegger, Audrey   
**Audrey Niffenegger.** London : Vintage, 2005.


---

**Problems of cataloguing exhibition catalogues : some guidelines.**  
 10 August 2009, 12:45:00 

---

**Qualitative GIS : a mixed methods approach**  
 10 August 2009, 10:41:00 | Cope, Meghan   
**edited by Meghan Cope and Sarah Elwood.** Thousand Oaks, CA ; London : Sage, 2009.

---

**Art and print : the Curwen story**  
 06 August 2009, 10:15:00 | Powers, Alan   
**Alan Powers.** London : Tate, 2008.

This shows an RSS feed of new books based on interests identified from my personal borrowing history. Some of the suggestions are not of interest, because I tend to borrow random things when testing the system. However, I was genuinely interested to know about many of the new books listed, and intend to borrow some of them in the near future!

So the initial results of this experimental system are promising.

**What's new:**  
 You are viewing a feed that subscribe to a feed, it is added feed is automatically downloaded and other programs. [Learn more](#)  
 Subscribe to this feed

**Wringer**  
 17 August 2009, 10:34:00 | Spinelli, Jerry  
 Jerry Spinelli. London : Collins, 2008.

**The time traveler's wife**  
 14 August 2009, 17:09:00 | Niffenegger, Audrey  
 Audrey Niffenegger. London : Viking, 2003.

**Problems of cataloguing e**  
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**Art and print : the Curwen**  
 06 August 2009, 10:15:00 | Powers, Alan  
 Alan Powers. London : Tate, 2008.

**Library web ecology : what you need to know as web design co-ordinator**  
 15 June 2009, 13:19:00 | Erdman, Jacquelyn Marie →  
 Jacquelyn Marie Erdman. Oxford : Chandos, 2009.

**Charles Rennie Mackintosh : a modern man.**  
 12 June 2009, 17:44:00 | British Broadcasting Corporation →  
 British Broadcasting Corporation [London] : BBC, 1996.

**Play for today : Rumpole of the Bailey.**  
 12 June 2009, 11:34:00 | British Broadcasting Corporation. →  
 British Broadcasting Corporation. 2009.

**SQL and relational theory : how to write accurate SQL code**  
 08 June 2009, 12:37:00 | Date, C. J. →  
 by C. Date, Farnham : O'Reilly, c2009.

**Googlization of libraries**  
 01 June 2009, 10:25:00 | Miller, William, 1947- →  
 edited by William Miller and Rita M. Pellen. London : Routledge, 2009.

I was particularly interested in the book on library web site design!

## Linking to related books

- Taking the user beyond the search results
- Other editions
- Works on similar topics
- Works sharing borrowers (people who borrowed this have also borrowed...)
- Helps to promote stock that users have not searched for

**Full View of Record**

Choose format: [Standard format](#) [Catalogue card](#) [Citation](#)

Record 5 out of 753 [◀ Previous Record](#) [Next Record ▶](#)

<b>Format</b>	Book and e-book
	Text
<b>Holdings</b>	<a href="#">Location</a>
<b>Main Entry</b>	Smith, Kendra Schank
<b>Title</b>	Architects' sketches : dialogue and design. / Kendra Schank Smith.
<b>Imprint</b>	Oxford : Elsevier, 2008.
<b>Physical desc.</b>	138 p.
<b>Additional Form</b>	 Electronic book also available: Accessible through Dawsonera via the World Wide Web: click to view. Use your University of Dundee username and password. <a href="http://www.dawsonera.com/guard/protected/dawson.jsp?name=University%20of%20Dundee&amp;dest=http://www.dawsonera.com/depp/reader/protected/external/AbstractView/59780080878775">http://www.dawsonera.com/guard/protected/dawson.jsp?name=University%20of%20Dundee&amp;dest=http://www.dawsonera.com/depp/reader/protected/external/AbstractView/59780080878775</a>
<b>Reproduction note</b>	Electronic reproduction: Rushden, Northamptonshire: Dawsonera
<b>Subject</b>	<ul style="list-style-type: none"> <li>Architectural drawing</li> <li>Architectural drawings - history</li> <li>Architecture - sketch-books</li> </ul>
<b>Added entry</b>	Dawson Books
<b>ISBN</b>	<ul style="list-style-type: none"> <li>9780750682268</li> <li>9780080878775 (E-bk.)</li> </ul>
<b>Record number</b>	000624491
<b>Holdings</b>	<a href="#">Location</a>

