



## Targeting **A**cademic **R**esearch for **D**eposit and **D**isclosure

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JISC

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# An environmental assessment of research publication activity and related factors impacting the development of an Institutional e-Print Repository at the University of Southampton

## Introduction

The [TARDIS](#) e-Prints Project is one of a cluster of complementary projects in the Focus on Access to Institutional Resources ([FAIR](#)) Programme funded by the Joint Information Systems Committee (JISC) which supports Higher and Further Education in the UK.

The [JISC Information Environment](#) is envisaged as a virtual place where members of colleges and universities can deposit and share useful content (e.g. research outputs). The current collection of JISC funded content has the potential to grow to embrace both externally generated content from publishers and aggregators and community-generated resources. To achieve the latter, staff and students will need a 'place' or 'places' in which to lodge suitable content and products and a means for exchanging and adding to it. This is an important part of developing a relevant and useful portfolio of resources. The FAIR programme has been developed to create the mechanisms and supporting services to allow this process to prosper and these 'places' to be built. The work of this programme has been inspired by the success of the [Open Archives Initiative](#) (OAI) – a simple mechanism that allows metadata about resources to be harvested into services that can be searched by staff and students.

Within this context, TARDIS is aiming to build a sustainable multidisciplinary institutional archive of e-Prints (currently named e-Prints Soton) to leverage the research created within Southampton University. It is testing the viability of both self-archiving and mediated deposit for a wide range of disciplines. While developing the archive, TARDIS is specifically feeding back into the pioneering GNU EPrints software (<http://software.eprints.org/>) developed within the prestigious Intelligence, Agents, Multimedia Group in the University of Southampton. In looking at a broad based institution, we are aiming also to gear the software to provide ease of use by archive administrators and end users from a spread of cultures and practices.

The publications archive developed for use in the Electronics and Computer Science Department, which uses the GNU Eprints software, and held over 800 full text publications as we began to set up our pilot institutional repository in 2003, was well known to the TARDIS team. It now holds over 1500 full text items; evidence of continuous use of the kind which might ideally be envisaged for the whole university. Since this is also a bibliographic database of citations to work by departmental researchers, there will be already

practical and technical decisions to be made in incorporating this within an institutional database intended originally to house full text publications in electronic form to aid both access and visibility.

To provide solutions which are meaningful across the whole institution it is very useful to get an understanding of the different publication practices of some of the other university departments. Although it would be too time consuming to investigate and quantify every departmental web site in depth, sampling a range of subject areas has brought some extremely useful observations.

A research support survey was also sent out recently by the library, following a pilot survey, to all university researchers. It provided the opportunity to include some specific questions on open access and an institutional e-Print repository to help understand the current attitudes of researchers. It had an excellent response and results should help inform future developments in TARDIS.

## **The Broader University Picture**

The University of Southampton is currently ranked among the top ten university institutions in the UK for the quality of its research. As such it is concerned to ensure it maintains the high profile of outstanding departments as well as encouraging other departments to increase the standard and visibility of their research. The university has greatly expanded in recent years and now has over 19,000 students and around 4800 staff based on several campuses in the Southampton region. It celebrated its Golden Jubilee in 2002.

This exercise has looked at the kind of activity which currently takes place within different communities around the campuses to manage their research output and other publications for outward consumption. It also provides some feedback on taking this forward.

However, while thinking about how to best introduce a new venture, it became evident that many other changes were taking place within the university which needed to be taken account of including major improvements to the web site and to university management systems. Although the aim is to streamline these processes, these developments all introduce an extra burden on staff as they learn and adapt to the changes. The most significant change was the major restructuring of the university from August 1<sup>st</sup> 2003. This inevitably impacts the work of the TARDIS project in various ways. A major part of the restructuring process has been the reorganization of the University's academic departments into 3 faculties and 20 schools with varying degrees of change to be made.

In an article in the university's Bulletin on 'Schools of Thought on the New Structure' three Heads of School reflect on what it means to them.

For the new School of Civil and Environmental Engineering and Technology (incorporating the Centre for Environmental Sciences), the new operational structure will be more streamlined than before with clearer lines of communication and responsibility, while also encouraging individuals to develop according to their own particular strengths and aspirations. e-Print archives could help these individuals in both sharing their own work and having ready access to that of others.

