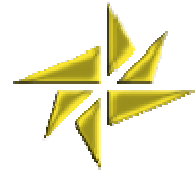




ALIA 2006 Biennial Conference



Australian Library and
Information Association

Refereed Paper

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Biography

Deidre Lowe is the RUBRIC Project Manager. Formerly the Systems Librarian at University of Southern Queensland, she oversaw all aspects of library technology. She has worked in both the higher education and private sectors in the areas of systems development and management, IT training, standards and Library systems sales and support. She has extensive experience in systems project management. Deidre has been nominated for both the Queens Trust for Young Australians and the Aurora Leadership Institute. Her key professional interests are to cultivate a learning culture in organizations and to explore cutting edge application of online technology and ways in which they can be applied to improve business processes and productivity.

Implementing Institutional Repositories in Regional Australia

Abstract

Universities which have embarked on repository projects have all found that significant issues such as population of the repository, acquisition policies, strategies for community engagement and marketing are equally important to solving any technical issues.

The RUBRIC (Regional Universities Building Research Infrastructure Collaboratively) project has been exploring where institutional repositories fit in the regional university landscape, assisting partners University of Southern Queensland, University of New England, University of the Sunshine Coast, University of Newcastle and Massey University with the process of establishing infrastructure to capture and provide regional, national and international exposure to the research output of their staff and students in a sustainable manner.

RUBRIC has drawn on expertise developed in the first round of Department of Education, Science and Training (DEST) funded activity, known as the FRODO projects (Federated Repositories of Online Digital Objects), to establish demonstrator repositories and pilot solutions in order to explore the issues and potential of institutional repositories in regional Australia. This paper provides an update on project activities in 2006 and a summary of regional issues emerging from this research. RUBRIC has been funded for eighteen months from mid-2005 by DEST under the Systemic Infrastructure Initiative, together with eight other projects known collectively as MERRI (Managed Environment for Research Repository Infrastructure).

RUBRIC Project Background

The RUBRIC project is sponsored by the Australian Commonwealth Department of Education, Science and Training, under the Systemic Infrastructure Initiative (SII) as part of the Commonwealth Government's program *Backing Australia's Ability – An Innovation Action Plan for the Future* (BAA). The SII provided two hundred and forty six million dollar over five years to upgrade research infrastructure at Australian Universities, improving efficiencies and ensuring the infrastructure “is of the broadest use to the largest number of Australian researchers” (DEST, 2005) The distribution of SII funds was largely decided by the Minister’s advisors and an evaluation process was formally conducted through the Australian Research Information Infrastructure Committee (ARIIC). ARIIC was established in August 2003 by then Minister for Education, Science and Training Dr Brendan Nelson. It was established to advise the Australian Government on the information infrastructure requirements of the higher education sector, particularly wider information and technical infrastructures and the needs of scholarly and research communities.

The ARIIC’s vision and goals were to improve access to information that enables Australian researchers to conduct research and also to make Australian research widely available and easily accessible. Information access is essential to research, particularly access to data sets and scholarly publications. Key areas of interest to ARIIC are to increase accessibility; promote standards;

foster practical demonstrations; promote cross institutional, cross sectoral and trans-national cooperation; secure improved access; and advocacy to embrace improved infrastructure.

Due to emerging changes in research practices and technologies, the ARIIC and available SII funding is strategically important to the universities involved, because it acknowledges that emerging technologies will change the way research is being done. It is a fact that digitally stored data and information are being generated at an unprecedented rate and that data will increasingly form a major resource for research. Problems identified in the management of data include that it is currently held in isolation, under utilised or available to limited audiences. New approaches such as Institutional Repositories (IRs) will improve access, curation and preservation of research data.

Another driver in the area of research is the proposal to introduce a Research Quality Framework which will impact on the funding of research in Australian Universities. While this is not a focus area for the RUBRIC project, it is a significant area of impact that needs to be monitored closely. It is anticipated that the outcomes of the RUBRIC project will ensure the participating universities are better positioned to cope with the requirements of an RQF process.