People who borrowed this have also borrowed:		
Farrelly, Lorraine	<a href="#">Construction + materiality</a>	2009
	<a href="#">Constructing architecture</a> , - 2nd extended ed.	2008
Forty, Adrian	<a href="#">Words and buildings</a>	2004
Related works include:		
Laseau, Paul	<a href="#">Graphic thinking for architects and designers</a> - 3rd ed.	2001
Forseth, Kevin	<a href="#">Graphics for architecture</a>	1980
White, Edward T.	<a href="#">A graphic vocabulary for architectural presentation</a>	1972
Powell, Helen	<a href="#">Masterpieces of architectural drawing</a>	1982
Drpic, Ivo D.	<a href="#">Sketching and rendering interior spaces</a>	1988

This is a real example from <http://library.dundee.ac.uk/> which has been in production with this enhancement for two years.

Not yet loaded up on to EL Commons. Please ask if interested and I'll see if I can find the time to document it!



**Full View of Record**

Choose format: [Standard format](#)

Record 5 out of 753

Format: Book and Text

Holdings: [Location](#)

Main Entry: [Smith, K](#)

Title: [Architectural Schank Sp](#)

Imprint: Oxford : B

Physical desc.: 138 p.

Additional Form: [Electronic Dawsoner University password /dawsoner dest=http /external/](#)

Reproduction note: Electronic Northamp

Subject: [Architectural](#), [Architectural](#), [Architectural](#)

Added entry: [Dawsoner](#)

ISBN: [9780751](#), [978008](#)

Record number: 000624491

Holdings: [Location](#)

---

**People who borrowed this have also borrowed:**

Farrelly, Lorraine	<a href="#">Construction + materiality</a>	2009
	<a href="#">Constructing architecture. - 2nd extended ed.</a>	2008
Forty, Adrian	<a href="#">Words and buildings</a>	2004

**Related works include:**

Laseau, Paul	<a href="#">Graphic thinking for architects and designers - 3rd ed.</a>	2001
Forseth, Kevin	<a href="#">Graphics for architecture</a>	1980
White, Edward T.	<a href="#">A graphic vocabulary for architectural presentation</a>	1972
Powell, Helen	<a href="#">Masterpieces of architectural drawing</a>	1982
Drpic, Ivo D.	<a href="#">Sketching and rendering interior spaces</a>	1988

## Full View of Record

Choose format: [Standard format](#) [Catalogue card](#) [Citation](#)

Record 7 out of 15

[◀ Previous Record](#) [Next Record ▶](#)

Format	Text
Holdings	<a href="#">Location</a>
Main Entry	● <a href="#">Begg, David K. H.</a>
Title	● <a href="#">Economics / David Begg, Stanley Fischer, Rudiger Dornbusch.</a>
Edition	6th ed.
Imprint	Maidenhead : McGraw-Hill, 2000.
Physical desc.	1 v. (634 p.) + CD-ROM
General note	Please ask at Duncan of Jordanstone Issue Desk for CD-ROM which accompanies their copy
Subject	● <a href="#">Economics</a>
Added entry	● <a href="#">Fischer, Stanley</a> ● <a href="#">Dornbusch, Rudiger</a>
ISBN	● <a href="#">0077099710</a> ● <a href="#">0077096150</a>
Record number	000332830
Holdings	<a href="#">Location</a>

