E-prints: the future of scholarly communication?

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Will 2002 be seen as the watershed year when the Open Archives Initiative (OAI) really took off and began to have an impact on global scholarly communication? The OAI develops and promotes interoperability standards that aim to facilitate the efficient dissemination of content. The Eprints.org free software is OAI compliant and enables institutional archiving with appropriate harvesting.

Coupled with the expansion of the internet, there is now the ability to distribute information rapidly from author to consumer and thus impact upon traditional forms of publishing via the new collective repositories of research material.

Such institutional repositories capture and preserve the research output. Researchers benefit through wider and more rapid dissemination of their work, while repositories serve as tangible indicators of a university's quality, thus increasing the university's visibility, status, and public value. This was documented in a seminal SPARC paper (Scholarly Publishing and Academic Resources Coalition), 'The case for institutional repositories' http://www.arl.org/sparc/IR/IR_Final_Release_ 102.pdf which was released in late July.

Like the description of the University of Nottingham E-Print Repository [http://www. ariadne.ac.uk/issue31/eprint-archives/], the SPARC paper argues the case for the establishment of institutional repositories. Repositories are emerging globally in a variety of forms, for example, the University of California eScholarship Repository [http://repositories.cdlib.org/] and the SHERPA (Securing a Hybrid Environment for Research Preservation and Access) Initiative, [http://www.sherpa.ac.uk], is investigating issues regarding the development of openly accessible institutional digital repositories in universities.

Australian context

The Coalition for Innovation in Scholarly Communication in 1999 identified a number of key areas in relation to national information infrastructure co-ordination. One of these was the establishment of an e-print facility or facilities. Work on this concept was undertaken by the Standing Committee on Information Policy (SCIP), a subcommittee of the Australian Vice Chancellors' Committee. For a variety of reasons, this initiative and the National Datasets Proposals were not able to be funded by what is now DEST (Department of Education, Science and Training). The AVCC SCIP group was subsequently disbanded by the AVCC leaving something of a national vacuum in the vitally important co-ordination of information infrastructure.

E-print repositories

In 2002 a DEST Systemic Infrastructure Committee was established under the chairmanship of John Shipp, librarian of the University of Sydney. This committee identified the development of e-Print repositories as a strategic area to be considered for funding in the 2002 round of the Systemic Infrastructure Initiative.

In relation to the DEST initiative, Colin Steele was asked to scope a specification for an E-Print facility which could be considered by the committee for possible funding in 2003. To this end a focus group was convened and consisted of: Kerry Blinco and Professor Neil McLean, Macquarie University; Debbie Campbell, National Library of Australia; Ross Coleman, University of Sydney; Jon Mason, deputy director, IMS; Derek Whitehead, Swinburne University of Technology; and Lorena Kanellopoulos, Mark Huppert and Colin Steele from the Australian National University (ANU). The focus group was asked in particular to comment upon technical infrastructure and national discovery and co-ordination issues. A scoping report was delivered in July. It is expected that deliberation of priorities for systemic infrastructure funding will be known by the end of October.

ANU initiative

ANU Library/Scholarly Information Services, following an initiative by Colin Steele, then university librarian at ANU, had established its e-Print repository on 1 September 2001 [http://eprints.anu.edu.au]. Lorena Kanellopoulos of the ANU Library's Electronic Publishing and Marketing Unit was asked to implement the project. By August 2002 the repository held 317 'documents' covering material from pre-prints to refereed articles; from conference papers to books.

National e-print initiatives

In May/June 2002, the Group of Eight Universities (Go8) funded a 'roadshow' from Colin Steele and Lorena Kanellopoulos to explain, facilitate and promote the concept of e-Print repositories. The presentations reaffirmed the global experience that a precursor to effective implementation of an e-print repository depends on a clear exposition of the issues to the academic community. Advocacy is perhaps the most important factor, even more than technical infrastructure. Authors need to be convinced that the repositories provide a successful mechanism for institutional collection and thus the wider dissemination of scholarly output. Major questions continue to be raised in relation to the status of publications, retention of copyright, and relations with publishers over contracts.