The School of Biological Sciences has already operated as a School for more than a decade. Change has also brought the opportunity to resolve difficulties: for example, the School has previously had a dual identity with respect to Faculties. The lesson from this School may be that restructuring cannot be a one-off event. This means that our institutional repository must also be ready and able to constructively accommodate change.

The School of Social Sciences will bring together five departments from 2 sites. A priority is to build on existing research strengths. In particular, a high priority will be given to achieving RAE 5\* status in at least one of the research areas. An e-Print archive could support this goal by helping to raise the profile of research in these areas.

As this major change took place on 1<sup>st</sup> August 2003, e-Prints Soton has been set up to use the new structures for simplicity. Since there is a need to minimise barriers for authors to deposit their work, a simple framework is an important consideration. For Oceanography there is the added complication of the drive to develop a fully integrated centre of excellence from the NERC Research Division and the School of Ocean and Earth Science, with their different cultures and practices, by 1<sup>st</sup> August 2004. The primary mission is to remain a world class centre of excellence in marine and earth sciences and marine technology but operating within the new Faculty of Engineering, Science and Mathematics and, therefore, under the management of the university. Staff would all be members of a research group (currently 10 in number). This progression might, however, simplify understanding of the various research areas for an outsider: this was certainly a challenge when sampling the research publications of the Southampton Oceanography Centre for this assessment.

For e-Prints Soton it is timely to represent the new structure in a manageable way (including, in addition, Professional Services which also has staff who publish research papers). From the preceding discussion, it can be seen to be important to recognise that this structure will not remain static and we will need to endeavour to build the service to accommodate this. While Faculties are still part of the vocabulary, disconcertingly, even the traditional word Department must be removed and be replaced by School. The original decision has been to try to encompass all Schools in one database rather than creating individual databases with software which might otherwise have to be upgraded individually and searched with a separate cross searching tool. At the same time as this major reorganisation, there are the major changes taking place in the software systems supporting student

administration: this suggests that any examination of linking to the core systems would be more beneficial after these systems are more stable.

## Exploring the Faculties

The 3 new super faculties are:

**Faculty of Law, Arts and Social Sciences (LASS)**

**Faculty of Medicine, Health and Life Sciences (MHLS)**

**Faculty of Engineering, Science and Mathematics (ESM)**

We looked at the web sites of some of the schools or subsets within the individual faculties. Schools, in any case, varied considerably in size. Within the old structure Mathematics was even a faculty of its own.

The overall results are best summarized by a series of charts and graphs. This helps to show the emphasis of some of the individual schools and the routes they give to publication data

**Table 1.** Publication Practices of Sample School Websites at Southampton University

Department	Total number of publications listed on website	Full text on website
Archaeology	252	2
Biology	796	24
Chemistry	1128	111
Economics	357	89
Electronics and Computer Science	7008	866*
English	243	3
Health Professions and Rehabilitation Sciences	332	0
Maths Education	170	34
Mathematical Studies	849	310
Medicine	1603	247
Modern Languages	160	0
Music	280	5
Nursing and Midwifery	439	0
Politics	138	6
James Rennell Division, SOC	792	68
Ocean Circulation and Climate Group, SOES	286	9

\*The Electronics and Computer Science figure includes only those on the database as there is inevitably considerable overlap with individual or group pages

