

eResearch Archive: reaching global agricultural communities

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Queensland Department of Primary Industries and Fisheries Library achieved a significant breakthrough in the provision of Open Access to Australian publicly funded research with the launch of its [eResearch Archive](#) (eRA). With more than one thousand publication records, journal articles, conferences papers and research reports now available to farmers, industry representatives, academics, researchers, students and members of the public throughout the world, the archive is the first web accessible multidisciplinary science institutional repository produced by an Australian government department.

eRA is the culmination of years of work by the Department's researchers and Library staff and has greatly enhanced service delivery to global agricultural communities. Where permission has been granted or subscriptions permit, users can link directly to full text content online and download copies. If full text is restricted, users can link to publishers websites to request articles or use the details to request from their local or institutional libraries.

In addition to contributing to growing national and global initiatives to improve access to scientific and research output, eRA offers many benefits to the Department and its authors including permanent preservation of intellectual property, facilitation of collaboration, increased impact and visibility and quantification of research outputs.

Background

DPI&F Library created its first ePrints repository in 2001 after staff attended a keynote address by Stevan Harnad at the 2001 Online Conference¹. With over 1000 scientists and researchers, many of whom are prolific authors of up to 30 publications per year, the Department was keen to capture its research output in a format which would provide the widest possible dissemination using an easy to use web accessible interface. Based on the research and products available at the time, Eprints, the open source software developed by the School of Electronics and Computer Science, University of Southampton, UK was selected.

Download, installation and setup of the repository was a relatively easy process undertaken by our Systems Librarian. Library staff created detailed intranet pages for depositors to encourage self-archiving and, after considering several options for subject headings, a subset of the Library of Congress Subject Headings was selected as it suited our needs and could be easily adapted for future growth.

EPrints only major deficiency, from a DPI&F perspective, was that it did not conform to the Department's Microsoft based Standard Operating Environment. It used MySQL as the database (not MS SQL), Apache as the web server (not Microsoft Internet Information Services) and sat under the Linux (not MS Windows) operating system. This meant the application could not be supported on our departmental servers so for several years, it operated on a networked Linux PC which was behind DPI&F's firewall. During this time, the ePrints repository was totally supported by the Library and access was limited to departmental staff using a link on the eLibrary intranet site.

In 2003, the software was upgraded to version 2 and, over the next three years, the repository grew to approximately 500 records. During that time, our experience with EPrints software continued favourably with no requirement for support from Southampton. One of the major advantages of EPrints was the ease of use of the self-depositing system and, with only minimal training and detailed help information, our authors (and their assistants) were able to build up content quickly with Library staff providing quality assurance prior to final upload.

Path to a new eRA

Early in 2006, the time was right to re-evaluate EPrints and prepare to launch it on the internet. Choices between proprietary vs open source software and local install vs external hosting were considered. Software had improved greatly since our early foray into digital repositories and competitors to EPrints3 such as [DSpace](#) and [Fedora-VITAL](#), were considered against factors including:

- Cost
- Support for OAI-PMH (Open Archives Initiative Protocol for Metadata Harvesting)
- Integration with existing systems
- Ease of use for repository staff, depositors and searchers including autocomplete facility
- Input and output options including, RSS feeds, email alerts
- Interoperability with other systems including bibliographic management software
- Options for statistical reports
- Ongoing service
- Future development possibilities

Our research indicated that several of the larger Australian universities were using a combination of software and tailoring the systems to suit their needs. With very strict Standard Operating Environment criteria within our organisation, limited funding and staff resourcing and relatively trouble-free experience with the earlier version of the software, our final decision was upgrade to [EPrints3](#) and host the repository with University of Southampton.

The software upgrade went smoothly with minimal downtime. Departmental web designers worked with the Library team to design and create the new home page. This was followed by data migration, user testing, creation of help information for public and staff users and promotional material. The upgrade, data migration and hosting service required considerable communication with the EPrints staff in Southampton and, despite the time difference, we were extremely impressed with their speed of response and their willingness to fix problems and provide solutions. Prior to the repository going live, data was provided to several repository harvesters such as [OAISTER](#) and [ARROW](#) and search engines such as [Scirus](#) and [Google Scholar](#) ensuring that the discovery of records in the eResearch Archive will be greatly enhanced.



Figure 1. DPI&F eResearch Archive Home Page

Publishers, Open Access and Mandatory Deposit

Publisher restrictions play a major part in the digital repository process. Authors, particularly scientists, will always aim to publish in the most prestigious journals and the majority of these are still owned by large proprietary publishers such as Wiley-Blackwell, Elsevier, Springer-Verlag and Academic Press. In the 8 years since DPI&F began its digital repository, some of these publishers have actually tightened use restrictions so that, in many instances, even author's pre-publication versions of their work cannot be held in open institutional repositories.

