

# The DAEDALUS Project

Based on a paper given at the UKSG seminar 'The Open Archives Initiative: application and exploitation', London, 14 May 2003

The DAEDALUS (Data Providers for Academic E-content and the Disclosure of Assets for Learning, Understanding and Scholarship) Project, funded by the FAIR (Focus on Access to Institutional Resources) Programme in the United Kingdom, aims to set up a range of institutional repositories. The project has arisen in response to a perceived 'crisis' in scholarly communications, driven by inflation in periodical subscription levels and declining library budgets. The DAEDALUS Project has two strands, service development and advocacy. The paper describes the initial development of Glasgow University's institutional repositories and details strategies to engage academic interest in depositing a range of content into them. The project will also address issues such as quality control, intellectual property rights and institutional support.



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## Scholarly communications

The problems around access to scholarly communications, caused in particular by excessive journal inflation, have been widely described<sup>1</sup>. SPARC (Scholarly Publishing and Academic Resources Coalition), and its European counterpart SPARC Europe, are involved in extensive lobbying to 'advocate change in the scholarly communications market, support competition, and encourage new publishing models that better serve the international researcher community'<sup>2</sup>.

In the United Kingdom, the debate has been taken up strongly by academic libraries, notably CURL (Consortium of University Research Libraries), and there is wide ranging debate within higher education about open access to research via open-access journals and the creation of institutional repositories. Institutional repositories aim to capture an institution's scholarly output, whether already published, in preprint form or published in other ways such as departmental or technical reports.

JISC (Joint Information Systems Committee) has created the FAIR (Focus on Access to Institutional Resources) Programme to fund a number of initiatives throughout the United Kingdom, including projects to set up a range of institutional repositories<sup>3</sup>, to investigate the rights management issues surrounding the deposit of materials

in these repositories<sup>4</sup>, and creating harvesting services through which the higher and further education community can access the collective output of e-print papers available from institutional repositories<sup>5</sup>.

## Local issues

The debate around scholarly communications and their dissemination has been sharpened by local experiences. As with all university libraries, budgets at Glasgow University have declined relative to inflation in the cost of materials, and increasing student numbers.

At Glasgow University, library budgets are devolved to faculties and faculty library committees, and this means it is academics themselves who are having to make and convey the news about cuts in journals to their colleagues. They are at the sharp end of these decisions and are often seeking solutions to the annual cull of periodical subscriptions. Some departments at Glasgow University have decided not to purchase monographs at all, over a number of years, to maintain their serials holdings, whilst acknowledging the damage this can do undergraduate provision. We have looked at other strategies to combat these problems, for example, collaboration. The GAELS

(Glasgow Allied EElectronically with Strathclyde) project at Glasgow University investigated models for collection development in collaboration with Strathclyde University, but collaboration at the level of joint collection development is severely constrained by copyright and licensing regulations.

It is arguable whether or not institutional repositories can solve the constraints of the existing publishing system. In the long term they may allow universities to maximize access to research amongst themselves, thereby providing an opportunity to reduce annual serials expenditure, but whether open-access models can in some way reproduce or replace the existing commercial publishing model with its complex peer-review systems remains to be seen. Certainly, more and more successful open-access journals are being published<sup>6</sup>, and many institutions throughout the world are starting to set up institutional repositories.

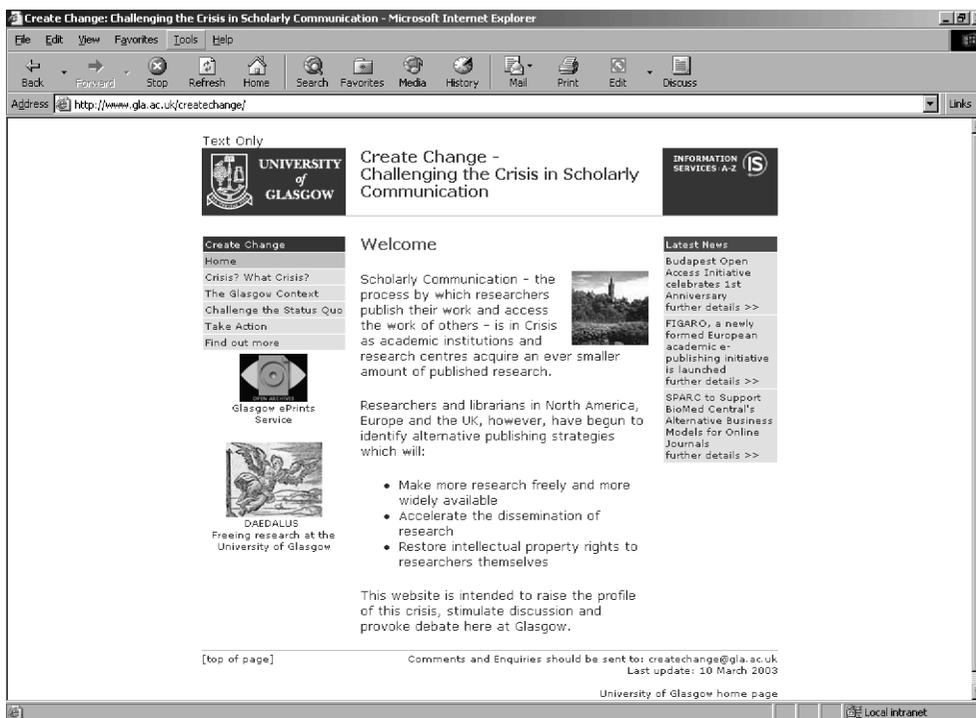
Institutional repositories benefit universities in other ways, allowing their research output to be seen as a whole and serving as a concrete indicator of the value and benefit of that research (which is otherwise spread across thousands of journals, conference proceedings and so on) to various parties, including funding bodies and political groups. The individual researcher also benefits as their research is likely to have a greater impact on the scholarly community and therefore be cited

