

# *UKSG Serial Resource Management for 21<sup>st</sup> Century Getting Technical - Linking*

Ross MacIntyre

MIMAS

The University of Manchester

# *A mixed bag of jargon*

- The basics of the web
- Linking
  - DIY
  - DOI & CrossRef
  - OpenURL
- Open Archives Initiative – ‘e-prints’
- Usage statistics
- What’s Next?



# *How does the Web (currently) work?*

## **3 simple protocols:**

### **Data Formats**

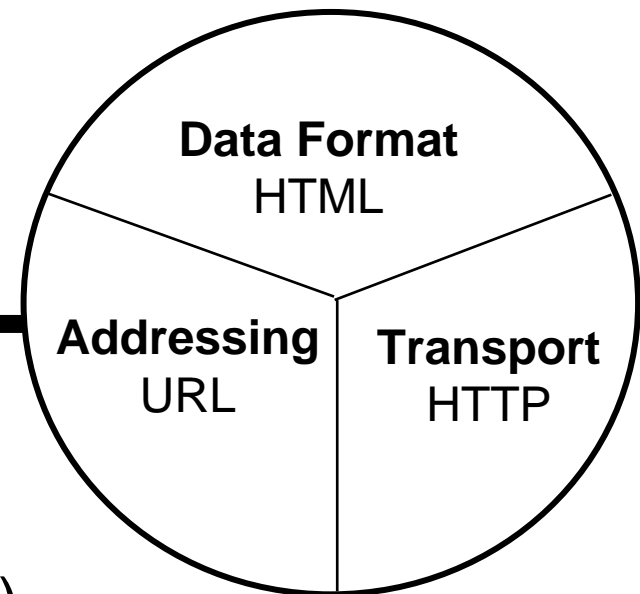
HTML (HyperText Markup Language) provides the data format for native documents

### **Addressing**

URLs (Uniform Resource Locator) provides an addressing mechanism for web resources

### **Transport**

HTTP (HyperText Transfer Protocol) defines transfer of resources between client and server



Brian Kelly,  
Web-Focus,  
UKOLN

# How does the Web work?



- 1 User clicks on link to the address (**URL**)  
<http://www.netsoft.com/hello.html>

- 2 Browser converts link to **HTTP** command  
Connect to computer at www.netsoft.com  
GET /hello.html



- 3 Remote computer sends file

```
<HTML>
<TITLE>Welcome</TITLE>..
<P>Welcome to <B>Netsoft
</B>
```



- 4 Local computer displays **HTML** file

Web Browser

HTTPAddressing -- /Addressing - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.w3.org/History/19921103-hypertext/hypertext/WWW/Addressing/HTTPAddressing.ht Go

Shibboleth Project - ... Teoma - Search with... European Tenders JISC Monitoring Unit Divmod.Org Home ... HTTP404 - Calming S...

## HTTP Addressing

With an access code of http:, a protocol introduced for the WWW initiative is used to acquire data from a server. This is the "Hypertext Transfer protocol", [HTTP](#), a simple search and retrieve (S and R) protocol.

```
http : // hostname [ : port ] / path [ ? searchwords ]
```

for example, the following are valid addresses:

```
http://info.cern.ch/hypertext/WWW/TheProject.html  
http://crnvmc.cern.ch/FIND?sgml+examples
```

HTTP addresses conform to the WWW conventions, including the possibility of using the [search format](#). The significance of the items in the path part of the document name is completely up to the server. Different paths may be used to select different databases, different views of the same database, etc.

**hostname**

This is the name of the server in internet form. A numeric form (e.g. 128.141.201.74) may be used, by the domain name form (e.g. info.cern.ch) is preferred. The hostname is mandatory.

**port**

This is a numeric port number. If a non-numeric string is used, it must be a defined service name (they are defined locally for each host), a service name is used in the hypertext address. If the port number is omitted the preceding colon must also be omitted. [The port number may change!].

See also: [WWW addressing in general](#), [HTTP protocol](#).

