



EPrints: institutional services and software futures

Leslie Carr

*EPrints Technical Director
& EPrints Repository Manager
& Information Systems Researcher*



Overview

- ▶ EPrints software capabilities
- ▶ Forthcoming software capabilities
- ▶ Institutional embedding at Southampton
- ▶ EPrints Commercial Services



What is EPrints

- ▶ A team of researchers
- ▶ A team of developers
- ▶ A piece of software
- ▶ A commercial service
- ▶ Embedded in a Research-Driven University



EPrints Team Researchers

- ▶ Stevan Harnad
- ▶ Les Carr
- ▶ Tim Brody
- ▶ Steve Hitchcock
- ▶ Jessie Hey

▶ *The team has over ten years of experience of Open Access issues; it has been developing EPrints software for seven years.*



▶ *Research issues: practical preservation, data management, impact measurement, policy development.*



EPrints Team Development & Support

- ▶ Chris Gutteridge
- ▶ Tim Miles-Board
- ▶ Mike Jewell
- ▶ John Darlington
- ▶ Alma Swan
- ▶ Siobhain Dales

- ▶ *Training*
- ▶ *Community*
- ▶ *Development*
- ▶ *Project Support*
- ▶ *Outsourcing*
- ▶ *Hosting*





Why EPrints?

- Software
 - To promote Open Access
 - Through adopting Institutional Repositories
 - To foster institutional change
 - Academic attitudes & working practices
- Ultimately working towards
 - Explicit Information Capture
 - Semantic Web
 - Knowledge Services
 - see *Advanced Knowledge Technologies*



What is EPrints Software?

- ▶ EPrints is a Web-based server that enables you to build a **repository** that allows **individuals** to deposit **important digital items** with **appropriate metadata**
 - ▶ for dissemination
 - ▶ for curation
 - ▶ for marketing
 - ▶ for reporting
- ▶ EPrints has enjoyed the largest user base of public repositories (209 worldwide)
- ▶ EPrints emphasises low impact, low cost and practical solutions



The EPrints Environment

- ▶ EPrints is
 - ▶ a simple content management system
 - ▶ extensively configured to accommodate the needs of academics and researchers
 - ▶ aimed at dissemination and reporting
 - ▶ designed to be Google-friendly
 - ▶ designed to be OAI-compliant
 - ▶ **highly configurable to achieve diverse needs**
 - ▶ built on a coding platform that is amenable to rapid development



Vanilla EPrints Repository



- Fixed home page
- Standard layout
- Standard searches & views
- Useful set of metadata
(title, abstract, journal, volume *etc.*)
- Standard set of data types
(authors, dates, etc)
- Standard OAI on by default
- Useful but bland and yet highly configurable

Repositories for all organisations



... institution,
department, project,
subject, collection or
service



See www.eprints.org/software/examples
or archives.eprints.org



Question: Your Customisation Needs?

- ▶ What does your institution need from an EPrints installation?
 - ▶ What sort of 'digital objects' do you need to collect?
 - ▶ What sort of metadata do you need to collect about them?
 - ▶ What sorts of ways do you want people to view the collections?
 - ▶ What facilities do you want to provide?



EPrints Full 10-Step Programme

1. Brand your repository
logos, stylesheets, layout, portal
2. Define information objects and their metadata
articles, theses, books etc
3. Declare the deposit workflows
including help text, examples and validation rules
4. Define collections, searches, subscriptions
5. Refine rendering for information objects
 6. Expose new metadata fields
 7. Deploy embedded applets, media players on abstract page
 8. Define new citation styles
 9. Define OAI mapping
10. Populate repository.
Go to step 1 to revisit requirements.