more heavily<sup>7</sup>, a very powerful argument in the context of increasing research selectivity.

### The DAEDALUS Project

Glasgow University received funding from JISC in 2002, for three years, to set up the DAEDALUS (Data Providers for Academic E-content and the Disclosure of Assets for Learning, Understanding and Scholarship) Project<sup>8</sup>. The project is funded as part of the FAIR programme and is in the programme's eTheses cluster along with the University of Edinburgh's Theses Alive! Project and Robert Gordon's E-Theses project, as well as being a partner in the SHERPA (Securing a Hybrid Environment for Research Preservation and Access) Project<sup>9</sup>. The project forms one of the core strategic aims for Glasgow University Library and feeds into Library strategy at all levels.

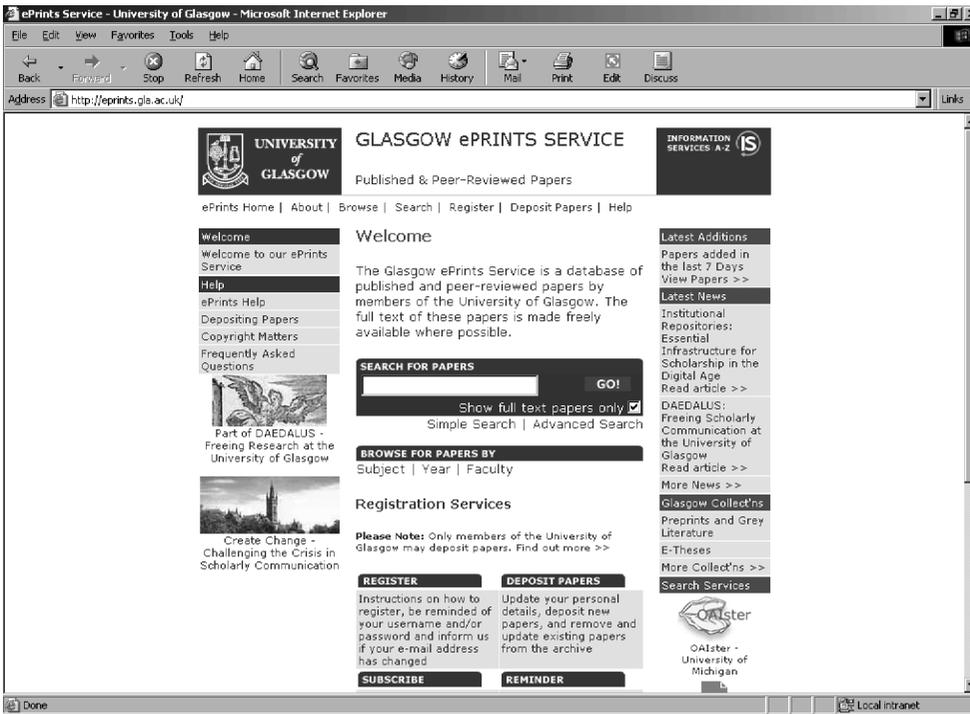
From the start it was decided to have two distinct strands for the project, service development and advocacy, with a project manager for each strand. This is a reflection of the weight given to achieving cultural change at the University as well as developing robust and well-supported systems. The project has developed an advocacy web site to highlight the issues around scholarly communications and this is regularly updated with news, links to other relevant web sites and advocacy materials that can be used by anyone interested.



