Investigating overlay journals: introducing the RIOJA Project

Introduction
RIOJA (Repository Interface to Overlaid Journal Archives) is a 1-year partnership between UCL (University College London), Imperial College London, and the Universities of Glasgow, Cambridge and Cornell. The project will work with the Astrophysics community to investigate aspects of overlay journals.

For the purposes of the project, an overlay journal is defined as an open access, quality-assured journal whose content is held on one or more repositories. The concept of the overlay journal dates back at least as far as 1996 [1], but exemplars have been few and far between. Modern Astrophysics research offers an interesting environment in which to put an overlay model to the test, because of the growing importance of the arXiv repository to the discipline. Anecdotal evidence suggests not only that depositing papers with arXiv is the norm for this community, but also that arXiv meets many of the community’s current awareness needs.

In the RIOJA model, a journal overlaid onto arXiv would add quality assurance (whether through peer review or other means) to papers deposited to and stored in the repository. The main function of the journal’s Web site would be to guide researchers to "accepted" papers - those awarded its quality stamp after a speedy but robust refereeing process. Those papers would continue to reside on arXiv. This model could potentially deliver fast certification of research, with much lower costs than those associated with the traditional publication model.

Project Aims
For the project, researchers in Astrophysics are working with librarians and arXiv staff to build a demonstrator overlay journal. This pilot work will also involve the creation of a toolkit, supporting functions such as author validation, metadata extraction from the source repository, and submission tracking.

Aside from creating the demonstrator and its underlying tools, the project will endeavour to turn some of the anecdote mentioned above into fact, by carrying out a large-scale survey of the Astrophysics community. The survey will collect data about research practice. It will also probe the views of the community about published journals. The
basic overlay model described above only manages the core function of peer review, while journal publishers argue that their services (such as links to data sets) add value to accepted papers. The survey will aim to ascertain which "value-added" services are truly valued by researchers in this discipline.

Finally, RIOJA will attempt to analyse the costs of maintaining a functional overlay journal in Astrophysics, incorporating the services identified as most valuable by the survey participants. The costings will take long-term preservation into account, and RIOJA will be working with the UCL/British Library LIFE Project [2] to identify the digital preservation requirements and costs for an arXiv-overlay model.

Astrophysics is an example of the close integration of a subject repository into the daily life of the researcher, and repository use is not so firmly embedded in the research workflows of other disciplines. However, the toolkit is being designed to be adaptable, as far as possible, to repository-overlay scenarios in other disciplines, and the survey methodology will also be repeatable in different contexts. Other outputs from the project, like the survey findings and costings analysis, may also help to inform future overlay work in other research communities.

Progress
The toolkit and demonstrator journal Web site are in development, for completion early in 2008. The questionnaire survey ran between early June and mid-July 2007. Some 4000 Astrophysicists and Cosmologists from the top science institutions (100 academic institutions and 15 non-academic) were invited to participate in the survey and provide their views, and a healthy 683 responses were received. Preliminary findings indicate that researchers are, in general, sympathetic to the overlay model, albeit with concerns about the long-term accessibility of the research material, and the quality of the certification process. A report on the survey will be released towards the end of 2007.

Further Information
RIOJA is funded by the JISC (the UK Joint Information Systems Committee), and it runs until April 2008. For more information and updates, visit the Project Web site at http://www.ucl.ac.uk/ls/rioja.

Notes