*Tim BL*

http://www.w3.org/History/19921103-hypertext/hypertext/WWW/Addressing/BNF.html#1

**CERN**  
The world's largest particle  
physics laboratory  
... where the web was born!

# URL-based Linking

- explicit filename

<http://www.ariadne.ac.uk/issue44/petrie-weisen/intro.html>

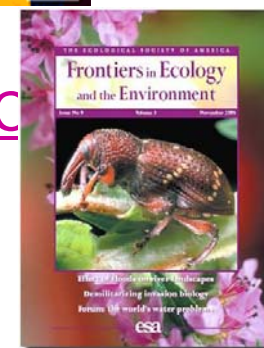
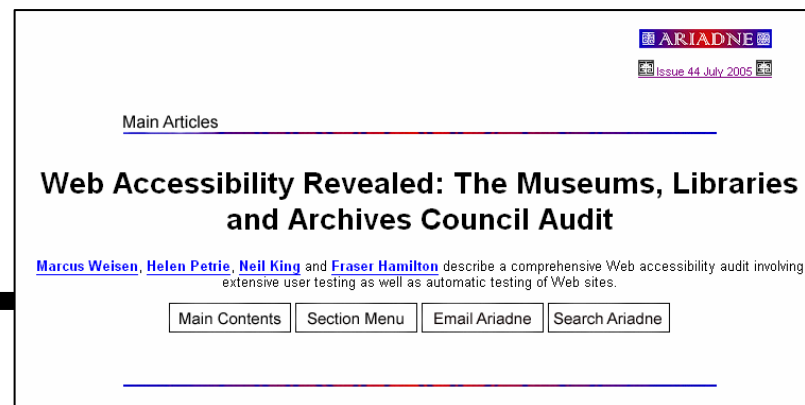
- derived filename, e.g. ISSN

<http://www.jstor.ac.uk/journals/10624783.html>

- script, e.g.

<http://links.jstor.org/sici?sici=1062-4783%28199223%2926%3A3%3C%3AFM%3E2.0.C>

<http://www.esajournals.org/esaonline/?request=get-toc3&issn=1540-9295&volume=003&issue=09>



# *Linking Mechanisms*



## The Digital Object Identifier (DOI):

- A unique identifier assigned to a digital object.
- A way of accessing an object (e.g. a full text article) without having to know its URL - the DOI identifies the object itself, not the place where it is stored.
- Persistent - as long as the object exists, so does the DOI.

# *DOI: Dumb Old Identifier*



“Dumb” number - doesn’t relate to the object, couldn’t be guessed - like a phone number.

**10.1000/1A3X-56BZ9**

Prefix - given to the rights owner e.g. the publisher

Suffix - any unique alphanumeric string

<DIR>.<REG>/<DSS>

e.g. 10.1074/jbc.M004545200

10.1136/bmj.38324.646574.AE



# CrossRef/DOI resolution



DOI  
link



URL to  
Publisher



DOI

Metadata



<http://dx.doi.org/10.1093/toxsci/57.1.95>

# OpenURL (ANSI/NISO Z39.88)

Pat Harris, Executive Director of NISO:

*"One message we hear is that the new business model will be enabled by information technology with standards at the core. This is where NISO fits in. ...over five hundred years ago Guttenberg fundamentally changed communication and learning. Today NISO's challenge is to create those standards that will enable the modern day Gothenburg Moment. Could it be the OpenURL?"*

*OpenURL format ::= Base URL ? Query*

Base-URL = web address of the link resolver i.e. the address to which the OpenURL is being sent

<http://LinkFinderPlus.library.edu?genre=article&issn=1234-5678&volume=12&issue=3&spage=1&epage=8&date=1998&aulast=Smith&aufirst=Paul>

Query = the metadata that the link resolver uses to identify and link to appropriate targets