The first round of SII funding went to four research projects, collectively

known as the Federated Repositories of Digital Objects (FRODO) projects. The federal funding provided to these projects between 2004 and 2006 was on the premise that digital information access is essential for Australian researchers to continue to conduct and perform further research and beyond that, the exposure of Australian research nationally and internationally via new technologies. The second round of funding became available in April 2005 and it was under this round that the RUBRIC bid was proposed.

The two main criteria of this round were that projects be collaborative and research based. The RUBRIC bid was put forward under the criteria of “maximising access to digital resources in Australian universities, especially regional universities” (DEST, 2005). Three key elements mentioned in the criteria were relevant to the bid.

- Including a range of universities, especially regional universities, in these projects will help achieve the desired outcomes for the SII ensuring maximum benefit for Australia researchers
- These projects should work collaboratively with, and build upon the findings of the FRODO projects.
- An emphasis on upgrading the information infrastructure of regional universities to ensure improved collaboration with other universities would be a priority for projects under this category (DEST, 2005)

The University of Southern Queensland led the bid process and

was advised of a successful outcome in late July 2005, with the official Minister’s press release available in late August 2005 (Nelson, 2005) A public version of the RUBRIC bid document is available on the RUBRIC website (RUBRIC a).

RUBRIC Project Overview

The RUBRIC Partners include the University of Southern Queensland (USQ) as lead institution, the University of New England, the University of the Sunshine Coast, the University of Newcastle and Massey University, with James Cook University listed as a silent partner. The University of Newcastle is a cross-sectoral partner with the Innovative Research Universities of Australia, of which Flinders University, Murdoch University and Macquarie University committed to participate.

All of the partners received a portion of funding to enable them to appoint locally based Project Managers. A centralized team referred to as RUBRIC Central was established at USQ to support the technical and business (*embedding*) sides of running the project. RUBRIC Central was established to work with and for the other partners in the project. The technical team and Metadata Specialist positions were appointed to research, test and document solutions. A Business and Communication Coordinator role was also appointed to act as the key conduit to the distributed partner project managers. It was anticipated that RUBRIC Central would play a key role in documenting emerging project outcomes which would

support the RUBRIC project and also feed into the growing pool of national documentation on institutional repositories (IR).

The project partners appointed local Project Managers to facilitate local deployment of an IR. These Project Managers ensure there is local engagement and embedding activities as part of the sustainability of the solutions beyond the life of the project.

RUBRIC Project Outcomes

Since the call for proposals had requested that projects build upon the findings of the FRODO projects, the project scope was limited to reviewing IR solutions in use by those projects. These were DSpace (MIT, 2002-2006), FEZ (QUT, 2005) and Vital (VTLS & ARROW, 2004). Trials of these solutions were established for partners during the first half of 2006, enabling thorough configuration and testing to occur. As a result, a recommendation was put to the RUBRIC Board at the July meeting. This recommendation was that a Fedora based repository would be a good target for long term repository projects. During the course of the trials, RUBRIC Central conducted a lot of work on data migration and developed confidence in migrating data between the repositories tested. This was seen as a highly important exercise for the purpose of data recovery and disaster planning.

Given the confidence of migrating data from one repository to another, this did not mean that RUBRIC project partners were advised to start

with a Fedora based repository. In fact, due to some technical issues encountered during the trials, partners who wanted to implement a repository in the short term were advised to consider a DSpace repository with the longer term view of migrating across to a Fedora based solution. For most of the partners involved in the project, this would be their first IR. University of Southern Queensland (USQ) had spent the better part of 2004 implementing an ePrints repository and the RUBRIC project was planned partly on this experience.

A number of collaborative tools were established in the early stages of the project to facilitate communication and dissemination of information between partners. These consisted of a wiki, a Sharepoint portal and the RUBRIC website (RUBRIC (a), 2005). There has also been a ticketing system implemented which enables work to be tracked and allocated. The RUBRIC Technical team follows an agile development process, managing work in short cycles and regular review. These work practices have been extremely efficient in ensuring issues have been captured and dealt with in a timely manner, leading to quality work output and reporting.