[◀ Previous Record](#) [Next Record ▶](#)

### Other editions include:

Begg, David K. H.	<a href="#">Economics.</a> - 9th ed.	2008
Begg, David K. H.	<a href="#">Economics.</a> - 8th ed. / David Begg, Stanley Fischer, Rudiger Dornbusch	2005
Begg, David K. H.	<a href="#">Economics</a> - 7th ed.	2003
Begg, David K. H.	<a href="#">Economics</a> - 5th ed. / David Begg, Stanley Fischer, Rudiger Dornbusch	1997

### People who borrowed this have also borrowed:

Lipsey, Richard G. (Richard George), 1928-	<a href="#">Economics</a> - 10th ed.	2004
	<a href="#">Economics of strategy.</a> - 3rd ed. / David Besanko ... [et al.]	2004
Sloman, John, 1947-	<a href="#">Economics</a> - 5th ed.	2003
Johnson, Gerry	<a href="#">Exploring corporate strategy</a> - 7th ed. / Gerry Johnson, Kevan Scholes, Richard Whittington	2004
Evans, Michael K.	<a href="#">Practical business forecasting</a>	2002

### Related works include:

Chalkley, Martin	<a href="#">Job search and the firm's wage offer decisions: a model of null offers</a>	1983
Miller, Marcus H.	<a href="#">Exchange rate bands with price</a>	1990

<b>Full View of</b> <b>Choose from</b> <b>Record 7 out of</b> <b>Format</b> <b>Holdings</b> <b>Main Entry</b> <b>Title</b>  <b>Edition</b> <b>Imprint</b> <b>Physical desc.</b> <b>General note</b>  <b>Subject</b> <b>Added entry</b>  <b>ISBN</b>  <b>Record number</b>  <b>Holdings</b>	<b>Other editions include:</b>		
	Begg, David K. H.	<a href="#">Economics</a> . - 9th ed.	2008
	Begg, David K. H.	<a href="#">Economics</a> . - 8th ed. / David Begg, Stanley Fischer, Rudiger Dornbusch	2005
	Begg, David K. H.	<a href="#">Economics</a> - 7th ed.	2003
	Begg, David K. H.	<a href="#">Economics</a> - 5th ed. / David Begg, Stanley Fischer, Rudiger Dornbusch	1997
	<b>People who borrowed this have also borrowed:</b>		
	Lipsey, Richard G. (Richard George), 1928-	<a href="#">Economics</a> - 10th ed.	2004
		<a href="#">Economics of strategy</a> . - 3rd ed. / David Besanko ... [et al.]	2004
	Sloman, John, 1947-	<a href="#">Economics</a> - 5th ed.	2003
	Johnson, Gerry	<a href="#">Exploring corporate strategy</a> - 7th ed. / Gerry Johnson, Kevan Scholes, Richard Whittington	2004
	Evans, Michael K.	<a href="#">Practical business forecasting</a>	2002
	<b>Related works include:</b>		
	Chalkley, Martin	<a href="#">Job search and the firm's wage offer decisions a model of null offers</a>	1983

<a href="#">Request</a>   <a href="#">Link to</a>	
<b>Also include:</b>	
<a href="#">Economics</a> . - 9th ed.	2008
<a href="#">Economics</a> . - 8th ed. / David Begg, Stanley Fischer, Rudiger Dornbusch	2005
<a href="#">Economics</a> - 7th ed.	2003
<a href="#">Economics</a> - 5th ed. / David Begg, Stanley Fischer, Rudiger Dornbusch	1997
<b>Borrowed this have also</b>	
<a href="#">Economics</a> - 10th ed.	2004
<a href="#">Economics of strategy</a> . - 3rd ed. / David Besanko ... [et al.]	2004
<a href="#">Economics</a> - 5th ed.	2003
<a href="#">Exploring corporate strategy</a> - 7th ed. / Gerry Johnson, Kevan Scholes, Richard Whittington	2004
<a href="#">Practical business forecasting</a>	2002
<b>Also include:</b>	
<a href="#">Job search and the firm's wage offer decisions a model of null offers</a>	1983
<a href="#">Exchange rate bands with price</a>	1990

Lots of other editions shown. Also several other popular general economics texts identified via borrowings.