# *“NOU” linking*

\* NOU – non OpenURL

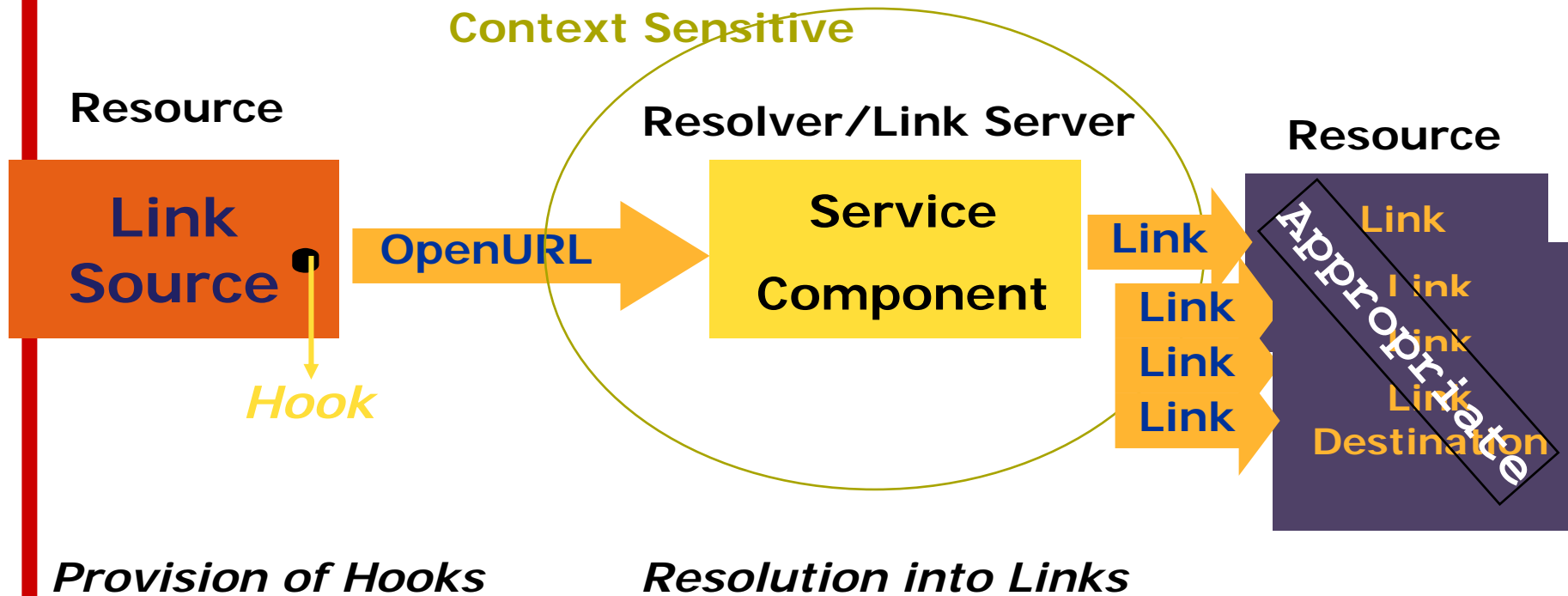


*Provision of Links*

*Resolution of Links*

Oren Beit-Arie, ExLibris

# OpenURL linking



Oren Beit-Arie, ExLibris

# OpenURL in action

The image displays three browser windows illustrating the OpenURL process. The first window, titled 'ISI Web of Knowledge [v3.0] - Mozilla Firefox', shows a search result for 'The bigger deal' by Jackson ME. The second window, titled 'ISI Web of Knowledge [v3.0] - Mozilla Firefox', shows the 'aDORe: A Modular, Standards-Based Digital Object Repository' article page. The third window, titled 'aDORe: A Modular, Standards-Based Digital Object Repository -- Van de Sompel et al. 48 (5): 514 -- The Computer Journal - Mozilla Firefox', shows the 'the Computer Journal' article page.





**Title:** Welcome to Kurdistan  
**Source:** Newsweek [0028-9604]  
 yr: 2002 vol: 139 iss: 12 pg: 22

Full text available from [ABI/INFORM Global](#)

year:  volume:  issue:  start page:

Full text available from [EBSCO Academic Search Elite](#)

year:  volume:  issue:  start page:

Full text available from [LexisNexis Academic](#)

Full text available from [Factiva](#)

year:  volume:  issue:  start page:

For holdings check the [Meriam Library Catalog](#)

Request your item through [Interlibrary Loan](#)

Have questions? [Ask a Librarian](#)

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 CrossRef Enabled

RIT LIBRARY linking you to MORE!