EPrints Fast 2-Step Programme

1. Brand your repository
logos, stylesheets
 10. Populate repository.
- Two-step programme is sufficient to get started
 - EPrints defaults provide useful starting point
 - There will be many stages in the repository history
 - demo, pilot, first official release, relaunch

2-Step Success

- Appears distinctive
- A default EPrints install styled differently



The screenshot shows the homepage of the 'The Minority Health Archive' website. The header features the University of Pittsburgh logo and the text 'University of Pittsburgh ♦ Graduate School of Public Health'. Below this is a banner with the title 'The Minority Health Archive' and a collage of diverse people. A navigation bar includes links: HOME, ABOUT, BROWSE, SEARCH, REGISTER, REGISTERED USERS AREA, and HELP. The main content area has a search bar with the text 'Search the Titles, Abstracts and Keywords' and a 'Search' button. To the left of the search bar are links: 'Browse by Subject', 'Browse by Year', 'Pioneers Collection', 'Latest Additions' (with a description), 'Simple Search' (with a description), 'Advanced Search' (with a description), 'Registered Users Area' (with a description), and 'Register' (with a description). To the right is a logo for the 'Center for Minority Health' with the URL 'www.cmh.pitt.edu'. Below the search bar, it states 'At present, the Minority Health Archive contains 274 documents'. Further down, it mentions the software used: 'Running on GNU EPrints archive-creating software, which generates eprints archives that are compliant with the Open Archives Protocol for Metadata Harvesting OAI 1.1 and 2.0. The eprints.org archive-creating software is available for free at http://www.eprints.org/'. At the bottom, it says 'Hosted by the University Library System' and provides the 'Site Administrator: minority-health@library.pitt.edu'.

10-Step Success - Second Cycle

University of Southampton Crystal Structure Report Archive

5- Cyano- 2- methyl- 4- phenyl- 1- (5,6,7- tris(acetoxy)- 2,10- dioxo- 3,9- dioxo- undeca- 4- yl)- 2- aza- 7- thiabicyclo[2.2.1]heptane- 3- one

M. J. Arevalo, M. Avalos, R. Babiano, P. Cintas, M. B. Hursthouse, J. L. Jimenez, M. E. Light and J. C. Palacios.

University of Southampton

C28H32N2O11S

InChi Code: C28H32N2O11S,1H3-15(31)37-14H2- 23H(38-16(2H3)32)24H(39- 17(3H3)33)25H(40-18(4H3)34)26H(41- 19(5H3)35)27- 13H2-22H(7- 29)28(42-27,21(36)30(27)6H3)20- 11H- 9H- 8H- 10H- 12H- 20 ([google for ichi](#))

Compound Class: Organic

Keywords: Controlled Keywords UNSPECIFIED

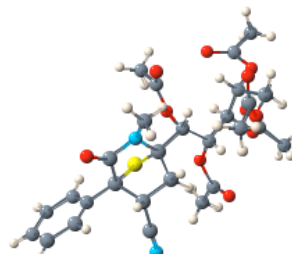
Creation Date: 26 September 2001

Deposited By: [Susanne L. Huth](#)

Deposited On: 03 August 2004

Available Files

Final Result

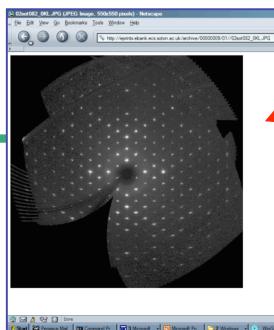


- Data repository which collects data sets and exposes scientific metadata.
- Schema standards accepted by international subject body.

Data collection parameters		
Chemical formula	C28 H32 N2 O11 S	01esp301_data/01esp301_CIF 17k
Crystallisation Solvent		01esp301_data/01esp301_cml 11k
Crystal morphology		01esp301_data/01esp301_inchi.cml 1k
Crystal system	Orthorhombic	Validation
Space group symbol	P2(1)2(1)2(1)	01esp301_data/01esp301_cif.html 15k
Cell length a	10.9877(7)	Refinement
Cell length b	11.9703(8)	01esp301_data/01esp301.res 10k
Cell length c	22.4663(18)	01esp301_data/01esp301_xl.lst 48k
Cell angle alpha	90.00	Solution
Cell angle beta	90.00	01esp301_data/01esp301.PR.P 6k
Cell angle gamma	90.00	01esp301_data/01esp301_xs.lst 47k
Data collection temperature	120(2)	Processing
		01esp301_data/01esp301.HKL 468k
		01esp301_data/01esp301.HTM 6k
Refinement results		
Solution figure of merit	0.1386	Other Files
R Factor (Obs)	0.0648	01esp301_data/01esp301.DOC 290k
R Factor (All)	0.3088	01esp301_data/01esp301.mol 6k
Weighted R Factor (Obs)	0.1318	
Weighted R Factor (All)	0.1930	