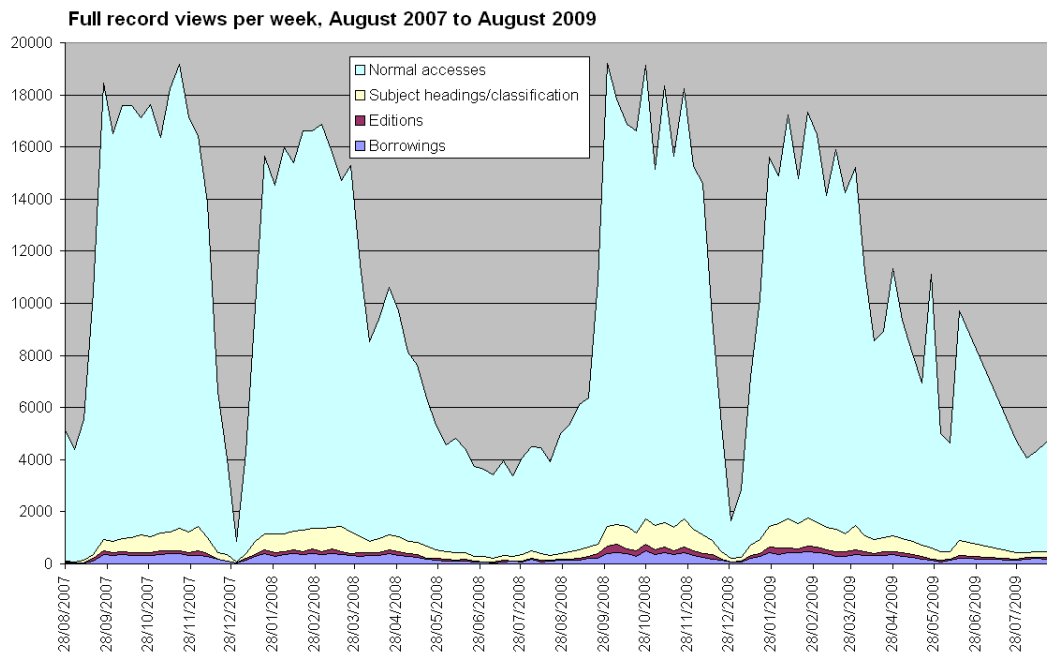
## Linking to related books (2)

- JavaScript to fetch related books panel
- Uses pre-generated (cached) links
- If no cached links available, panel does not appear and BIB record is queued for link calculation
- If cached links are old (for any value of “old”) they are also queued, at lower priority, for recalculation.

Here's how it works. Links have to be cached because of the processing effort required.