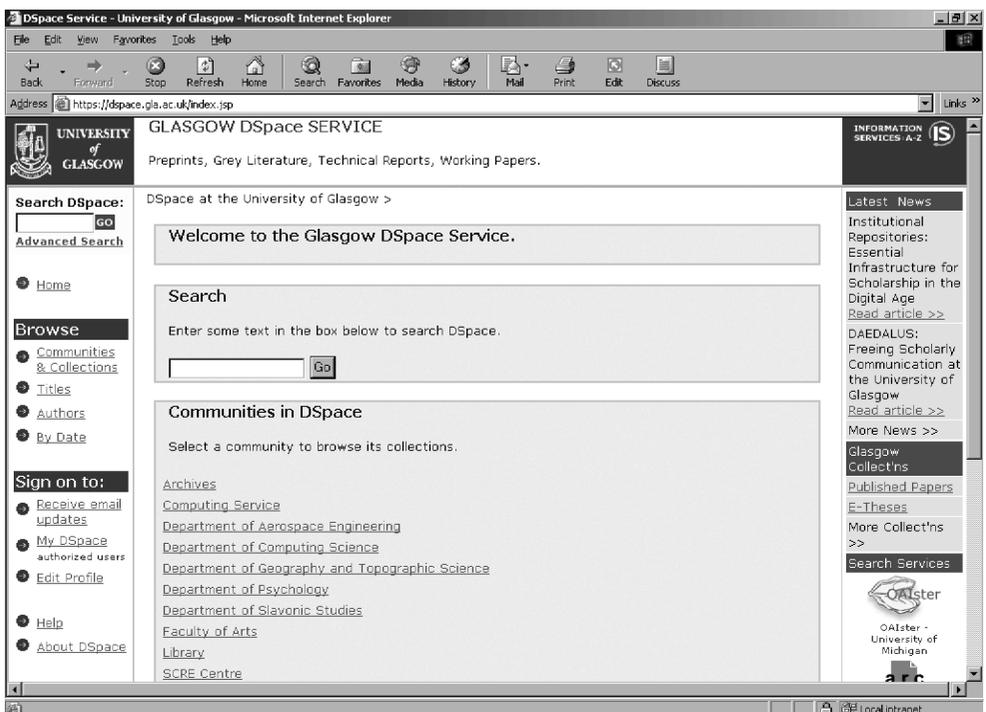
The remit of the project is to explore *service development issues* including standards, metadata and document formats, *cultural issues* surrounding the deposit of materials and encouraging use of the services, and *organisational issues* such as intellectual property rights, plagiarism and quality control.

### Service development

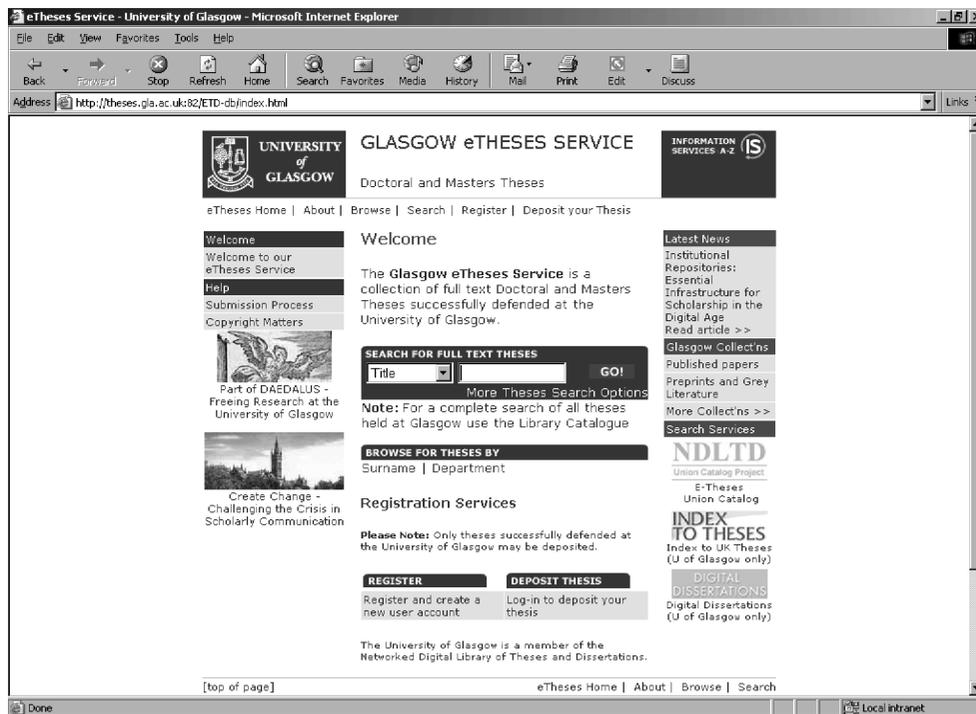
The project has developed several repositories using different kinds of software, and as part of the project we are making comparisons of the different types of open source software available.<sup>10</sup> We have set up three different repositories so far:



for published and peer-reviewed papers using GNU Eprints;



for preprints, grey literature, technical reports and working papers using DSpace;



for electronic theses using Virginia Tech's ETD-db software.

