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The Development of a Socio-technical infrastructure to support Open Access Publishing through Institutional Repositories

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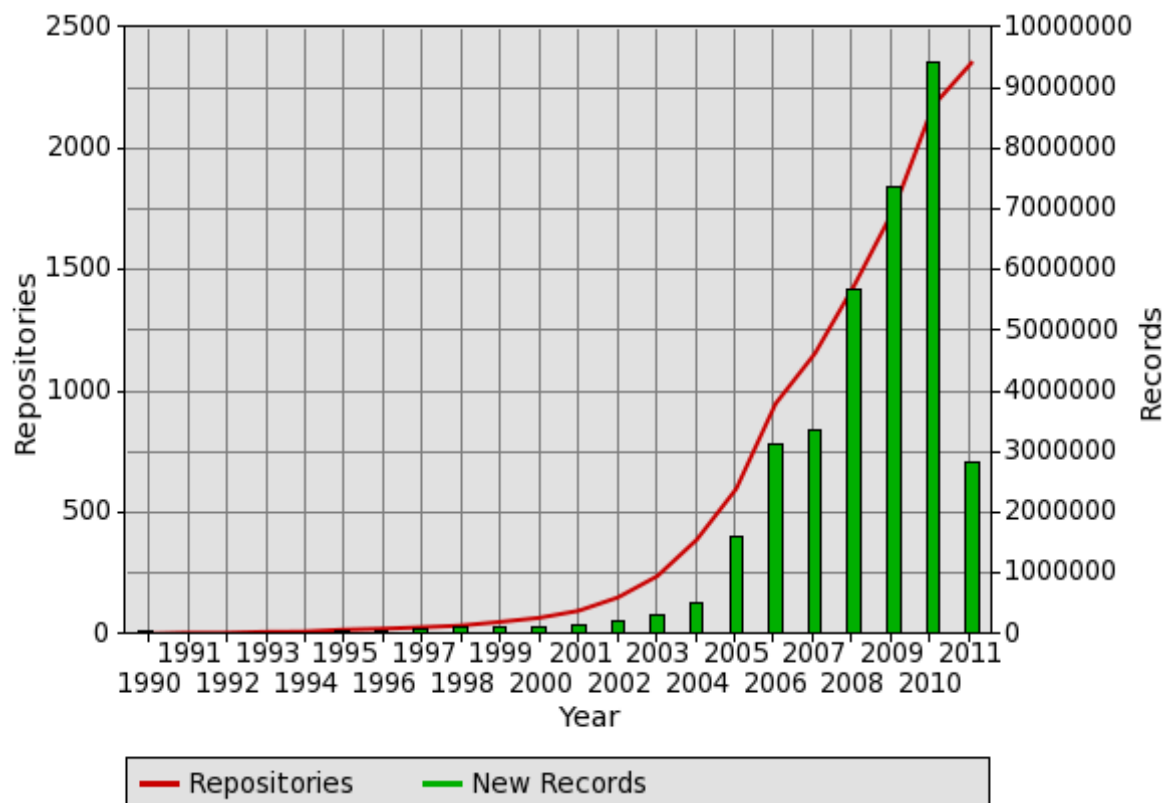
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Summary

The UK RepositoryNet+ project (RepNet) has been funded by JISC (UK Joint Information Systems Committee) to establish an infrastructure based around Institutional Repositories (IRs) to support Open Access publishing models for research papers. With the scoping phase of the project now complete, and the build phase slated to commence in March, it is planned to launch the service during OR12 in July. This paper will discuss the background to the funding of the project, the methodology followed to map the academic publishing landscape and establish user requirements, the process followed to develop and refine the components catalogue, and the bringing into service of the main functional services and components for Waves 1 and 2 of the project through to March 2013.

Project Background

Between 2006 and 2009, JISC invested over £14m in Higher Education repository and digital content infrastructure. This established the Information Environment supporting digital repositories and preservation, including funding for institutions to develop a critical mass of content and advice for the development of repositories. This investment was reflected in the growth of new repositories and records deposited between 2003-2011 as illustrated below¹.



