

Making Digital Libraries Interoperable: Challenges and Approaches



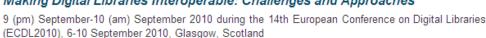
9 (pm) September-10 (am) September 2010 during the 14th European Conference on Digital Libraries (ECDL2010), 6-10 September 2010, Glasgow, Scotland

Handling Repository-Related Interoperability Issues: the SONEX Workgroup

Peter Burnhill, EDINA National Data Centre, University of Edinburgh Pablo de Castro, Carlos III University Madrid

2nd DL.org Workshop

Making Digital Libraries Interoperable: Challenges and Approaches







Scholarly Output Notification and Exchange (SONEX)

The first objective of the JISC-supported Sonex initiative was to identify and analyse deposit opportunities (use cases) for ingest of research papers (and potentially other scholarly work) into the repository space. Later on, the scope of Sonex widened to include as well identification and dissemination of various projects being developed at institutions in relation to the deposit usecases previously analysed.

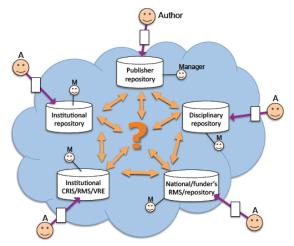
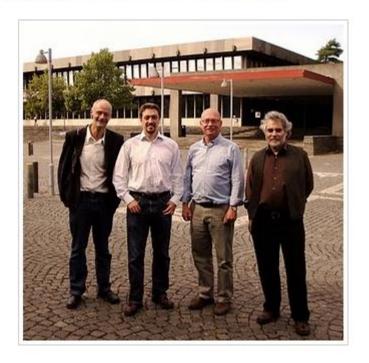


Figure 1.- Deposit usecases: Information exchange among diverse repositories

http://sonexworkgroup.blogspot.com/

Workgroup members and affiliation



The Sonex workgroup at DTU Copenhagen, Aug 2009. Left to right:

Pablo de Castro (Chair) – Carlos III University Madrid (UC3M), Spain

Jim Downing - University of Cambridge, UK

Mogens Sandfaer - Danish Technical University (DTU), Denmark

Peter Burnhill - EDINA-University of Edinburgh, UK

SONEX are...

As of Nov'09 the workgroup coordinator Pablo de Castro changed affiliation from Spanish National Research Council (CSIC) to Carlos III University Madrid, and **Richard Jones** (Symplectic Ltd) became a member of the group in Apr'10 replacing Jim Downing.





SONEX vs DL.org approach



Scholarly Output Notification and Exchange (SONEX)

SONEX	DL.org					
Similarities						
International in scope						
Building upon existing systems/projects						
Differences						
Pragmatic approach: characterizing an	Theoretical approach: DELOS DLMS					
environment for running projects	reference model					
working on repository interoperability						
Narrow scope: IR-based plus various	Wide scope: characterizing DLMSs					
deposit-driving stakeholders	from DL end-user, designer,					
(publishers, CRIS, etc)	administrator and developer					
	perspective					



Digital Library Interoperability, Best Practices and Modelling Foundations

SONEX origin: Institutional Repositories Workshop (IRW'09)

International Repositories Workshop







Radisson SAS Hotel, Amsterdam 16-17 March 2009

Programme | Booking Form | Venue

"An international agenda for action on repositories infrastructure"

Background

Networks of open access repositories for research papers have been created in many countries and regions, and subject and funder repositories have been established that are both national and international. Examples include:

- . DAREnet in the Netherlands
- UK Repositories Infrastructure
- OA-Network in Germany
- · Digital Repository Federation in Japan
- . APSR and Arrow in Australia
- DRIVER in Europe

The scope of these activities reflects typical funding streams for infrastructure. However, research is global, and any services for researchers that are likely to be acceptable need to be global. Hence there is a critical need to join up the repositories work across the world.

IRW'09 Objectives: 4 strands



Welcome to the International Repositories Infrastructure wiki - tag #repinf09

This wiki is for those interested in:

- 1. developing coordinated action plans for specific areas of repository development
- 2. pursuing those plans
- 3. coordinating that activity internationally

An international workshop in March 2009 kicked off this process, which is now open to anyone willing to contribute.