**Title:** Naked  
**Source:** [0-316-77949-0] Sedaris  
 yr: 1997

Check for this journal/book title in [RIT Library's Catalog \(Einstein\)](#)

Check for the print version of this book in [ConnectNY Catalog](#)

Not available online or in print from the library? Request this item via [IDS Express \(interlibrary loan\)](#)

Read a review of this book at [Amazon.com](#)

Search the [Web](#)

Google

title words:

Get help from an RIT librarian via [live chat or e-mail](#)

Learn more about MORE! Click here for our [FAQ](#)

A Service of RIT Library  
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The Library provides services for the following via [SFX](#)

**Source:** Babel [0521-9744]

Holdings in [The University of Chicago Library Catalog](#)

Request material via [Interlibrary Loan \(Campus\)](#)  
 (University of Chicago Faculty, Students, and Staff only)

Request material via [Interlibrary Loan \(Hospitals\)](#)  
 (University of Chicago Hospital Staff and Other Eligible ILL U only)

Please send questions or report problems to [SFX Help](#)



Uva-linker services for this record:

**Title:** Marital Attachment Interview: Adult attachment assessment of marriage  
**Source:** Journal of social and personal relationships [0265-4075] Dickstein  
 yr: 2001 vol: 18 iss: 5 pg: 651

Full text available from the Library of the Uva

year:  volume:  issue:  start page:

[Intenta]

Paper version of this journal might be available at the Library of the Uva

You need a [Library Card](#) to borrow the publication.

Paper version of this journal might be available via another Dutch Library

If you have an ILL-account you can request the publication.

Web Search Engine might retrieve related information

Google

title words:  full text service

FAQ about Uva-linker



Close this Window

More

**Source Portal** [1531-2542]  
 yr: 2003 vol: 3 iss: 2 pg: 352

Full text available via [Project Muse](#)

year:  volume:  issue:  start page:

Check for holdings in [FSU Library Catalog \(WebLuis\)](#)

Search the Florida State University Libraries' Catalog. [Ask a Librarian](#)

Check for holdings in [SUL Union Catalog](#)

Search all State University Library Catalogs at one time. [Ask a Librarian](#)

Search for Other Full-Text Options in the [E-Journal Locator](#)

SFX does not yet connect to some available full text services. If no full text option is listed on this menu you may want to try searching the E-Journal Locator.

Request document via [Interlibrary Loan Request Form](#)

Have Questions? Consult the [SFX FullText Finder - FAQ](#)

Download Record into [RefWorks Direct Export Tool](#)



**Title:** Uncoupling farnesol-induced apoptosis from its inhibition of phosphatidylcholine synthesis.  
**Source:** The Journal of biological chemistry [0021-9258] Wright  
 yr: 2001 vol: 276 iss: 27 pg: 25254

Funded by UNI Student Computer Fee

Full text from [Highwire Press Free](#)

year:  volume:  issue:  start page:

Check holdings in [Library Catalog \(UNISTAR\)](#)

Find It! [Frequently Asked Questions](#)

Need help? [Ask a Librarian](#)

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# *All sorted then?*



Pig courtesy of Tom Bishop,  
Royal College of Surgeons



ISI Web of Knowledge [v3.0] - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print Mail & New Tab

Norton Internet Security

Address http://portal.isiknowledge.com/portal.cgi?Init=Yes&SID=Z6pLi8DLNBFEg3N2ei5

ISI Web of Knowledge Web of Science Signed In HOME LOG OUT

Web of Science

WELCOME HELP GENERAL SEARCH CITED REF SEARCH SEARCH HISTORY ADVANCED SEARCH

Search Results -- Summary

TS=(intelligent design)  
DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1945-2005

241 results found (Set #1)  
Records 1 -- 10 Show 10 per page

Go to Page: 1 of 25

Search within results: Enter a topic

Use the checkboxes to select individual records for marking, then click Submit Marks to add them to the Marked List.

1.

[Anon]

[Fight the good fight - Evolution vs intelligent design is a battle we cannot afford to lose](#)

NEW SCIENTIST 188 (2519): 3-3 OCT 1 2005

Times Cited: 0

FindItQJL

2.

