Guest Editor's Introduction

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GUEST EDITOR'S INTRODUCTION

Ten years ago (October 1999) saw the beginning of the Open Archiving Initiative, an international effort initiated by the administrators of existing Internet-based 'subject archives' to explore opportunities for interoperability between their independent services. The protocol for Metadata Harvesting (OAI-PMH) that emerged from the discussions established a basic architecture in which data providers interacted with service providers to provide a simple environment for archives, or repositories as they were shortly to be known.

The promise of participating in new opportunities for sharing and interoperability stimulated the development of repositories and allowed new stakeholders to participate. Institutional libraries created repositories to expose their existing collections for global sharing. These institutional repositories also provided the environment to build new collections of material, enabling Open Access to research outputs that had previously been inaccessible and offering preservation services for items that were abandoned and unmanaged. Other agendas have since joined Open Access and preservation to drive the deployment of repositories across the world: e-research, e-learning, research management, research assessment and even marketing. These diverse applications build on the fundamental repository capability of providing an accessible source of material that persists beyond the lifetime of its hosting hardware, software and even organizational infrastructure.

The opportunity that the web afforded was a scale-free dissemination platform that enabled individuals, groups and organizations to share and collaboratively manage resources and services. This last decade has seen a significant amount of experience established, both in terms of the technical construction of repository software and the social and organizational challenges of moving private research material into the public research spaces of the scientific commons.

The aim of this issue is to further our understanding of how repositories can deliver useful services to the global scholarly and

scientific community by marshalling resources at the personal scale and delivering them at the global scale. As repositories have become embedded in their institutions, providing mainstream management services as well as library functionality, they have had to integrate with a wide variety of institutional information systems, adding the capability of handling project management and human resource information as well as bibliographic holdings. Keith Jeffery and Anne Asserson detail the emerging relationship between research repositories and "Current Research Information Systems" which allow the repository to function as a good citizen in the corporate infrastructure that supports research.

Moving from research management to e-research Peter Sefton provides a national perspective from the Australian experience, showing how the repository itself may become 'disaggregated' into different components that provide individual repository services in a hybrid architecture rather than a monolithic platform. The opposite approach is discussed by Martin Wolpers and colleages in the use of standards to aggregate-heterogenous repositories for e-learning and social communities. And Robert Darby, Catherine Jones, Linda Gilbert and Simon Lambert look at the relationships between discipline-based and institutionally-based repositories in the UK.

Considerable progress has already been achieved towards Open Access and other agendas, but it is clear that no repository can be an island in the increasingly diverse and complex web-based information environment. However, as this special issue explores some of the technical aspects of repository development, we should keep in mind that the eventual goal is the effective functioning of the scientific and scholarly commons: Open Access to and usage of research literature, research data, scholarly materials and teaching resources.

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