Archive Staff Only: [edit this record](#)

eprints





EPrints Services

- ▶ Work with Library Staff
 - ▶ Determine backlog & legacy systems
 - ▶ Support batch data import
 - ▶ Repository Capability Training
- ▶ Work with Technical Staff
 - ▶ Installation Assistance & Advice
 - ▶ Repository Configuration and Management Training
 - ▶ 2- or 10-Step Configuration
- ▶ Host the Repository
- ▶ Like The Goodies “We Do Anything, Anytime, Anywhere”.
 - ▶ Community Membership, Training, Bespoke Coding



How is EPrints Deployed?

- Research
 - Research outputs: papers, theses, multimedia (music, sculptures, performances, textiles *etc*) [TARDIS]
 - Research data [EBank]
 - Research Laboratory workflow [R4L]
 - E-research / E-learning managed environments (learning contracts, research workflow -> journal submission) [CORE]
 - Research administration and assessment [IRRA]
- Teaching
 - Learning Objects [MURLLO]
- Publishing
 - Journal reviewing management (BBSprints)
- Preservation
 - Preservation services [PRESERV]

Benefits: metadata reuse for administrative (RAE) reports

Carr, Les

Miles-Board, T., Bailey, C., Hall, W. and Carr, L. (2004) Building a Companion Website in the Semantic Web . In <i>Proceedings of The Thirteenth International World Wide Web Conference (WWW2004)</i> , pages pp. 365-373, New York, NY, USA.	Also selected by: Hall, Wendy
Miles-Board, T., Deveril, , Lansdale, J., Carr, L. and Hall, W. (2003) Decentering the Dancing Text: From Dance Intertext to Hypertext . In <i>Proceedings of Fourteenth conference on Hypertext and Hypermedia, Hypertext'03</i> , pages pp. 108-119, Nottingham, UK.	
El-Beltagy, S., Hall, W., Roure, D. D. and Carr, L. (2001) Linking in Context . In <i>Proceedings of Proc The Twelfth ACM Conference on Hypertext and Hypermedia (Hypertext '01)</i> , pages pp. 151-160.	Also selected by: Hall, Wendy
Miles-Board, T., Carr, L., Kampa, S. and Hall, W. (2003) Supporting Management Reporting: A Writable Web Case Study . In <i>Proceedings of The Twelfth International World Wide Web Conference (WWW2003)</i> , pages pp. 234-243, Budapest, Hungary.	

Involvements in conferences/workshops (Program Committees, Chairing, etc.)

Program Committees: International World Wide Web Conference
International Conference on Web Engineering (ICWE 2004) ACM
(HT01, HT02, HT03, HT04) Program Chairs: Thirteenth ACM International
(2003) Second International Workshop on Scholarly Hypertext (2003)
Wide Web Conference (WWW2006)

Responsibilities in professional associations (IEEE, etc.)

File Edit View Insert Format Tools Data Acrobat Go To Favorites Help											Links	
A1		Group										
	A	B	C	D	E	F	G	H	I	J	K	L
1	Group	Username	Surname	First Name	Score	Publication	Paper					
2	iam	ha	Alani	Harith		IEEE IS	Alani, H., Dasmahapatra, S., O'Hara, K. and Shadbolt, N. (200					
3	iam	ha	Alani	Harith		Perspectiv	Jones, C., Alani, H. and Tudhope, D. (2002) Geographical Tern					
4	iam	ha	Alani	Harith		Internation	Alani, H., Jones, C. and Tudhope, D. (2001) Voronoi-Based Re					
5	iam	ha	Alani	Harith		IEEE Intell	Alani, H., Kim, S., Millard, D., Weal, M., Hall, W., Lewis, P. ai					
6	iam	ha	Alani	Harith		The Journa	Tudhope, D., Alani, H. and Jones, C. (2001) Augmenting thesa					
7	iam	lac	Carr	Les		The Thirtee	Miles-Board, T., Bailey, C., Hall, W. and Carr, L. (2004) Buildir					
8	iam	lac	Carr	Les		Fourteenth	Miles-Board, T., Deveril, , Lansdale, J., Carr, L. and Hall, W. (2					
9	iam	lac	Carr	Les		Proc The T	El-Beltagy, S., Hall, W., Roure, D. D. and Carr, L. (2001) Linki					
10	iam	lac	Carr	Les		The Twelft	Miles-Board, T., Carr, L., Kampa, S. and Hall, W. (2003) Supp					
11	iam	rmc	Crowder	Richard		Internation	Wills, G., Sim, Y.-W., Crowder, R. and Hall, W. (2002) Open F					