Shipman P

[Being stalked by intelligent design](#)

AMERICAN SCIENTIST 93 (6): 500-502 NOV-DEC 2005

Times Cited: 0

FindItQJL

3.

Neill US

[Don't be stupid about intelligent design](#)

JOURNAL OF CLINICAL INVESTIGATION 115 (10): 2586-2586 OCT 2005

Times Cited: 0

FindItQJL

VIEW FULL TEXT

4.

Koep E, Mebane DS, Das R, et al.

[Characteristic thickness for a dense La0.8Sr0.2MnO3 electrode](#)

ELECTROCHEMICAL AND SOLID STATE LETTERS 8 (11): A592-A595 2005

Times Cited: 0

FindItQJL

5.

Brumfiel G

[School board in court over bid to teach intelligent design](#)

NATURE 437 (7059): 607-607 SEP 29 2005

Times Cited: 0

FindItQJL

VIEW FULL TEXT

6.

Kortum RD

[The devil, and darwin: A critique of intelligent design theory.](#)

RELIGIOUS STUDIES 41 (3): 357-362 SEP 2005

Times Cited: 0

Sort by: Latest date SORT

Output Records:

Selected records on page

All records on page

Records to

Bibliographic Fields

PRINT E-MAIL

EXPORT SAVE TO FILE

Or add them to the Marked List for later output and more options.

ADD TO MARKED LIST

[0 articles marked]

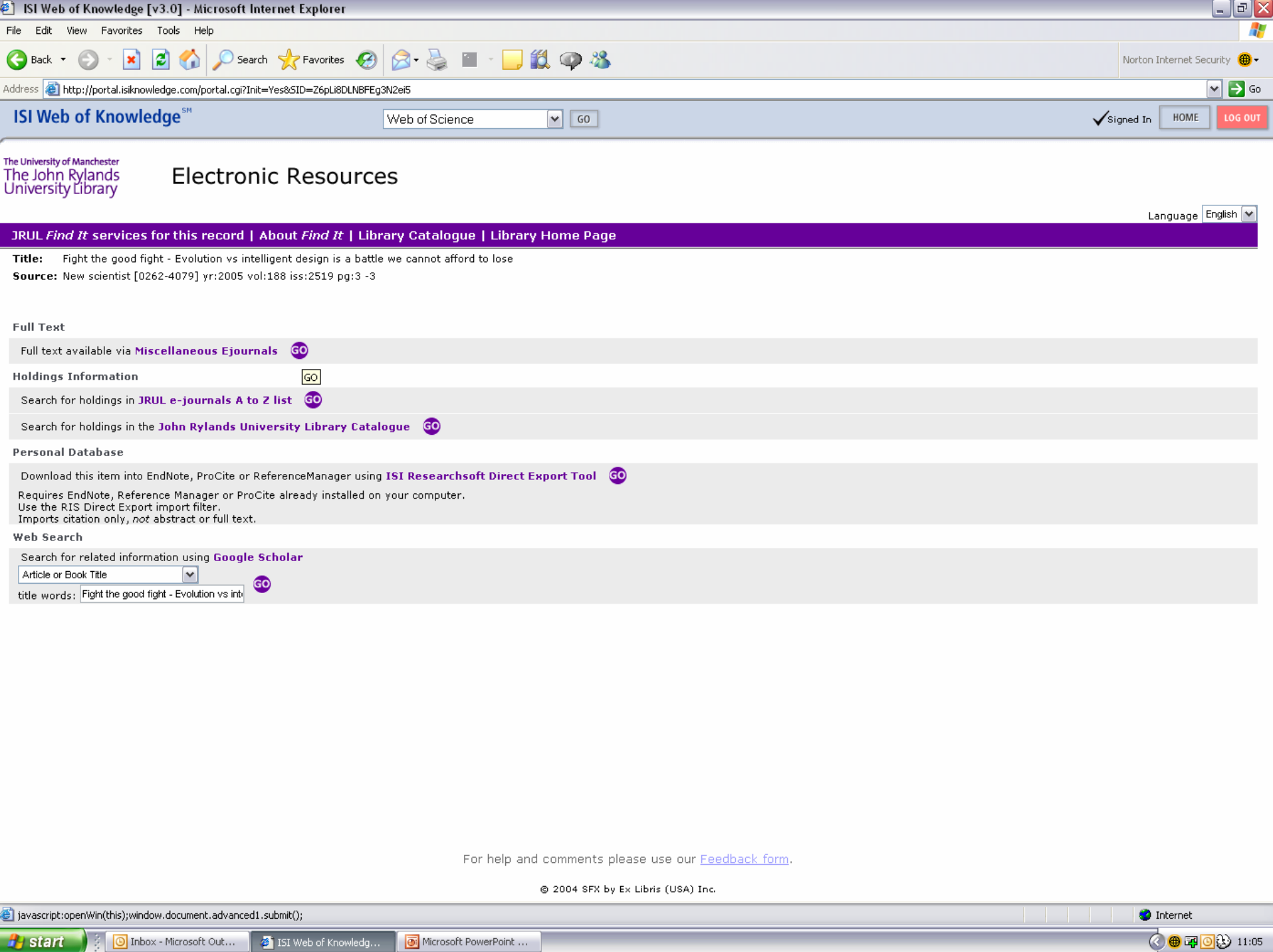
Analyze Results:

ANALYZE

View rankings and histograms of the authors, journals, etc. for this set of records.  
(Up to 2,000 records at a time.)

http://wos15.isiknowledge.com/?SID=Z6pLi8DLNBFEg3N2ei5&Func=FastOpenURL&PublisherID=University\_of\_Manchester\_open&doc=1/1&SubFu

start Inboxes - Microsoft Out... ISI Web of Knowledge... Microsoft PowerPoint ... Internet 11:04



NewScientist

10 November 2005

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01 October 2005  
No. 251908 October 2005  
No. 252015 October 2005  
No. 252122 October 2005  
No. 252229 October 2005  
No. 2523

## SEPTEMBER



# *The Open Archives Initiative*

- 1999 Universal Preprint Service (UPS)
  - Multi-disciplinary collection of technical reports, conference papers, articles, e-print servers, etc.
  - Services provided on “harvested metadata”
- Data Providers / Service Providers
- Not ‘Cross-Searching’
- OAI is only about metadata – not full text
- OAI is neutral about nature of metadata and the resources described



# *OAI - Protocol for Metadata Harvesting*

- Simple mechanism for sharing metadata records
- Records shared over the web (ie HTTP as XML)
- 'Client' can ask metadata server for
  - all records
  - all records modified in last 'n' days
  - info about sets, formats, etc.
- Specific application: self-archiving via e-print servers in/for all institutions
- JISC project - <http://www.sherpa.ac.uk/>



- Consistent, Credible & Compatible Usage Statistics
- Code of Practice for:
  - Data elements to be measured
  - Definitions of these data elements
  - Output report formats/delivery/frequency/granularity
  - Methods for measurement and use
- AAP, ALPSP, ARL, ASA, EDItEUR, JISC, NCLIS, NISO, PA, STM, UKSG