¹ Figures taken from ROAR (Registry of Open Access Repositories)

As part of this programme, JISC commissioned the Houghton Report² into the economic impact of Open Access, published in January 2009. According to the report, core scholarly publishing system activities cost the UK higher education sector around £5 billion in 2007. The sector could save £80m per year by shifting to Open Access publishing, as well as making a considerable contribution to the UK economy and society in general by allowing easier access to research outputs. The report also provided tools to allow modelling of this impact at a local level and provided the economic driver to create a complete socio-technical infrastructure to support this new business model for academic publishing.

This is needed because the old model is clearly broken: the 'market' is strangled and inelastic, with academic researchers having to both read and be published in journals to keep up with their subject and for career development; a complex and non-transparent subscription model for 'bundled' journal content; a near-monopoly on publishing supply, with Elsevier, Springer and Wiley, who have bought up many of their competitors, now publishing 42% of journal articles. Some 65% of institutional repository budgets are spent on academic journal subscription, and libraries are having to cut book budgets to make ends meet, or pass costs on to students through tuition fees. With the taxpayer funding almost all of the academic publishing process, from research to writing to peer review, it is clear that the astronomical 35-40% operating profit margins enjoyed by the rentier capitalism model of conventional academic publishing can no longer be justified.

The UK RepNet project was funded by JISC to establish an IR-based infrastructure to support a new Open Access model for academic publishing, where transparent publishing fees are paid by the author or Principal Investigators (PI) as part of the research funding, with the funder mandate to upload the published version, with metadata including digital Object identifier (DOI) and funder data, into a publicly-available repository where content will be available free at point of use.

Methodology

JISC issued a call for proposals in June 2011 and EDINA³ were successful in securing funding to manage the project. The first task was to map the 'repository landscape' in terms of the main players such as funding bodies, researchers, publishers and HE institutions and repositories, the processes followed and the tools and technologies to support this. This diagram, 'Actors, Agency and Relationships: Report, Deposit and Access'⁴ was presented first at Repository Fringe in August 2011 by Peter Burnhill and the UK RepNet team and further refined through conversations with stakeholders through December 2011. This diagram illustrates the publishing process from initial funding of research by the UK funding bodies such as research councils and charities, eg Wellcome Foundation, the research datasets and articles resulting from this funding and the processes of submission, peer review and selection carried out by the academic body prior to publication in book or journal form by the publisher. Articles are then uploaded, according to publisher permission and embargo into a variety of subject and institutional repositories where different versions, either