Automatically updated CV

Dr Les A Carr

University of Southampton: Electronics and Computer Sciences
About ECS | Admissions and Research | People | Publications | Contact ECS

Position	Academic Staff in Intelligence, Agents, Multimedia Group
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OFA Visibility	Completely Visible
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Email	le@ecs.soton.ac.uk
Email Home	roadrunner
Address	Dr Les A Carr School of Electronics and Computer Sciences University of Southampton SO17 1BJ United Kingdom

[Help on profiles](#) (ECS staff/graduate only)

Publications, PrePrints etc.

Number of records: 102.

Carr, L. A., Davis, H. C. and White, S. A. (2004) *AnnAnn - a Tool to Scaffold Learning about Programs*. *Semantic Web*, New York, NY, USA.

Miles-Board, T., Bailey, C., Hall, W. and Carr, L. (2004) *Building a Companion Website in the Semantic Web*. *Semantic Web*, New York, NY, USA.

Glaser, H., Alani, H., Carr, L., Chapman, S., Ciravegna, F., Dingli, A., Gibbins, N., Harris, S., Schmidt, M. C. and Shadbolt, D. (2004) *Building a Companion Website in the Semantic Web*. *Semantic Web*, New York, NY, USA.

Wills, G., Woukeu, A., Bailey, C., Ong, A., Carr, L., Conole, G., Hall, W. and Grange, L. (2004) *Building a Companion Website in the Semantic Web*. *Semantic Web*, New York, NY, USA.

Millard, D., Davis, H., Weal, M., Allen, K. and De Bra, P. (2003) *AHA! meets Auld List*. *Proceedings of the 13th ACM Conference on Hypertext and Hypermedia (HT'03)*, New York, NY, USA.

Wills, G., Woukeu, A., Bailey, C., Ong, A., Carr, L., Conole, G., Hall, W. and Grange, L. (2004) *Building a Companion Website in the Semantic Web*. *Semantic Web*, New York, NY, USA.

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Glaser, H., Alani, H., Carr, L., Chapman, S., Ciravegna, F., Dingli, A., Gibbins, N., Harris, S., Schmidt, M. C. and Shadbolt, D. (2004) *Building a Companion Website in the Semantic Web*. *Semantic Web*, New York, NY, USA.

Wills, G., Woukeu, A., Bailey, C., Ong, A., Carr, L., Conole, G., Hall, W. and Grange, L. (2004) *Building a Companion Website in the Semantic Web*. *Semantic Web*, New York, NY, USA.

Millard, D., Davis, H., Weal, M., Allen, K. and De Bra, P. (2003) *AHA! meets Auld List*. *Proceedings of the 13th ACM Conference on Hypertext and Hypermedia (HT'03)*, New York, NY, USA.