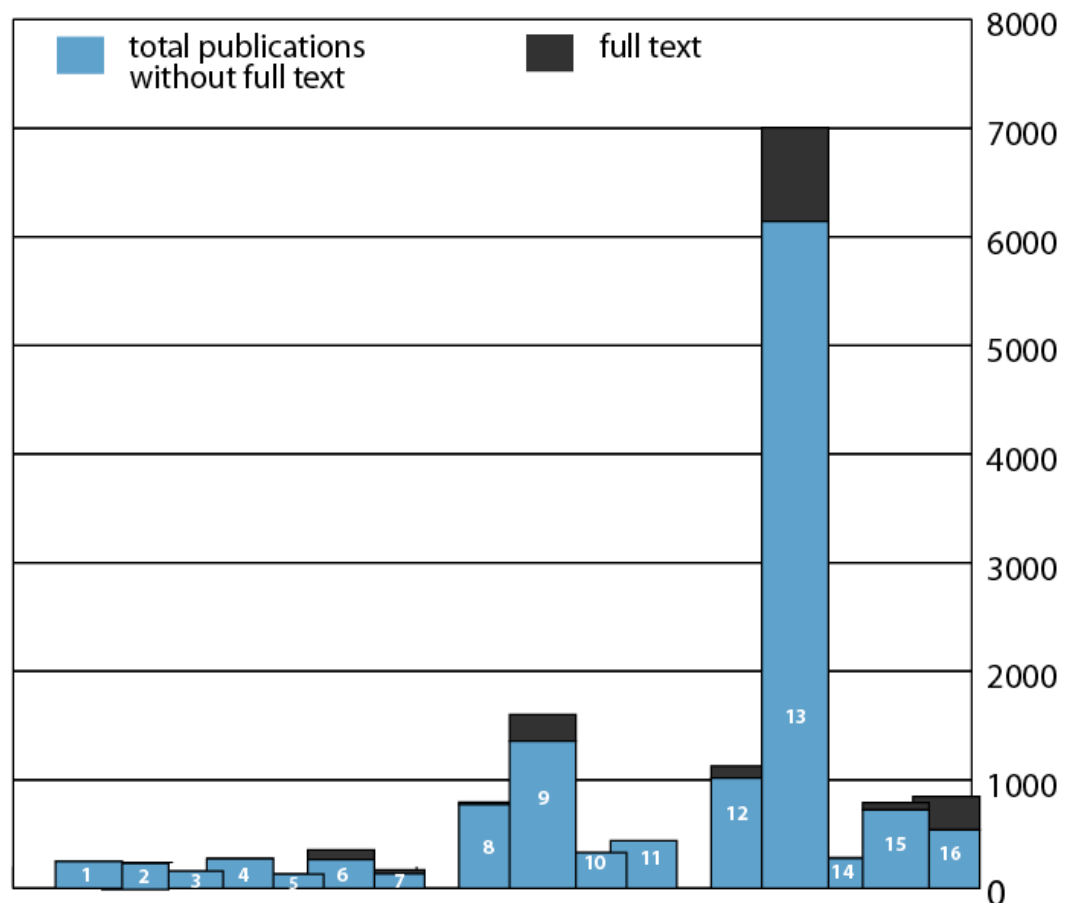
The following chart looks specifically at the percentage of publications displayed on the sample web sites with full text. It must be remembered that departments (or schools) often display only selected publications and not necessarily the most recent.

**Table 2:** Sample web sites within University of Southampton faculties with percentage of publications in full text

Department	Total number of publications listed on Web	<i>Full text on Web</i>	Percentage of Publications with full text
<b>Faculty of Law, Arts and Social Sciences</b>			
Archaeology	252	2	1%
English	243	3	1%
Modern Languages	160	0	0%
Music	280	5	2%
Politics	138	6	4%
Economics	357	89	25%
Maths Education	170	34	20%
<b>Faculty of Medicine, Health and Life Sciences</b>			
Biology	796	24	3%
Medicine	1603	247	15%
Health Professions and Rehabilitation Sciences	332	0	0%
Nursing and Midwifery	439	0	0%
<b>Faculty of Engineering, Science and Mathematics</b>			
Chemistry	1128	111	10%
Electronics and Computer Science	7008	866	12%
Mathematical Studies	849	310	37%
Ocean Circulation and Climate Group, SOES	286	9	3%
James Rennell Division, SOC	792	68	9%

They can also be usefully viewed as a graph:

**Chart 1:** Number of academic publications listed with full text electronically available via exemplar school websites, 2003



**LASS**

- 1 - Archaeology
- 2 - English
- 3 - Modern Languages
- 4 - Music
- 5 - Politics
- 6 - Economics
- 7 - Maths Education

**MHLS**

- 8 - Biology
- 9 - Medicine
- 10 - Health Professions
- 11 - Nursing and Midwifery

**ESM**

- 12 - Chemistry
- 13 - Electronics and Computer Science
- 14 - Ocean Circulation and Climate, SOES
- 15 - James Rennell Division, SOC
- 16 - Mathematical Studies

Shown as percentages we see that Mathematics with its highly methodical publications listings organised around its 4 research groups already has 37% of its publications available from their site in electronic form. These listings are not generated using the GNU EPrints software, however, and this will need to be taken into consideration within the institutional context.