We have found that having these differentiated services has addressed, to some extent, the concerns academic staff have about quality control and the reluctance some researchers have expressed about including their published papers among a mass of varied items in a single service. The project will also create a search service which will enable users to search across the range of repositories. We view Glasgow University's institutional repositories as complementary to existing subject archives such as the physics service, ArXiv, and are asking academic staff here to deposit copies of their papers into both services if appropriate.

**Advocacy**

The advocacy strand of the project has a far-reaching remit which aims to create an open access culture at the University, while seeking content for the services and developing guidelines on policy implications and processes around content delivery, and ensuring an exit strategy that will deliver a fully supported and fully used service. Policies are being developed in the areas of content and submission so that we can write guidelines about what will be accepted, who decides what is acceptable and what kind of editorial control might be imposed. It has become clear from meetings with academic staff that there are concerns about

what material will be deposited into the various repositories, and by whom. The DSpace software allows this responsibility to be ultimately devolved to faculties, departments or research groups, who can then devise their own editorial policies.

These issues have to be decided in full consultation with the academic community, and we are undertaking a number of strategies to engage academics and researchers in the debate around scholarly communications.

The project has established a project board with three senior academics, representing each of the three territorial subject groupings within the University, who have been of great assistance in developing advocacy strategies. Project staff are contacting academics who have posted copies of their papers onto personal or departmental web pages, to encourage them to place them in our repositories instead (or as well) where they are more likely to be maintained in perpetuity.

We have, in some cases, offered to create faculty publications databases for use in future Research Assessment Exercises with the *quid pro quo* that we will obtain full-text open access to these publications wherever possible.

We have identified a number of journals, with what appear to be liberal editorial policies around the re-use of copyrighted papers, and we have contacted researchers publishing in these journals

so that we can test the journal policies with regard to the deposit of papers in institutional repositories.

It has been essential to involve subject librarians in the advocacy programme, and they arrange for presentations to be made at faculty, departmental and research group meetings, distributing publicity materials and keeping the issues alive in their subject areas.

The project has organised two campus events, each attended by around 50 academics, with speakers from bodies such as SPARC and other FAIR projects, who have contextualised the issues so that staff at Glasgow University are aware that the scholarly communications debate and responses to it are being taken up in other universities throughout the world.

### Organisational issues

We are currently offering a mediated submission service, as well as the opportunity to self-archive, and we are accepting papers in a range of electronic formats, which are then converted to PDF. In the case of published papers, some publishers will not allow the version of the paper as published in their journals to be deposited into our repository. We therefore accept other pre- or postprint versions produced in formats that vary from Word to Latex, and convert these, with a full description of the paper's status in its record. Clearly this increases the workload for Library staff and eventually it would be desirable for us to move to a wholly self-archiving model. We are not overly concerned with the appearance of papers deposited into the services, as long as the content is reliable.

We are working with the cataloguing department in the Library to establish the metadata and subject headings for deposited items and we have created a subject listing based on the Library of Congress Classification Outline, an established subject scheme which will provide a degree of consistency for future cross-searching.

Our discussions within the University have highlighted that intellectual property rights are of particular concern to academic staff, and we therefore contact publishers on behalf of individual authors to check their policies with regard to the deposit of papers in our repositories.

We are aware of the need to have the full support of senior management within the University and to get support for policy change.

One area where this might happen quickly is in the area of thesis deposit. Many academics have expressed interest in research students being required to deposit an electronic copy of their doctoral theses in our eThesis repository.

### Conclusion

The FAIR Programme has put the open access debate, and consequent development of institutional repositories, on the agenda for higher education in the United Kingdom. At Glasgow University, the DAEDALUS Project aims to have 750 peer-reviewed and published papers in an institutional repository by 2005. In order to achieve this we must continue to advocate the benefits to the University, to the individual researcher and to society, of maximising the impact of research by making it freely and open accessible. We will be publishing detailed findings, particularly in areas such as quality control and policy development as the project develops.

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