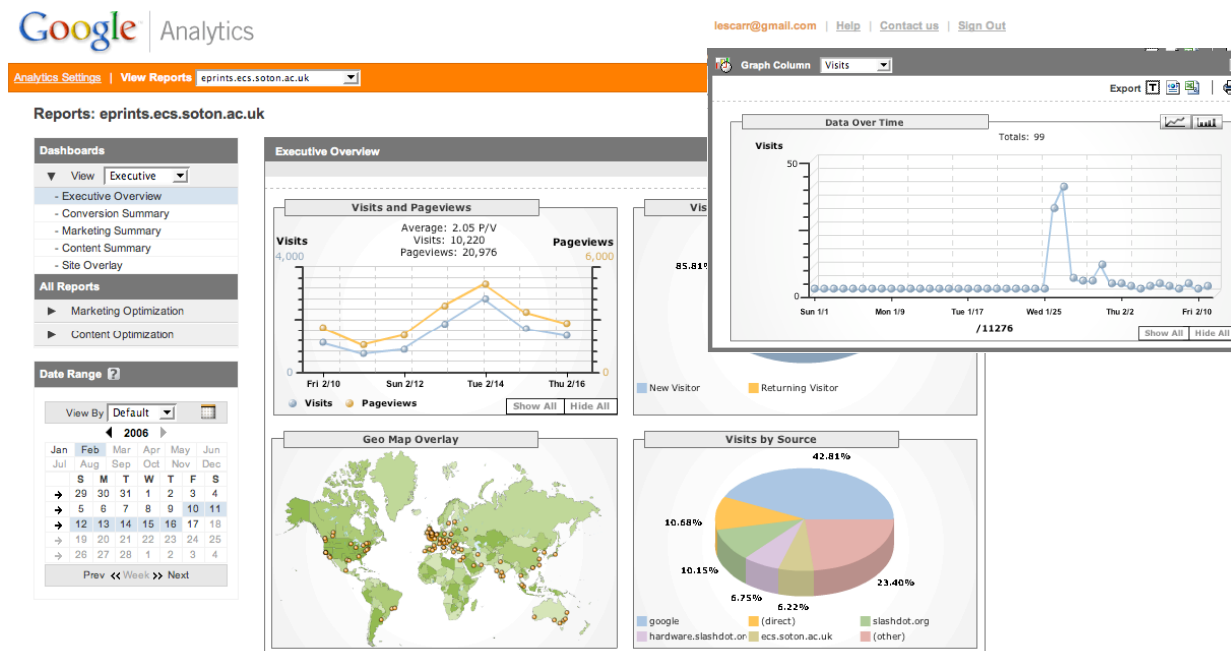
On all researchers
personal home pages.
Also group lists for each
research group's portal.

eprints



Marketing Analysis

Google Analytics provides simple mechanism for sophisticated repository statistics





Eprints 3: New Features

- ▶ User-based Export Plugins
 - ▶ Export selected EPrints records (*e.g.* results of a query) to XML, Endnote, BibTeX, RSS etc
- ▶ User-based Import Plugins
 - ▶ Import data from XML, Endnote, BibTeX *etc* directly into individual work area.
- ▶ Embargo support
 - ▶ Automatically expire funder- or publisher- imposed embargos
- ▶ Request document
 - ▶ Enable readers to request a copy of restricted or missing documents via email



New Features

- ▶ Audit trail
 - ▶ View log of all actions on and changes to an Eprint
 - ▶ Diffs between versions
- ▶ More flexible editorial review processes
- ▶ Improved metadata entry workflow
 - ▶ with shortcuts to individual metadata pages
 - ▶ metadata entry is customisable on a per-user or per-eprint basis
- ▶ Easier and more accurate metadata entry



EPrints 3 Metadata Entry

Metadata Entry Upload Metadata Preview Submit

Before you deposit this entry into the repository, the following problems need to be corrected:

- You haven't filled out the required Title field

Uploader

Filename	Size	Type
Please upload some files.		
Choose File		Upload

Title Required [Help](#)

Repository Interoperability from the User's Perspective

Authors/Creators Required [Help](#)

Name (First Name, Given Name)	Creator's Email (if known)
1. <input type="text"/>	<input type="text"/>
2. <input type="text"/>	<input type="text"/>
3. <input type="text"/>	<input type="text"/>

Publication Details [Help](#)

Publication Title Required	<input type="text"/>
Volume	<input type="text"/>
Number	<input type="text"/>
Pages	<input type="text"/>
ISSN	<input type="text"/>

Keywords [Help](#)

[Previous](#) [Next](#)

Authors/Creators Required [Help](#)

Name (First Name, Given Name)	Creator's Email (if known)
1. Ch	<input type="text"/>
2. Christopher Gutteridge	<input type="text"/>
3. Michael O. Jewell	<input type="text"/>
Mischa Tuffield	<input type="text"/>

Authors/Creators Required [Help](#)

Name (First Name, Given Name)	Creator's Email (if known)
1. Christopher Gutteridge	cjg@ecs.soton.ac.uk