## ***Faculty of Law, Arts and Social Sciences***

To illustrate some of the disciplines within the faculty we will examine some specific examples firstly within the School of Humanities:

### **Discipline of Modern Languages**

Snapshot of Publication Data on the Website [www.lang.soton.ac.uk](http://www.lang.soton.ac.uk) in 2003:

The former department of Modern Languages is one of the leading centres in the UK for the study of foreign languages and cultures, and was awarded the highest grade (5\*) in the 2001 Research Assessment Exercise. PhD supervision is offered in line with the expertise of the members of staff in the primary areas of language, culture and society.

The list of all members of Modern Languages can be viewed at <http://www.lang.soton.ac.uk/profiles/stafflist.htm>

Each member of staff has a web page that briefly covers his/her Biography, Teaching and Research Interests and Recent Publications. Typically a member of staff lists about 3-7 examples of the recent works, the majority of which are books. Only one person refers to titles of the journals she published her works in as opposed to the list of the publications she produced. There are 69 books listed amongst 51 members of the research staff and some staff display front cover shots of the published books. However cover shots of the books are not linked to, say, a publisher's catalogue description for more information. Many staff also list the books they have translated in the publication list. One member of staff provides a link to the full list of his publications in addition to the standard profile; the list contains 96 publications but has as yet no links to abstracts or any electronic text.

Overall, staff members in Modern Languages do not provide links to either any full text or abstracts of their publications and do not have any additional links to personally maintained websites. However, there appears to be further potential for putting some publications, or even parts, online or simply linking to additional useful information about them, which can be further explored. Although the range of publications differs considerably from some science subjects there is already the possibility of adding cover images built into the GNU EPrints software.

## Discipline of Music, School of Humanities

Snapshot of Publication Data on the Music Website,  
[www.soton.ac.uk/~musicbox](http://www.soton.ac.uk/~musicbox) 2003

Although the university has created an Arts campus, Music remains on the main campus where it is adjacent to the renowned Turner Sims Concert Hall. The discipline of Music carries out international-level research across a broad spectrum of topics, encompassing music history, theory and analysis, issues in contemporary music and popular culture, performance research, and composition; the quality of its work was recognized through the award of a 5\*A (the highest possible grade) in the 2001 Research Assessment Exercise. Departmental research falls into six broad themes, with several staff working in each; this overlapping of interests contributes significantly to the vitality of our research environment. These themes are listed at <http://www.soton.ac.uk/~musicbox/research.htm> with links to the appropriate sections of the 2001 Research Assessment Exercise return, which summarize work done in each field between 1994 and 2000, and publications resulting. A list of annual departmental publications can also be found on the university's Corporate and Marketing Web site. Neither list of themes nor departmental publications listed here have links to abstracts or full text.

All University hosted web-pages of the teaching staff members follow guidelines for maintaining a home page, the guidelines can be found at [http://www.soton.ac.uk/~musicbox/home\\_page.htm](http://www.soton.ac.uk/~musicbox/home_page.htm). According to the guidelines it is Music Department policy that every staff member maintains a home page including a summary biography and publication list. The publication lists also include a section on current projects or work in progress. The Music Department stipulates a specific format for publication lists because it draws information from the publication lists (for research returns, postgraduate brochures, etc), and for this purpose it is requested that everyone uses the same conventions.

Apart from this, staff members are free to lay out the home page as they prefer and some staff members have highly sophisticated home pages (see Pete Thomas at <http://www.petethomas.co.uk>). In addition to a conventional list of publications that normally includes books, book chapters, journal articles and reviews, Music department members also list compositions and performances. Some staff have created links to MP3 files to enable a web-site visitor to listen to compositions. Some books may also be linked to a publisher's catalogue description.

The new School of Humanities includes the incredibly diverse areas of Archaeology, English, Film, History, Jewish History and Culture, Modern Languages, Music and Philosophy. Clearly disciplines such as Music will have their own special needs within the new broad School of Humanities.