**JR1** = Journal Report 1: Number of Successful Full-Text Article Requests by Month and Journal

**JR2** = Journal Report 2: Turnaways by Month and Journal

**DB1** = Database Report 1: Total Searches and Sessions by Month and Database

**DB2** = Database Report 2: Turnaways by Month and Database

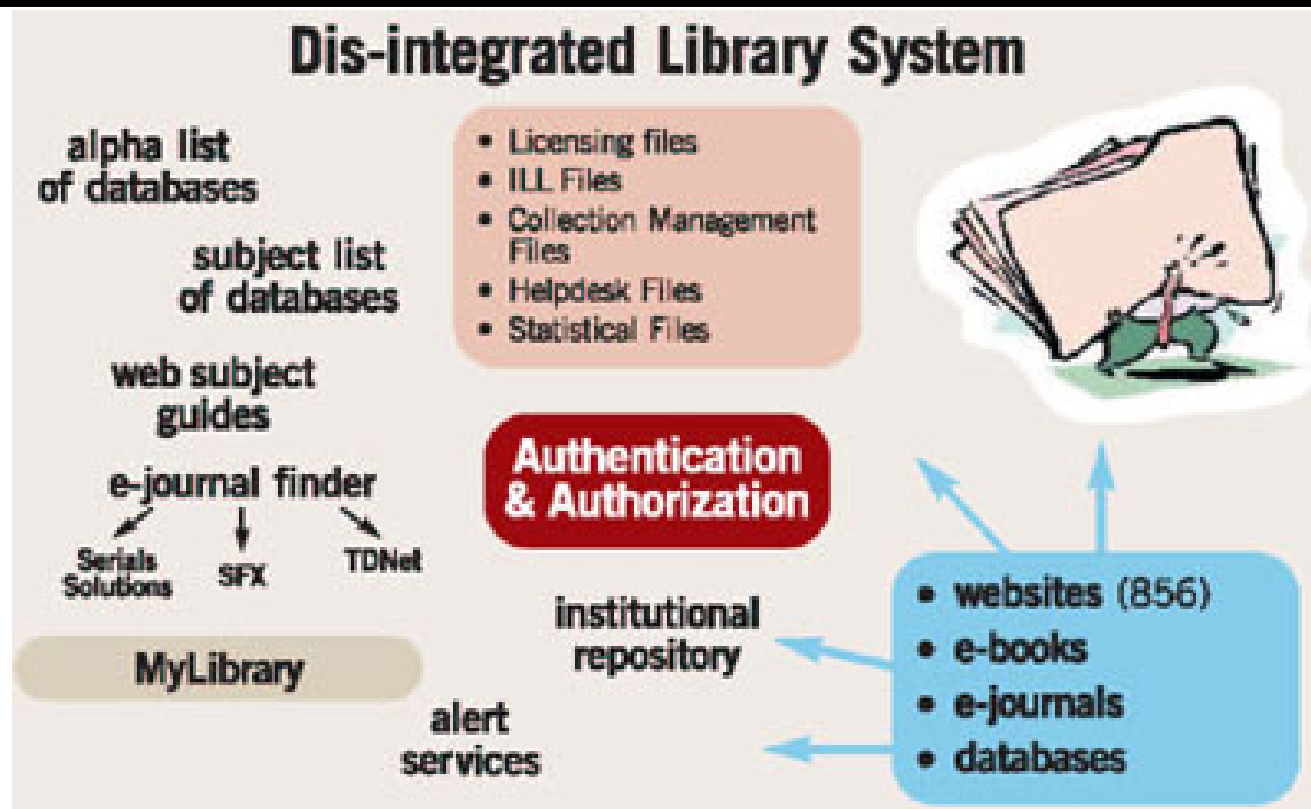
**DB3** = Database Report 3: Total Searches and Sessions by Month and Service

**JR3** = Number of Successful Item Requests and Turnaways by Month, Journal and Page Type

**JR4** = Total Searches Run by Month and Service

- 150 member organisations
- Code of Practice
  - Over 30 vendors (40+ products) compliant (in part)
  - Auditing standards & procedures published
  - XML DTD for Usage Reports developed
- Code of Practice eBooks & eReference
  - Published March 2006

# What next?



Acknowledgement: Greg Raschke and Suzanne Weiner (netConnect) The Library Journal -- 7/15/2004



# *Electronic Resources Management - ERM*

- **Basic ERM Data Elements**

- **Descriptive:** Title fields, holdings, publisher, and ISSN
- **Licensing:** Authorized users, archiving rights, and cancellation allowances
- **Financial:** Price and inflation rate
- **Administrative & Support:** Administrative password and vendor contact information.
- **Access:** Authorization method and local access URI
- **Usage or Evaluative:** Number of full-text article downloads and number of searches

- **Coming to market:** Dynix, EBSCO, Endeavor, ExLibris, Harrassowitz, Innovative Interfaces, Serials Solutions, SIRSI, VTLS, ...



email: [ross.macintyre@manchester.ac.uk](mailto:ross.macintyre@manchester.ac.uk)

web: <http://www.mimas.ac.uk/>