Publication Details [Help](#)

Publication Title Required	Le
Volume	Lecture Notes in Computer Science (LNCS)
Number	<input type="text"/>
Pages	<input type="text"/>
ISSN	<input type="text"/>

Publication Details [Help](#)

Publication Title Required	Lecture Notes in Computer Science (LNCS)
Volume	<input type="text"/>
Number	<input type="text"/>
Pages	<input type="text"/>
ISSN	0302-9743

EPrints3: Record of Metadata Changes

[Move Item to Editorial Review](#) | [Retire Item](#) | [New Version](#) | [Use as Template](#) | [View Records awaiting Editorial Review](#)

[Summary](#)

[Full Record](#)

[Export](#)

[Export](#)

[Edit](#)

[Edit](#)

[History](#)

Observations on the House Martin ([eprint 14 r7](#))

Modified by Christopher Gutteridge at 10:29:36 on 06 July 2006

Before

```
<subjects>
<item>JN</item>
<item>KF</item>
<item>D880</item>
<item>DL</item>
<item>QR355</item>

<item>DS</item>
</subjects>
```

```
<rev_number>8</rev_number>
<lastmod>2006-07-06 10:29:29</lastmod>
```

After

```
<subjects>

<item>QR355</item>
<item>DL</item>
<item>D880</item>
<item>DS</item>
</subjects>
```

```
<rev_number>7</rev_number>
<lastmod>2006-07-06 10:29:36</lastmod>
```

Observations on the House Martin ([eprint 14 r6](#))

Modified by Christopher Gutteridge at 10:29:29 on 06 July 2006

Before

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<rev_number>8</rev_number>
<lastmod>2006-07-06 10:29:27</lastmod>
```

After