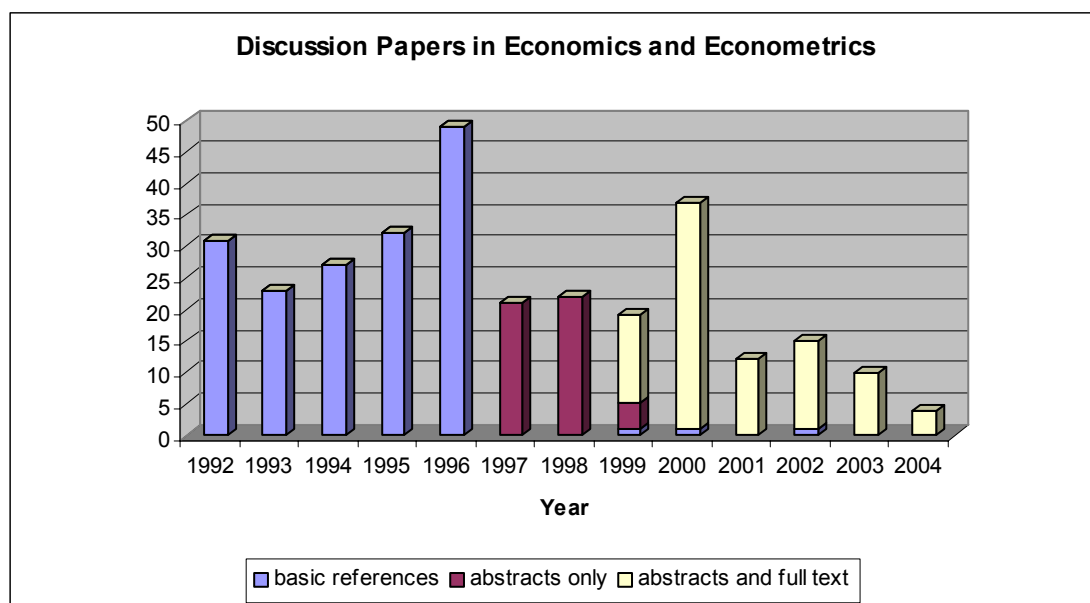
## Economics, School of Social Sciences

Within the Social Sciences we see evidence of other traditions such as working papers and here we see a clear picture of a transition towards provision of full text in electronic form. Discussion of the ideas within the papers is likely to be more timely if the full text of the document is easily accessible.

[http://www.socsci.soton.ac.uk/Economics/Research/Discussion\\_Papers/default.php?NavContext=Discipline](http://www.socsci.soton.ac.uk/Economics/Research/Discussion_Papers/default.php?NavContext=Discipline)

The University of Southampton Economics Division has been publishing discussion papers in Economics since 1992. Abstracts for papers from 1997 onwards are available on-line. For papers from 1999 onwards, authors have included on-line files of their work, always in PDF (Acrobat) format, although paper copies can be sent on request and are available on subscription.

**Chart 2:** The transition to full text of Economics Discussion Papers at Southampton



This snapshot shows the publications now containing full text as a norm. When looking at the whole institution there is obviously a need to consider how to manage the integration of this established practice as well as the established publication listings of the school as a whole.

## **The Centre for Research in Mathematics Education**

The **Centre for Research in Mathematics Education** (CRIME) is an example of an established interdisciplinary centre within the university. CRIME, one of the centres within the former Department of Education, was established in 1970. It includes academic staff from the Faculty of Mathematical Studies and the Research and Graduate School of Education. After the restructuring the School of Education has been assigned to the Faculty of Law, Arts and Social Sciences and the Faculty of Mathematics is now part of a much larger Faculty of Engineering, Science and Mathematics. The centre already makes a percentage of its work available online. A potential bonus of an institutional repository is that, in such an interdisciplinary area a work need be entered only once and can be immediately reflected in both disciplines for use in university reporting of research and wider. However, the centre needs also to be recorded for it to maintain its own dissemination as before. One service that the centre expressed interest in having provided was a simple conversion service for creating pdfs.

Elsewhere in Education there is keenness to show through the visibility of full text the strength of the research record particularly in newer fields such as e-learning.