Our departmental authors have been directed, where possible, to maintain the right to deposit either published or author's versions of their work in the eResearch Archive. The repository staff are charged with the responsibility of ensuring that breaches of publisher copyright transfer agreements do not occur and regularly refer to the Sherpa Project's [Romeo](#) and the OAKLaw Project's [OAKList](#) which are searchable databases of publisher policies on copyright and archiving.

One of the trends which may lead to a lessening of these restrictions is the movement towards Open Access² particularly for publicly funded research. Many publishers are now coming onboard with this concept and allowing authors to pay a fee for permission to archive published versions of their work on institutional repositories or allow open access via websites of learned societies, research bodies and funding organisations.

Much of the Australian research on institutional repositories and open access principles emanates from the Open Access to Knowledge (OAK) Law Project based at QUT including a very useful step-by-step guide with checklist and summaries of Open Access Policies of Australian Universities³. The recent Open Access and Research Conference⁴, hosted by OAKLAW, was also a wonderful opportunity for interested parties to hear leading international speakers discuss recent developments⁵ and also participant in workshop activities⁶.

In providing a true web accessible institutional repository, DPI&F is now on par with Australian and international universities and has cemented its commitment to Open Access by introducing a policy which mandates that all significant scientific and research publications must be deposited in its digital archive.

The Future

To ensure DPI&F eResearch Archive and its profile continue to grow, our scientists must take ownership of the depositing process. To achieve this, eResearch Archive staff will give presentations at many of the Department's research facilities, Science Forums and Business unit meetings. We will continue to work on help information and marketing material to convince our authors that the depositing process is simple and, most importantly, worth their while. Enhancements such as, individual profile pages and detailed statistical reports will provide useful ways of tracking and organizing their research output and providing useful citation impact data.

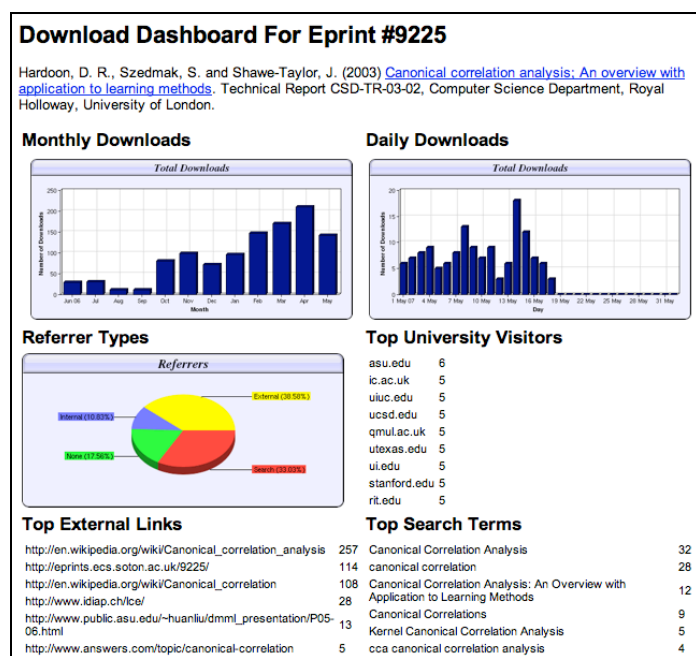


Figure 2. Open Access and Research Conference 2008 : Day 1, Session 5, Wednesday 24 September: Open Access and Research Quality, Prof Stevan Harnad, Why Open Access is important in the assessment of research quality

The Department is currently scoping a project which would see more material added to the eResearch Archive including scientific datasets and images. DPI&F Library is also keen to spread the repository message to our colleagues in other state government departments and has recently undertaken a consultancy with Department of Health to provide advice and support in implementing an EPrints3 repository.

Conclusion

The launch of the eResearch Archive on the internet has provided a fantastic boost to the profile of DPI&F Library within the Department and was well received by Senior Executive Team and our researchers. We hope that our ongoing involvement in the provision of this archive will see the Library continue to be an integral part of the Department's research and publication process.

With the continued global focus on Open Access to publicly funded research and our Department's commitment to delivering world-class research and development, it is hoped that the DPI&F eResearch Archive will provide an impressive, ever expanding knowledge base showcasing our expertise and promoting our continued collaboration with the worldwide agricultural community.

References

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Useful Links

[DPI&F eResearch Archive](#)

Sherpa Project's [Romeo](#)

[OAKList](#)

[AuseAccess](#) is a wiki devoted to open access repositories in the Australasian region

[Open Archives Initiative Protocol for Metadata Harvesting](#)