National framework supporting local creation: New Zealand's institutional repository story

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E nga mana, e nga reo, e nga iwi o te Ao,
Rau rangatira ma,
Tena koutou oku hoa mahi.

Kia ora katoa - greetings to all of you! I have just greeted you in the indigenous language of New Zealand *Te Reo Maori* and welcomed people from the north, south, east and west to this *hui* (meeting) on institutional repositories.

New Zealand (or *Aotearoa* in Maori) is, as many of you know, a small nation of some 4 million people in the South Pacific. I mention this because our small size is relevant to what I want to talk to you about today. Our relatively small population has its advantages. We can be agile, inclusive and can engage in solutions that impact on a whole country; connecting rural and urban areas, both small and large communities and organisations and the interests of central and local government.

The New Zealand Context

In today's context of Institutional Repositories, much has been researched and written about institutional repositories within organisations. The radical shift in scholarly publishing to open source / open standards environments is now mostly well accepted although there is still much to be done in shifting academic culture to a wholesale adoption of this trend in scholarly communication.

Today I am not going to add to this debate other than referring to a report commissioned by the National Library of New Zealand Te Puna Matāuranga o Aotearoa supported by the Council of New Zealand University Librarians (CONZUL) [3]), *"Institutional Repositories for the Research Sector Feasibility Study"* [4].

The introduction of the report states:

"This report explores the feasibility of setting up a New Zealand network of institutional repositories, as essential research infrastructure for the digital age."

This explains our thinking about how we would develop such a national framework to connect content repositories of all kinds with a common search and discovery layer.

The purpose of this paper therefore is to outline for you the steps the New Zealand Government has taken to strengthen the national information infrastructure and describe how a national framework of institutional repositories, which connects content repositories of all kinds, contributes to New Zealand's Digital Strategy [1].

In outlining these developments I will touch briefly on international partnerships we have made, and four milestones that are important building blocks in achieving a national repositories framework.

International Partnerships

As we know, good progress has been made internationally in developing connected infrastructure across sectors and disciplines to surface digital content, and we have heard much about developments in earlier papers today.

New Zealand has made international connections with the Department of Education, Science and Technology (DEST) in Australia [5] and the Joint Information Systems Committee (JISC) in the United Kingdom [6]. These two agencies are currently working together with New Zealand's Ministry of Education's ICT Advisory Committee [7]. Together they are contributing to national research frameworks in their respective countries. Alongside that, the agencies in these three countries are increasingly working more closely together – signing a memorandum of understanding early in 2006 for a joint programme of

work. This collaborative trend is encouraging and has been very helpful in the New Zealand context.

An all-of-country approach: New Zealand's Story
So what are we thinking about in New Zealand?

In general terms we are looking at how institutional repositories can feed into much more comprehensive national infrastructure and digital content layers, and for the past two years the New Zealand Government has been engaging all Government agencies, community and business communities in discussions to determine the best solutions for New Zealand.

There are four milestones or building blocks that have been relevant from a library perspective in building institutional repositories. You may think these milestones are disconnected, so bear with me. They do all come together!

1. National Library of New Zealand Act 2003
2. National Digital Heritage Archive
3. New Zealand Digital Strategy
4. New Zealand's Digital Content Strategy

Let's unpick them one by one and see why they are important.

Milestone 1: The passing of the National Library of New Zealand Act 2003 which brought legal deposit into an electronic domain. New Zealand was one of the first countries to do this.

Milestone 2: National Digital Heritage Archive
To comply with the Act, the National Library was granted $24 million in the 2005 budget to build a trusted digital repository (the National Digital Heritage Archive). This repository will become an important component of New Zealand's Institutional Repositories framework and New Zealand's Digital Content Strategy which I will mention in Milestone 4. The National Library is partnering with Endeavour Information Systems and Sun Microsystems to design and build the archive and we signed this tripartite partnership earlier this month.
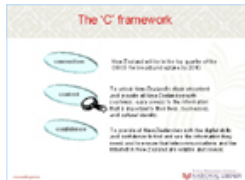
Milestone 3:   **New Zealand Digital Strategy May 2005**

In May 2005 New Zealand's Digital Strategy was launched.

The strategy is ambitious in both the social and economic transformation it expects to deliver through the smart use of ICTs involving central and local government, commercial and public interests. While the vision is a bold one, it is very simple at its core. It is clear, direct and urgent in what it wants to achieve and targets three areas of focus for this transformation. Referred to as the "3 Cs" framework (Connected, Content, Confidence), the Government is now injecting significant resources into these areas to achieve the strategic momentum it is looking for. This is a holistic strategy and each of the 3 Cs is regarded as interdependent. Neglecting any of the components weakens the desired impact.