## ***Faculty of Medicine, Health and Life Sciences***

Medicine, in particular, has an existing structure with access to publications leading to abstracts and sometimes full text which is necessary to take note. An institutional e-Print archive would need to build on this previous work. Medicine operates a highly focused research strategy with large interdisciplinary Research Divisions that bridge traditional subject boundaries. It provides a highly organised web site for research based on the six Research Divisions reflecting the School's major strengths <http://www.som.soton.ac.uk/research/>. The RAE 2001 Outcome, the Research Report for 2001 detailing publications and the Research Strategy were all listed but tantalisingly only allowing access to the School of Medicine community.

The scale of the publication recording is shown by the following chart.

**Table 3:** Prevalence of abstracts and full text for publications on Medicine website 2003

Division within Medicine		Number Of Listed Publications	Abstract	Full Text
<b>Cancer Sciences including:</b>				
	Immunology and Immunotherapy	108	75	28
	Systemic Therapy	64	38	15
	Community Clinical Science including:			
	Treatment Decisions	168	35	8
	Epidemiology	68	4	1
	Infection, Inflammation and Repair including:			
	Molecular Microbiology and Infection	52	44	25
	Tissue Remodelling and Repair	126	71	26
	Respiratory Cell and Molecular Biology	146	74	16
	Allergy and Inflammation Sciences	64	56	22
	Human Genetics	230	194	26
	Molecular Mechanisms in Cancer	31	30	10
<b>Clinical Neurosciences</b>		39	32	6
<b>Medical Education</b>		0	0	0
<b>Fetal Origins of Adult Disease including:</b>				
	Maternal and Fetal Physiology	86	51	11
	Population Studies	81	68	18
	Nutrition	100	67	13
	Endocrinology	49	34	12
	Bone and Joint	114	64	7
<b>Information and Computing</b>		77	9	3
<b>TOTAL for SOM</b>		<b>1603</b>	<b>946</b>	<b>247</b>

The table represents the divisional structure at the School of Medicine (SOM) as seen from the website (<http://www.som.soton.ac.uk/>). Individual divisions

typically present a list of staff members and each research/academic staff member has a web page referred to as a 'research profile'. Each research profile contains information about the research an individual is conducting and a list of recent research-related publications. Some staff members also include publications from previous years and only a handful of individuals provide a full list of their publications. The research profile of an individual can also be accessed through a staff search page (<http://www.som.soton.ac.uk/staff/staffsearchres.asp>), which lists all staff members within the School of Medicine.

The list of recent publications presented by a staff member is normally a list of references with links to either an abstract of the article or full text or both. The abstracts are always linked to the PubMed database (<http://www.ncbi.nlm.nih.gov/entrez>), which can contain a link to the full text version of an article on the website of the relevant publisher. The full text is normally linked directly to a publisher's web-site by-passing the PubMed database. It appears from the SOM website that research profiles of individuals are normally maintained by the school or the relevant sub-division. Only a few academic staff members maintain their own web pages in addition to their research profiles. Many staff members do not have research profile pages although they have blank pages allocated by the school.

A typical example of the SOM staff member web page is shown by <http://www.som.soton.ac.uk/research/ais/members/jow.htm>. Of 9 recent papers all have an abstract and 5 also have links to journal text in pdf format although none of the pdfs are stored in house.

Southampton researchers have also submitted 9 items of research to BioMed Central, the open access publishers, including a conference paper published in January 2004, a review, a commentary and oral presentations. Nursing, by contrast, does not yet have any links to full text publications but a seminar for research staff showed a keenness to increase visibility and profile.

## ***Faculty of Engineering, Science and Mathematics***

### **School of Electronics and Computer Science**

<http://www.ecs.soton.ac.uk/>

The department started a database to list its own research publications in 1998. Researchers in the Intelligence, Agents, Multimedia Group have also created the open source GNU EPrints software for use by others around the world to create their own eprint archives. The original 'Jerome' database has become a useful exemplar for the EPrints software and now uses the latest version. It includes bibliographic information (now over 8000 publications) and offers the option to add full text (now 1500 documents). It became

departmental policy for all staff and research students to contribute their publications adding full text where possible. Thus in 2003 the database was successfully used as the basis for the department's input to the University's 2002 research report. Lists were generated which highlighted missing fields enabling staff to check metadata quickly. Reports were then easily generated in the appropriate format specified for the input to the University.

Added features include:

The database links papers to projects and groups and is used for project or group web pages.

It links publications in the database to the school's 'People' database and can provide publications to a staff web page.

It adds performance indicator fields for the Research Report and RAE.