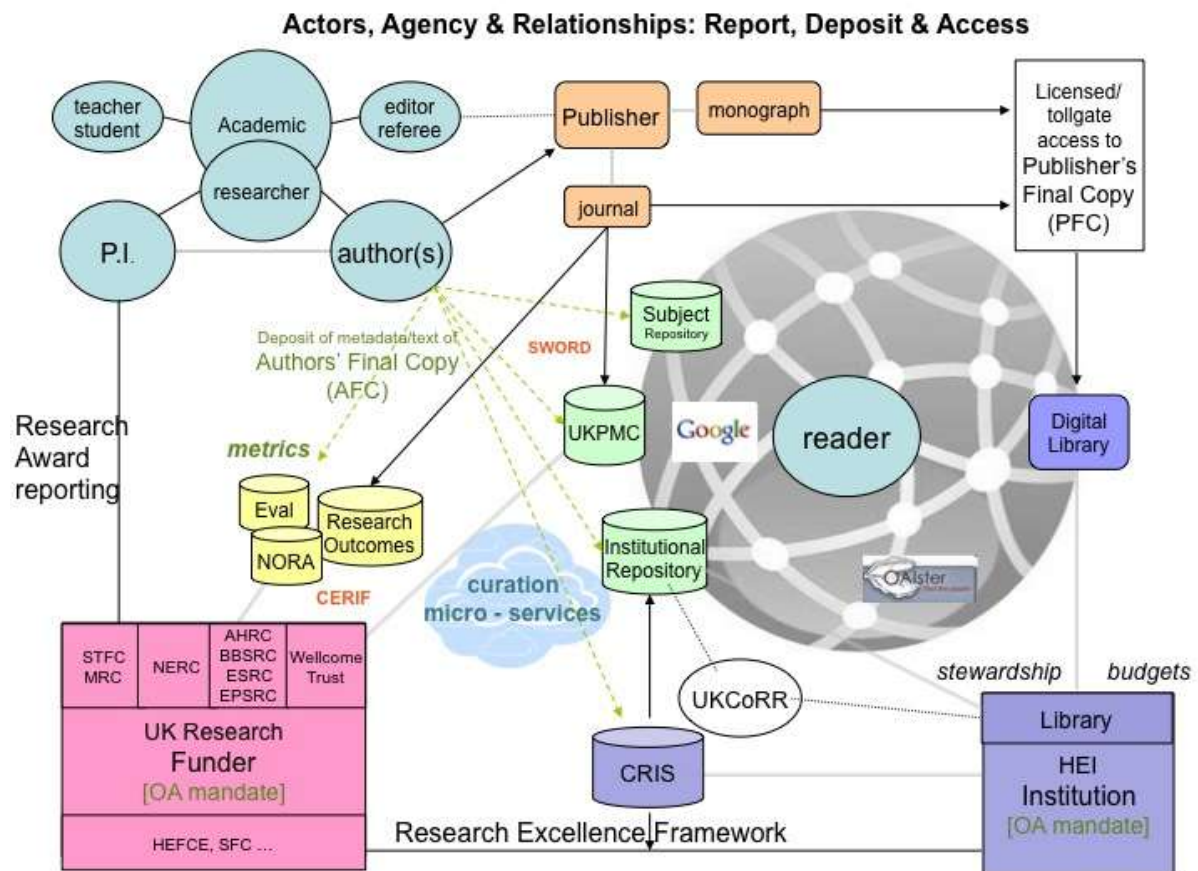
² <http://www.jisc.ac.uk/media/documents/publications/rpconomicoapublishing.pdf>; John W. Houghton & Charles Oppenheim; Prometheus: Critical Studies in Innovation, Volume 28, Issue 1, 2010 pages 41-54; <http://www.tandfonline.com/doi/abs/10.1080/08109021003676359>

³ EDINA: <http://edina.ac.uk/>

⁴ http://edina.ac.uk/presentations_publications/mtrl/

author's final copy, or publisher's final copy are made available at different times to different constituencies depending upon their access rights.

This research both validated our view of the landscape and identified some 'data deficits' in terms of



transparency of compliance with funder mandates, lack of publisher DOIs in IR metadata, inability to produce article-level metrics linked to funded projects, all of which should be addressed by future service components within RepNet. This requirements gathering, comprising surveys, interviews and conversations with stakeholders including research funders, academics/researchers, publishers and research managers in Higher Education institutions and repositories was carried out by external consultants between November 2011 and March 2012.

We also produced a components catalogue, initially composed of some 50 items, comprising services and tools, some in development, others, such as Google Scholar, already being used. Using an evaluation matrix, we then narrowed this down to some 12 components, for which we invited business proposals for JISC funding for service components from a number of universities in the UK.

Proposals for these service components, broken down into the functional areas comprising aggregation/search; benchmarking, statistics and reporting; deposit tools; registries; and enhanced metadata were received in January 2012 and recommendations were made to the JISC Oversight Group, an advisory body for the JISC funding programme for the Repositories and Curations shared infrastructure strand of the JISC Research Management programme, with announcement of funding expected in March 2012.

This funding will be used for development of a full service suite, using the UKOLN⁵ innovation Zone for incubation of new concepts and a production environment hosted by EDINA. Development will take place between March and June 2012, with the initial Wave 1 of service components to be launched at OR12 in July.

Workshop

We would also like to organise a half-day workshop to be held under the auspices of OR2012, to showcase the Wave 1 service components and present the proposed Wave 2 components for development in September 2012 to users of the service. We will also use this workshop to highlight areas of co-operation with our colleagues working on the EC-funded OpenAIRE+ project⁶.

Sponsorship

Because this is a launch event for RepNet, we would like to discuss sponsorship opportunities, subject to approval from JISC.

⁵ UKOLN: <http://www.ukoln.ac.uk/>

⁶ OpenAIRE: <http://www.openaire.eu/>