## Linking to related books (3)

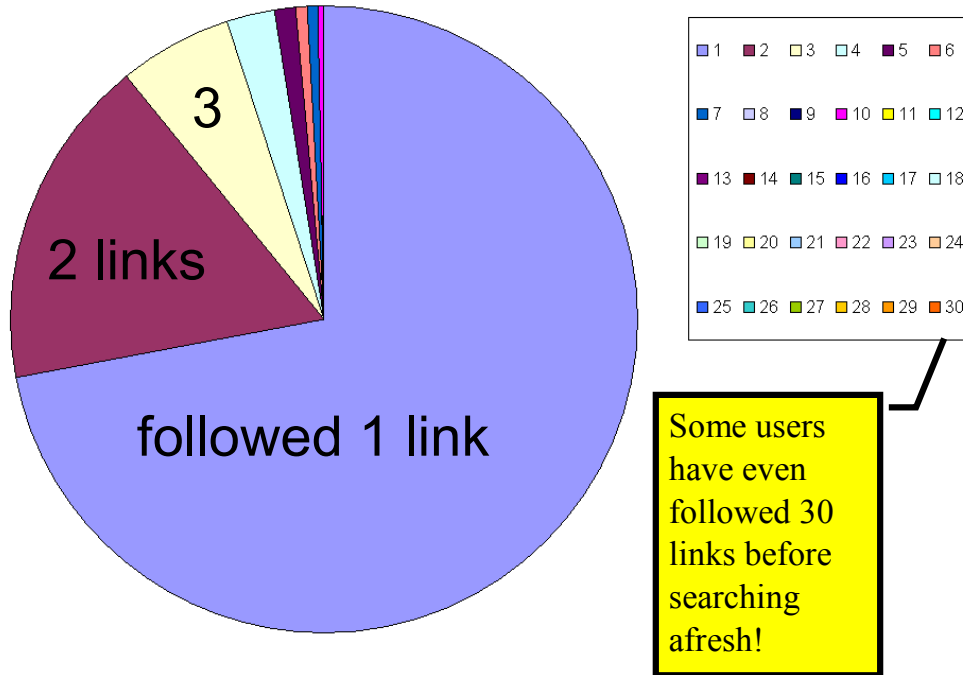
- Other editions generated using OCLC xISBN API (see <http://www.worldcat.org/affiliate/webservices/xisbn/app.jsp> )
- “People who borrowed this have also borrowed” calculated from z36h
- “Related works” found using headings and class numbers in common, e.g. LCSH, Dewey, LC, UDC.



**10% of views come via a “related materials” link rather than a search**

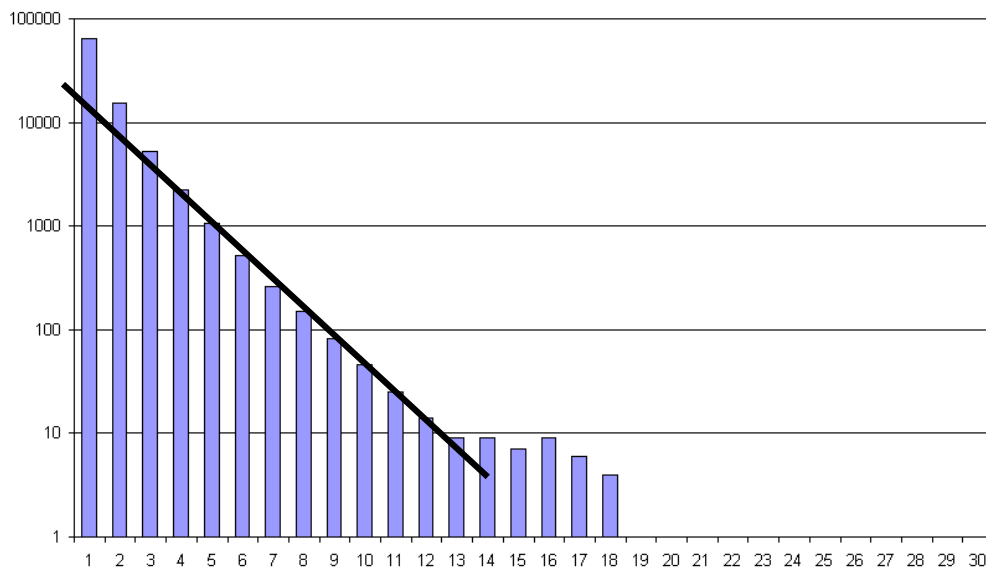
This enhancement is having a real impact: it is popular with users and people follow the links to explore our library.

## How deep do users explore?



The logs we gather enable us to detect how deep users are exploring. How many clicks do they move away from their initial search result? Sometimes up to thirty!