Latest e-Prints are displayed on the main page of the school web site.

## School of Mathematics

The former Mathematics faculty also has a strong tradition of recording publications although not using the GNU EPrints software. It is based on the 4 research groups as illustrated in the following table.

**Table 4:** Snapshot of Publication Data on the Mathematics website, [www.maths.soton.ac.uk](http://www.maths.soton.ac.uk) in 2003

Group	Years	Total Publications	Full Text	Format includes	Full text is accessible via
Applied	2003-1996	376	153	Downloads and links: pdf, html, dvi, postscript, TeX, MS Word, Latex	<a href="http://www.maths.soton.ac.uk">www.maths.soton.ac.uk</a> <a href="http://arxiv.org">http://arxiv.org</a> or local mirror <a href="http://xxx.soton.ac.uk">http://xxx.soton.ac.uk</a> <a href="http://www.sciencedirect.com">www.sciencedirect.com</a> <a href="http://ejournals.worldscientific.com.sg">http://ejournals.worldscientific.com.sg</a>
Operational Research	2003-1996	113	13	Downloads and URL: pdf, postscript	<a href="http://www.maths.soton.ac.uk">www.maths.soton.ac.uk</a> <a href="http://www.optimization-online.org">www.optimization-online.org</a> <a href="http://www.sciencedirect.com">www.sciencedirect.com</a> <a href="http://link.springer.de">http://link.springer.de</a>
Pure	2003-1995	190	128	Downloads: pdf, dvi, postscript	<a href="http://www.maths.soton.ac.uk">www.maths.soton.ac.uk</a>
Statistics	2003-1996	170	16	Downloads: pdf, html, postscript	<a href="http://www.maths.soton.ac.uk">www.maths.soton.ac.uk</a>
<b>TOTAL</b>		<b>849</b>	<b>310</b>		

Full text is either downloaded or linked to appropriate URLs and the broader range of formats is noticeable. However, there is likely to be encouragement to also provide pdfs for readability by those who do prefer this or who may not

otherwise have an appropriate viewer or printer. Clearly any future archive would need to work with or find a transition from the well organised existing archive of publications with its group focus.

Elsewhere in the Faculty there is interest in eprints for a variety of reasons. In Chemistry there is potential interest in electronic publications because of the number of international students. Linking to data is also a particular interest being pursued as part of the eBank UK project.

In Physics and Astronomy there is a perceived need for a publications database with full text deposits or links as appropriate. The traditional High Energy Physics Preprint list would also benefit from a simpler method of deposit. Astronomy already provide a live search on the subject based archive 'arXiv' for the publication list on their web pages. There are strong links with arXiv and the library based complementary database called SPIRES for some but not all physicists.

## **Southampton Oceanography Centre**

A contrasting approach is taken by the **Southampton Oceanography Centre** which as we have seen has 2 specific entities which overlap but which will be coming together more closely in the future. The current distinctions are emphasised in our look at the web sites of interrelated groups.

The Southampton Oceanography Centre is a joint venture between the Natural Environment Research Council and the University of Southampton and embodies the previous Institute of Oceanographic Sciences (IOS) and the departments of Geology and Oceanography. Historically (since 1949) the National Oceanographic Library (NOL) within IOS was responsible for the recording of all research output and between 1950-1980 produced and distributed worldwide, an annual volume of Collected Reprints (an obvious paper analogue to the present intended e-Print activity). The NOL is required annually to report on 'Output Measures' of SOC and since 1995 (the inception of SOC) has taken responsibility for recording research output of both NERC and University researchers.

The NOL plays a central role in the scholarly communication process. It lists all research papers from submission to published, orders and distributes the reprints of research papers and is responsible for the production and distribution of SOC Reports. It produces throughout the year updates of papers published to Line Managers and makes the SOC Staff Publications database available on the NOL Website. Over 600 research publications are produced each year of which nearly 300 are peer reviewed. There is a formal process between researcher and the NOL in place to ensure that a definitive listing can be provided both for NERC and the University Research Report. We are using this fertile environment to pilot e-Prints Soton which, nevertheless, also provides a challenge in that certain procedures are already in place although without an emphasis on full text currently.