It is anticipated that as further outcomes emerge from the project, documentation and reports will be extracted from the wiki and *Sharepoint* and populate the *Facilitated Online Sources Toolkit for Establishing Repositories* (FOSTER) Toolkit (RUBRIC (b), 2005) providing much greater accessibility to project

outcomes by the wider higher education community in Australia. At the moment, the wiki, Sharepoint portal, community tagging using del.icio.us (Yahoo!, 2006) and the project tracking system, form a basic knowledge base that is continually under development by all project partners. These systems are restricted presently to project partners.

Building capability

RUBRIC is working to address challenges faced by regional and smaller universities in establishing research infrastructure. Key difficulties include:

- reduced capacity for risk-taking with experimental or immature technologies;
- limited infrastructure resources;
- limited staffing resources which can be caused by:
 - challenges in attracting high-calibre technical staff to regional areas;
 - smaller tenured staff numbers reducing flexibility for project work;
 - difficulties in back-filling key staff when conducting significant projects; and
 - lower percentage of research-active staff

At the same time, these smaller universities may have some advantages over larger institutions. Key advantages include:

- greater agility for adopting innovations with less bureaucracy;
- well integrated intra-institutional infrastructure which facilitates the delivery of projects that require a

range of skills from different departments;

- processes which can facilitate cross-institutional infrastructure development;
- close links between research, learning and teaching as the practical application and dissemination of research is of major importance to regional universities; and
- research activities tend to be focused and well integrated with local and regional government, business and community interests and activities.

The RUBRIC partners recognize the need to keep pace with larger institutions in building appropriate infrastructure to support research and allied educational processes. RUBRIC Central (based at USQ) acts as a conduit for information and support between the project partners and FRODO-lead institutions such as Monash University for the ARROW Project, the Australian National University for the Australian Partnership for Sustainable Repositories (APSR) and the Meta Access Management System (MAMS) project. This coordination contributes to the uptake and sustainability of these other government funded projects and makes better use of scarce expertise. This ensures that the research output of smaller institutions is managed and utilized locally in such a way that it can provide meaningful access to the content, participate in national and international initiatives such as harvesting into national search

engines and contribute to collaborative scholarship.

RUBRIC Central is focused on the process of deployment in those smaller organizations and able to provide specialist support and tools beyond that which would be provided by the existing FRODO projects. At the same time, the focus is on building capability into all partner organisations, ensuring the staffing required to run an IR in those institutions can be sustained beyond the life of the project.

Through the RUBRIC project, regional and smaller universities have access to national debate on emerging topics of significance relevant to the IR field, as well as to the ongoing development of software solutions available. The overall emphasis for the RUBRIC project is to deploy an IR solution in each partner organization. The primary goal is that at the end of the project, each partner will have established and begun to populate a repository. It is hoped that there will be capacity within the life of the project to explore broader emerging issues once the primary goals have been achieved. To this end, an issues register is noting broader issues for further exploration. These include the ability

to capture more than just PDF documents, investigating ways of embedded capture into daily workflows, data flow between systems, such as links with the Library Management system and issues of national significance such as the RQF.

RUBRIC's brief to deploy emerging best practice coupled with limited staffing resources means there are many issues that will not be researched by RUBRIC per se, especially where other projects funded under the SII have specific focus. Copyright, for example, which is the jurisdiction of the OAK-LAW project (QUT, 2006). Towards the end of 2006, project outcomes will be increasingly documented and transferred to the publicly available FOSTER toolkit. A public forum called *RUBRIC Reports* is planned for October 2006 in conjunction with the *IDEA2006* conference, in Melbourne (DEST & MVV, 2006). At this event, various partners in the RUBRIC Project will talk about issues such as the benefits of collaboration and project management aspects of implementing an IR. It will close with a panel session discussing the topic *Sustainability: A national agenda*.

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