```
<rev_number>8</rev_number>
<lastmod>2006-07-06 10:29:29</lastmod>
<refereed>FALSE</refereed>
```

Observations on the House Martin ([eprint 14 r5](#))



Institutional Embedding

'We see our Institutional Repository as a key tool for the stewardship of the University's digital research assets,' said Professor Paul Curran, Deputy Vice Chancellor of the University. 'It will provide greater access to our research, as well as offering a valuable mechanism for reporting and recording it.'

Southampton Press Release 15 Dec 2004





Institutional Embedding

- University mandate for all potential RAE outputs to be deposited
- Funding to boost IR support for the RAE
- Aim for IR to be fully embedded as tool for research support
- Endorsement from DVC for Research and Heads of Schools



University of Southampton:
endorsement through semi-mandate

Prof Philip Nelson
DVC for Research
and Enterprise



Institutional Embedding

- ▶ Dedicated library staff + initial JISC support + lots and lots and lots of f2f
- ▶ Build on existing liaison librarians
- ▶ Three staff share out role of lead link for the 20 Schools – one 0.5 FTE dedicated to this role, 2 roles embedded as part of day to day work
- ▶ Variety of models of activity – author self-deposit, School administrator deposit, upload from existing School database
- ▶ Challenge of getting “deep” levels of liaison e.g. technical staff, School RAE Manager, School editors, Deputy Heads of School Research, Heads of Schools



RAE push: Metadata team

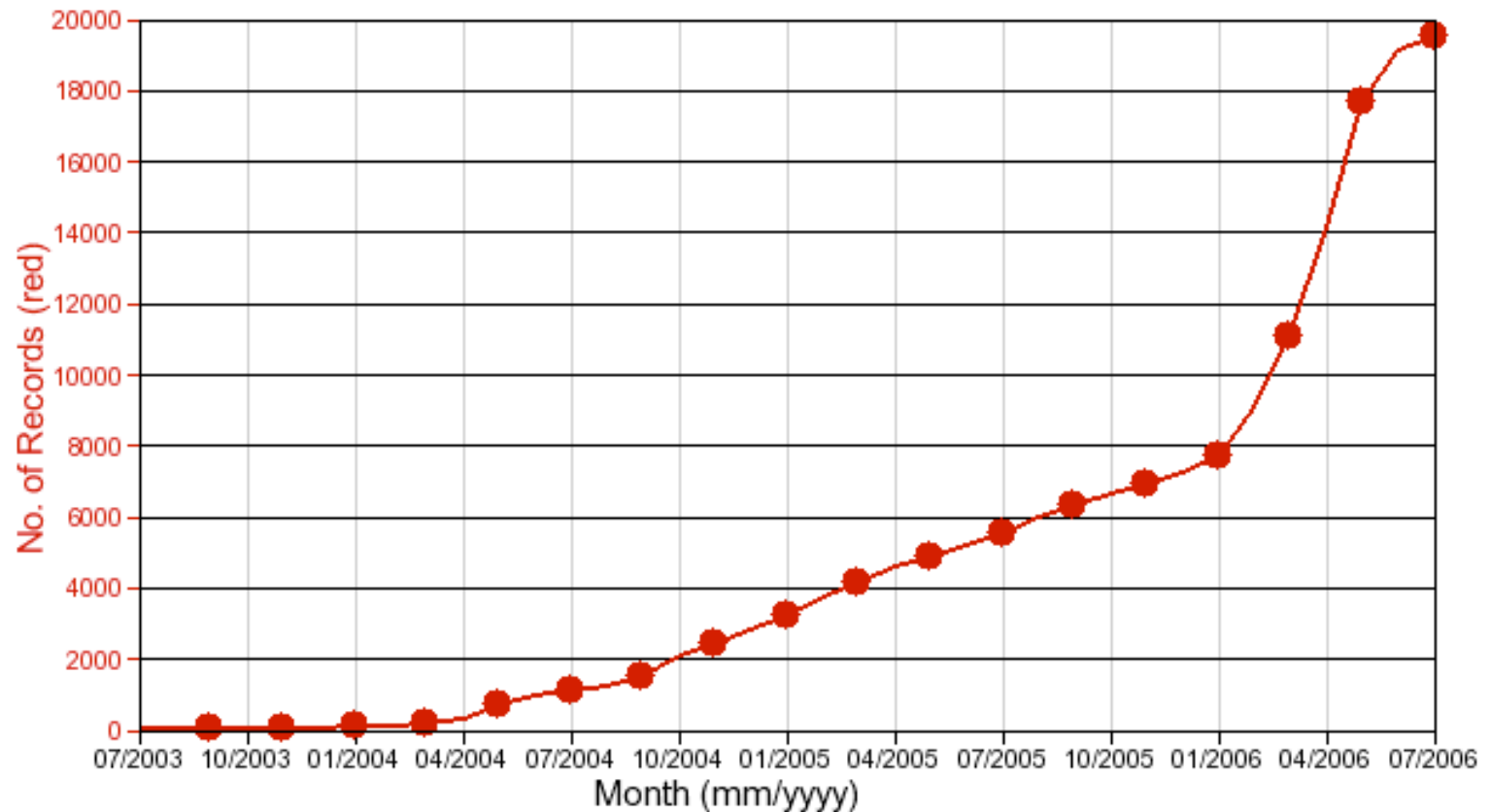
- ▶ 1.6 FTE core staffing (1 as team manager and trainer)
- ▶ Currently 4.6 FTE additional temporary staffing and equivalent of 1.8 FTE seconded from library activity (4 staff)
- ▶ Staffing has some fluidity – training investment and QA risk
- ▶ Checking accuracy of metadata, verifying publication, adding subject headings (Library of Congress) and adding DOIs and other appropriate full text links
- ▶ Tight timescale: 150 - 200 records a day



Institutional Success

University of Southampton: e-Prints Soton

Generated by <http://archives.eprints.org/>





Institutional what next?

- ▶ Build on the RAE experience to lay grounding for ongoing research reporting
 - ▶ not just a one off experience for IRs
- ▶ Explore links to metrics
 - ▶ part of a much bigger OA picture of looking at access, downloads and impact on citations
- ▶ RAE a good driver to make progress across the disciplines
 - ▶ encourage take up in the Arts and Humanities
 - ▶ possible enhancement and promotion of interdisciplinary research
 - ▶ Disadvantage: Full text rate = 10%
- ▶ Work on broader offer to researchers e.g. personal pages, links to bibliographic software, CVs etc.
- ▶ Look at preservation issues but not as a barrier to access