This tour of some of the diverse disciplines of the university shows a variety of practices, styles and formats. Most importantly it shows that we are not starting from scratch which might be a simpler task in many ways. However, it shows there is plenty of potential for adding or linking to full text until it becomes second nature as it has already become for Economics Working Papers or for Astronomy journal articles.

## **Summary of perceived needs of university authors and suggested services**

Academics are asked to provide information about their publications for a large variety of demands and for which the format required varies each time.

The following needs were some of those identified, but not prioritised, by our academics:

Providing a secure store for publications in electronic form at an early stage for sharing with the research community or enabling visibility of one's work as a professional

Providing information for a School's research report (regardless of where the electronic document is stored) and from there the University Research Report

Providing information and documents for CVs, job and fellowship applications

Providing information and documents for a School's public front including lists on its web site in a variety of forms (by person, group, project or topic) and also publicity in printed form

Providing information and documents for research proposals

Providing information and documents for the Research Assessment Exercise (however it is presented in its new form)

Providing information and documents for other publication archives such as those of research councils (the ESRC, for example, is experimenting with a full text archive)

Providing a simpler way of maintaining a personal web site

A specific annual burden on academics is the University Research Report. Traditionally in paper form it provided publication lists in pdf form for departments in 2002. Normally seen as a request for large amounts of information well after the event it would be a considerable bonus if an e-Prints archive would provide the basis of a more proactive service which could, at the same time, improve the visibility of Southampton research in a simpler fashion. These demands sway the decision on whether the eprints database can remain solely a full text database or whether it must be an integral part of a publications system to get buy-in from the academics who must help create it.

To enable all these needs to be fulfilled successfully a number of services were suggested by individuals that e-Prints Soton or other publication services could offer to make these processes easier.

The most fundamental one was perhaps that authors would appreciate most being able to just **input data once** and use this for **multiple outputs**. Bibliographic information and also the document itself may, however, be updated when an article is published. The deposit process is more complicated in disciplines where authors already contribute to subject based archives such as arXiv or RePEC or contribute to project databases such as AKT. Import for high energy physicists could perhaps be aided by being able to ask the SPIRES library system for bibtex output and importing that directly into the departmental database. The School of Physics and Astronomy has already been experimenting with EPrints software because of the numerous demands for publication information. They propose that the publications database created could also provide a store for the electronic document when it is not already stored elsewhere e.g. in arXiv.

Other useful services suggested included:

Provide filters to produce the performance codes required by the University publication reports

Provide export to personal bibliographic software e.g. EndNote, Reference Manager, bibtex etc

Provide export functions and support for creating the University Research Report

Provide conversion to pdf for deposit

Provide conversion to html and perhaps plain text that could be cut and pasted into anything

It was suggested that the e-Prints community might produce/ build up a bank of filters over time. It might be possible to take advantage of mark up schemes devised for special purposes such as Mathematics or Chemistry.

Provide a facility to add corporate authors and collaborations (now included)

Provide 'metadata importers', for example, for multiple authors (which may in Physics even stretch to 500 or more)

Provide editors to add details to incomplete information (this ties in with our aim to test a mediated process)

## **Key Issues for e-Prints Soton**

A key consideration for the TARDIs project (Hey and Simpson 2004) is how to ensure e-Prints Soton collaborates effectively with the new Schools. The Schools are developing their new Strategic Plans to fit in with the overall University Corporate Strategy. As Research policy develops in the new structure there are opportunities for creative dialog with e-Prints Soton to both further and influence these goals. At this sensitive time of transition, there is a need to ensure our service can add value and save time rather than entailing

significant extra work for individual researchers. This is where mediated support may prove a bonus even if it later becomes less necessary. In some areas, in which up until now there has been little move to provide full text available electronically, it will be more straightforward to provide a new service as less duplication is involved. Here, however, advocacy and support may become a greater priority.

Although it throws up additional issues to tackle, an exploration of current electronic publication recording practices, particularly involving full text dissemination, around the university has provided a firmer basis and constant reminder on which to proceed towards an Open Access vision for research within specific faculties and schools. Providing some value added services to meet perceived needs could help provide some valuable incentives to deposit publications proactively in e-Prints Soton. Research recording demands provide a framework within which to position the institutional repository if it is indeed to become an essential infrastructure for the digital age (Lynch 2003).

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All links checked May 2004