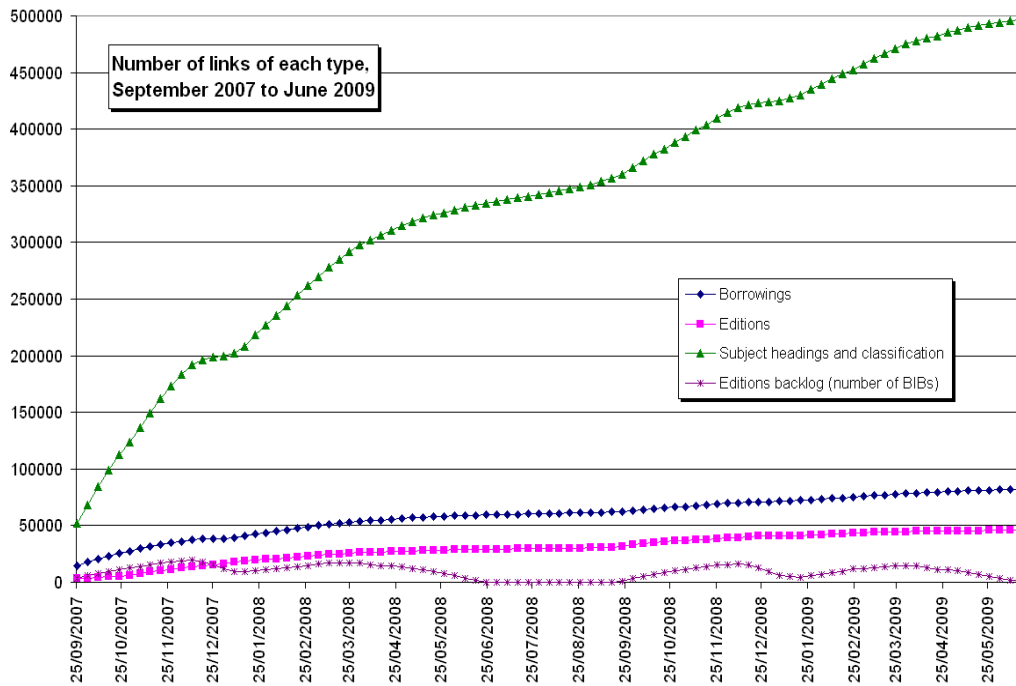
## How deep do users explore?



A logarithmic scale makes the expected exponential decline apparent.



# Building the links: progress



The links are cached, so we can see how long it has taken for users to explore our catalogue and cause the links to be generated. The green line shows the links via classification and subject headings. When we started collecting statistics, two years ago, we had built up 50,000 links, so with up to 5 per book that's about 10,000 books with these links. Two years later, around 100,000 books have onward links. That leaves 400,000 books where no-one has even looked at the full catalogue record in the last two years!

## Possible developments

- Exploit the user's e-shelf as well as borrowings to determine interests.
- Automatic suggestions for exploration beyond the reading list.
- Automatic suggestions for lecturers for new material to add to reading lists.

A reading list is a collection of books. We could see what subject headings and classification numbers are attached to the books, and find closely similar material to recommend further reading. And we can see what books have been borrowed by people who have borrowed stuff on this reading list.

By analysing a reading list we could also make suggestions for relevant new material which arrives in the library, so that lecturers can keep the reading lists fresh.

## Possible developments (2)

“People who borrowed this...” at a personal level:

1. patron logs in to catalogue
2. system accesses entire (or recent) borrowing history of patron
3. finds other patrons with similar borrowings and sees what they borrowed next

Similar problem to <http://www.netflixprize.com/>

- “Collaborative filtering”

Netflix is an American postal DVD library. The great thing about their recommendation system is that by recommending films in their back catalogue they encourage users to borrow more, and not just the high-demand latest films. This way they work their stock harder and make more money.

A clear application to libraries here: we can make our stock work harder too (providing our older books are not factually inaccurate, like older medical texts, for example).