So where do institutional repositories for the research sector sit in the overall Digital Strategy that the New Zealand Government has developed? To create the right environment for an effective national framework for institutional repositories for the education and research sectors it is clear that interdependence between each of the
3 C's will be a crucial ingredient of success.

Milestone 4:   **New Zealand's Digital Content Strategy**

The fourth step has been the development of New Zealand's Digital Content Strategy (Content Strategy), due to be launched in December 2006. The Content Strategy is an all-of-Government strategy with the National Library of New Zealand as the Government's lead agency.

While an in-depth understanding of the Content Strategy is not necessary for this paper, a brief overview of the key concepts and elements of the Strategy will help to clarify how the national framework of Institutional Repositories will provide an important content feed into the Strategy.

New Zealand Digital Content Strategy
(referred to as the "Content Strategy")

The Content Strategy defines digital content and offers three interconnected views of content – formal, informal and business content.

I will describe briefly what kinds of content we are thinking about in each of these views, so you can see where institutional repositories might fit in.

 Formal content typically covers that which is provenance established; e.g. in museums, archives, libraries, government departments – artefacts, research, newsletters, articles, books, applications/ programmes.

 Informal content typically covers content such as text, photographs, individual's cam-captured material, wikis, blogs, chat emails… folksonomies – lives on the web.

 Business content is that used or created for commercial gain, that supports efficiency business… data, products, applications, creative content industries – sound, image etc.

At this stage we think Institutional Repositories in the tertiary and research sectors will sit more comfortably with the definition of formal content while community repositories may traverse all three content definitions. We could debate this but I hope you can see why.

The content feed from New Zealand's publicly-funded research fund is so important to the New Zealand Digital Content Strategy generally.

A Way of Thinking about Digital Content

Institutional Repositories: A National Framework

As the Content Strategy develops, we are anticipating that clusters of institutional repositories will emerge, connected by a national framework and a unifying search and discovery layer. The vision is to connect digital content from a variety of repositories crossing formal, authoritative, informal, community, creative business content spaces referred to earlier in this paper through a mechanism called Digital New Zealand.

What is important from the National Library of New Zealand perspective is that it has been agreed that the National Digital Heritage Archive, mentioned earlier, will be the preservation layer with content creators depositing their works in the Archive if they choose to do so.

The Tertiary Sector: Research Libraries

Like most countries, the New Zealand tertiary sector has begun to develop a variety of open source / open standards repositories. At this stage the development is patchy, however in July 2006 the Tertiary Education Commission (TEC) has funded three collaborative Institutional Repository projects in the tertiary.

The National Library of New Zealand will develop a harvesting metadata tool and a search and discovery layer for the Commission which will deliver a national institutional repositories framework for the tertiary sector in New Zealand.

Importantly this national framework will provide an crucial formal content feed from the tertiary sector into a concept called Digital New Zealand which is an initiative from the Content Strategy. Where institutions choose to do so, their research output can be ingested into the Heritage Archive to be preserved in perpetuity for future generations.

Concluding Comments

This paper has looked at Institutional Repositories for the research sector in the context of New Zealand's Digital Content Strategy and reflects that while progress in developing institutional repositories in the research sector in New Zealand is still relatively immature, new funding from the Tertiary Education Commission in June 2006 to encourage and support the development of Institutional Repositories has given these developments a focus.

The collaborative work between JISC (UK), DEST (Australia) and the Ministry of Education in New Zealand means that there is now a robust standards and interoperability framework to work from.

The ICT framework for a joined-up education sector is maturing rapidly and is closely aligned to the Digital Strategy 3 Cs framework.

The National Digital Heritage Archive project provides a strategy for preserving New Zealand's digital memory and community and research repositories will provide important content feeds into the archive.

With all of these components lining up nicely, a national framework for institutional repositories in the research sector was a natural development, making it feasible for New Zealand's publicly funded research to be accessible online. The all-of-country approach to digital content which traverses formal, informal and business content and describes five elements about understanding, creating, sharing, preserving and protecting content, gives a strong signal as to how the New Zealand Government will view content when New Zealand's Digital Content Strategy is launched in December 2006. Institutional repositories in the research sector sit well with the formal authorised content described in the strategy and it is anticipated that the sector will provide an exemplar for open source/open standards repositories for others to follow.

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