Following the roadshow several universities have begun to address E-Print initiatives. The University of Queensland has recently prepared a business plan, authored by Belinda Weaver, to develop an electronic E-Print Archive to cover the research output of the University of Queensland. As these repositories proliferate, the opportunity for the full-text harvesting of Australian research output along subject lines increases. Such a process also has synergies with Australian Research Council needs and local Research Office data collection processes.

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Since books are being offered to the E-Print repositories free-of-charge, it is also clear that embryonic E-Presses are being created. Monash University Library has commissioned a business plan to establish an E-Press, while variations of electronic publishing, through current or revived presses, are currently being investigated at Sydney, Melbourne and ANU.

E-print repositories and commercial publishers

One of the worlds leading open source initiatives is at the Massachusetts Institute of Technology (MIT) with its DSpace Project [http://www.dspace.org/live/home.html], a digital repository to capture, distribute and preserve MIT's intellectual output. Their press release of 3 August stated that these archives may provide more efficient open access to research than the commercial journals.

The relationship between institutional or subject repositories and commercial publishers is a complex and interesting one. Some commentators, like Professor Stevan Harnad, (see for example, http://www.nature.com/nature/debates/e-access/Articles/harnad.html) have indicated that the major question is about establishing open archives, not about a frontal attack on commercial publishers. He argues that authors should deposit their research output in E-Print repositories at their own institutions. Data in these repositories can be harvested globally.

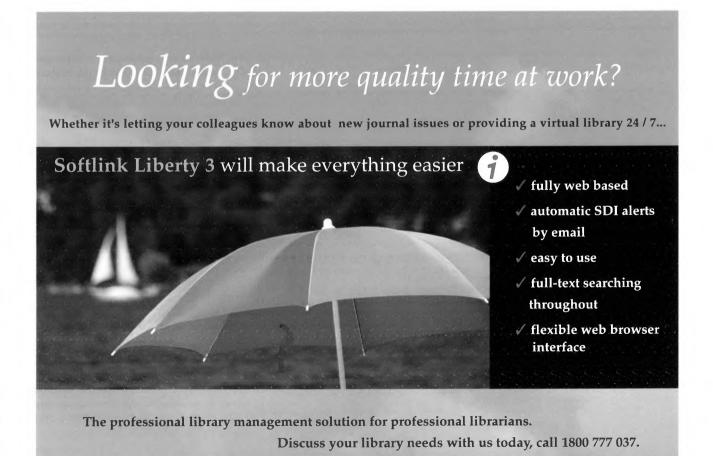For others however, and here one could cite some of the SPARC literature, there is an avowed intent to challenge the monopolies and aggregations of commercial publishers. It may be in the long-term that if repositories expand to contain a lot of refereed institutional output, they could in theory challenge the monopolies of commercial publishers. At the moment, a number of publishers, such as Elsevier, allow for refereed articles to be placed in institutional repositories.

As most of scholarly literature is little used, even in an electronic environment, then alternatives to the present cycle of creation, production, distribution and access could be realised if a process of accreditation/refereeing/branding is offered. The recent alliance between Ingenta and the University of Southampton reveals that some publishers see no contradiction being involved in free electronic journals as well as commercial output. The introduction of such software as Cite-base allow for an additional quantitative model of evaluation.

Conclusion

Professor Jean Claude Guedon has stated in his May 2001 Associate of Research Libraries keynote speech [http://www. arl.org/arl/proceedings/138/guedon.html] that the ultimate aim of the Open Archive Initiative is to make as much information widely available as possible and free-of-charge. While this may be currently an ideal, it is a goal that surely most library and information specialists support. The development of E-Print Repositories around the world is already contributing significantly to this ideal. ∎

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