## Aggregation of usage data

- Problem of scale by comparison with commercial data-warehousing
- Sharing anonymised usage data across higher education community (e.g. bX)
- JISC MOSAIC project:  
<http://www.sero.co.uk/jisc-mosaic.html>
- For example, a search for “ethics” could rank the results according to your subject of study.

Only by sharing usage data across institutions will we have the critical mass for more advanced services. This could be done co-operatively, or through a system supplier. For example, bX is doing this, and the URM may have the scope for greater sharing of statistics.

In the UK JISC has sponsored a project, MOSAIC, to look at exploiting the data. One idea floated is that if you know that the user is studying nursing, say, then a search by that user for “ethics” could rank more highly the medical ethics books which have been used by other nursing students. And an MBA student would get business ethics ranked at the top.

Questions?

Ideas?

## OPAC scripting enhancement

- IGeLU enhancement request no. 1764 –  
Server-side scripting support for OPAC
- Please vote!

## Miscellaneous other slides in case required...

The following slides are not part of the presentation, but were included in case I needed them when answering questions.

**Subject:** British D Journal

Results from your Library Catalogue alert

Alert name: British D J 2  
 Search terms: wti = ( "british dental journal" )

To alter your alert settings, please use the following link:  
<http://library.dundee.ac.uk/F/?func=bor-sdi>

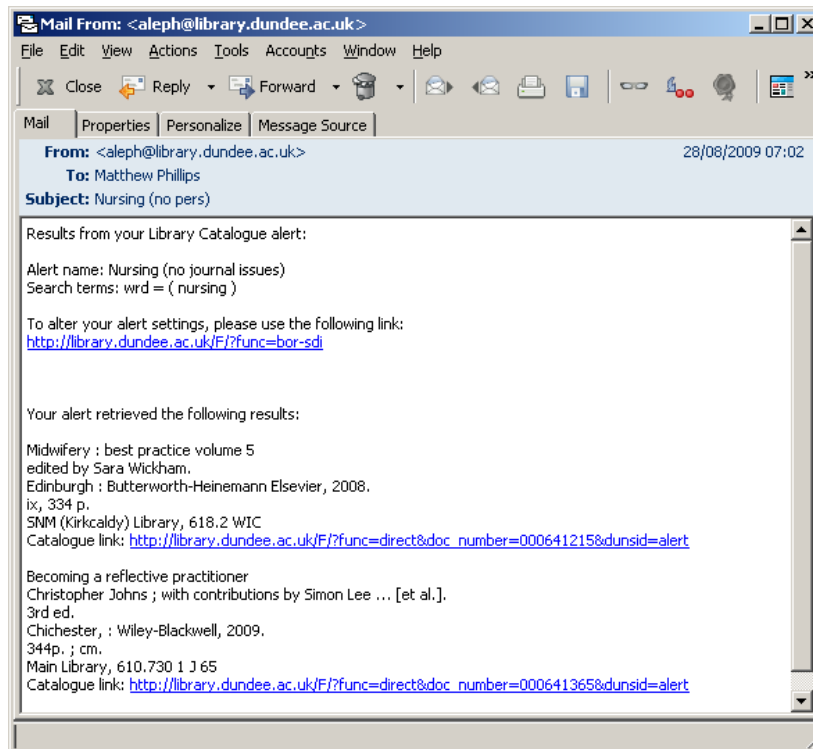
Your alert retrieved the following results:

Record number : 1  
 Record number 000019417  
 Format Periodical  
 Format Electronic resource  
 Format Text  
 Main Entry British Dental Association  
 Title British dental journal.  
 Imprint Nature Publishing.  
 General note MOST RECENT ISSUE IN SHORT LOAN COLLECTION - ASK AT ISSUE DESK  
 General note Not for loan  
 Subject Dentistry  
 Continues Journal of the British Dental Association  
 Holdings summary Main Library, Periodicals, 617 BRI. v.178(1995)-  
 Holdings summary Electronic Resource. 186(1999)-  
 Holdings summary Electronic Resource. v.186(1999)-4 years ago##Archived content is freely available as  
 Indicated above  
 Holdings summary Remote Store 2, Periodicals, 617 BRI. v.24(1903)-99(1955), v.101(1956)-177(1994)  
 Electronic link <http://libproxy.dundee.ac.uk/login?url=http://www.nature.com/bdi/>; { For off-campus access  
 use your University of Dundee username and password }  
 Electronic link <http://www.nature.com/bdi/archive/index.html> ;  
 ISSN 0007-0610  
 Library holdings Electronic Resource  
 Library holdings Electronic Resource  
 Library holdings Main Library : Periodicals - 617 BRI  
 Library holdings Main Library : Short Loan - ask at Desk - Short loan - 617 BRI  
 Library holdings Remote Store 2 : Periodicals - 617 BRI

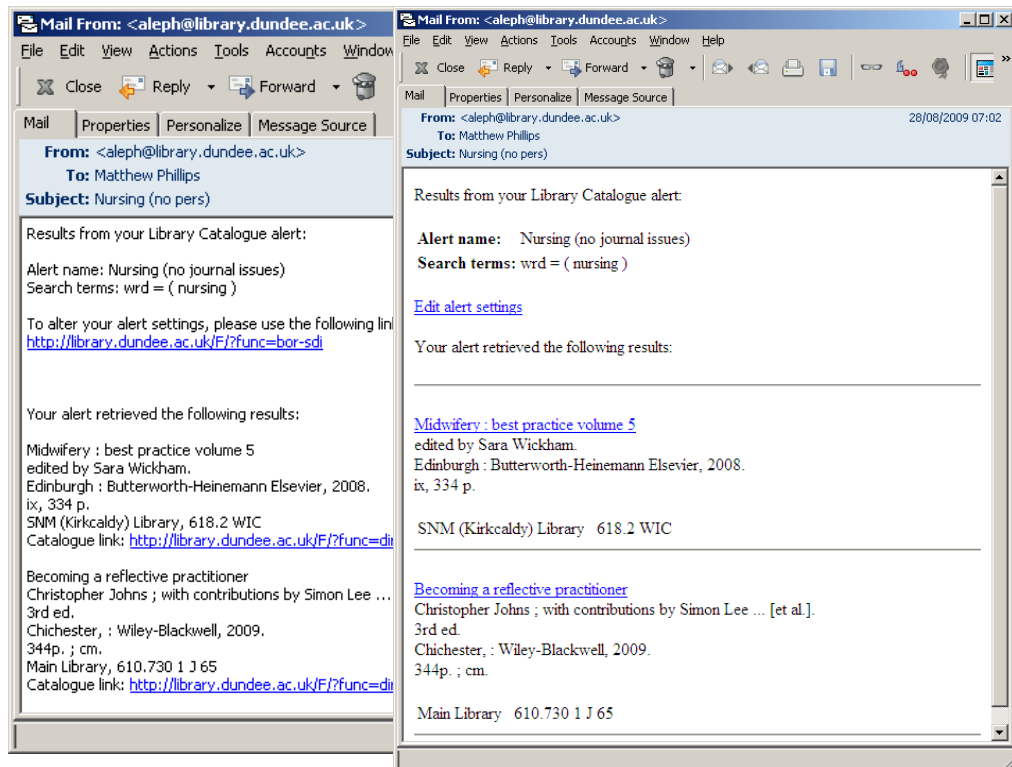
[End of report]

This slide shows the standard Aleph alerts e-mails. Not very nice.





Here's the e-mail we generate using a custom service.



It even includes an HTML multipart-alternative with even nicer formatting.

## Linking to related books: problems

- xISBN being incomplete, and cataloguers cannot correct it.
- Borrowings don't include e-books: need a way to record usage of these by person.
- "Related works" works well for e-books, but we don't use LCSH for printed books (local subject heading scheme) and don't assign local headings for imported e-book records.