Anyone can read the content of this wiki. Those who would like to have editing rights, that is, be able to contribute comments and suggestions, should click the link on the top right of this page ('request access').

The plans

The current crop of action plans are around four areas.

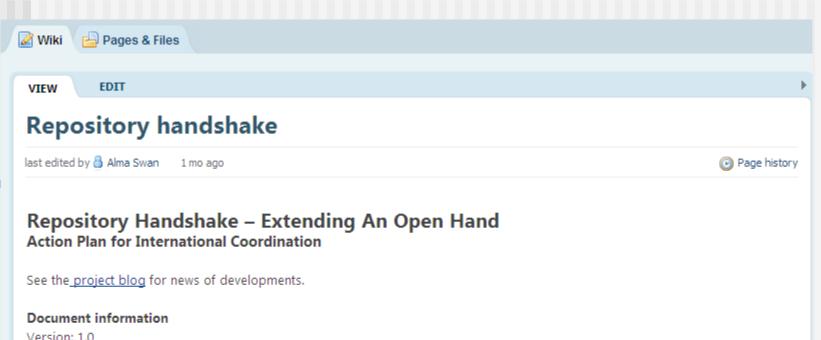
- <u>Citation services</u> that is, making citation data more easily available from OA papers. <u>**Draft project proposal**</u> now available for community review
- 'Repository handshake' that is, ways for repositories to ease the deposit process in various scenarios. This project is underway and **NEWS** is reported on the project's blog.
- Interoperable identification infrastructure that is, can named entities be unambiguously identified on the web?
- International Repositories Organisation how can repositories and their teams work better together.

Presentations on the plans were made at the OAI6 workshop in Geneva 17-19 June, and the Powerpoint files are now available here:

Citation services
Interoperable identifiers
Repository handshake
Repository organisation

A general update on progress, June 09 is here.

http://repinf.pbworks.com/



Proposal

The scope of this activity/strand is broad, on all (digital) materials of scholarly interest but the focus is on research papers/articles. There is relation with the three other strands: a dependence upon that for identifiers (and other sources of authority); a response to the requirements of citation (and other services supported by repositories); the relation with the organisational framework is unclear at the time of writing. The overall time horizon is two to three years but this should be a multi-phase activity, with Phase 1 being rapid engagement over a six month period. The essential characteristic is that is international in scope, important both for understanding and securing agreement for enabling actions.

The 'handshake' is not just that of technical interoperability, it also requires understanding of variety of business processes (or domain specific workflows) which represent 'a deposit opportunity'. The metaphor of the handshake is used to motivate mutual expectation of benefit. The driver is on achieving more content, with better quality metadata (particularly that which covers identification and availability), in ways that make deposit easier and rewarding.

The SONEX paper: dissemination is part of the work

Handling Repository-Related Interoperability Issues: the SONEX Workgroup

Peter Burnhill¹, Pablo de Castro² *, Jim Downing³, Richard Jones⁴, and Mogens Sandfær⁵

 EDINA National Data Centre, University of Edinburgh, Edinburgh, UK
 Carlos III University Madrid, Leganés (Madrid), Spain
 University of Cambridge, Cambridge, UK
 Symplectic Ltd, London, UK
 Technical University of Denmark (DTU), Copenhagen, Denmark http://sonexworkgroup.blogspot.com/

Abstract. Sharing of scholarly content through a network of Open Access repositories is becoming commonplace but there is still need for systematic attention into ways to increase the rate of deposit into, and transfer of content across, the OA repository space. This is a report of the work of a small international group, supported by JISC, with remit to describe, analyse and make recommendations on deposit opportunities and use cases that might provide a framework for project activity geared to the ingest of research papers and other scholarly works. The multi-authored, multi-institutional work is put forward as the default, and nine use case actors are listed, as deposit agents, with four main use case scenarios. There is also some comment and pointers to projects in Europe which address some of these use case scenarios.

Keywords: repositories, interoperability, deposit, research output, CRIS, metadata

RH/SONEX: think-tank, not project

4 Dealing with Use-Case Implementation: a Cooperative Strategy

SONEX workgroup tasks do rather relate to use-case analysis than to their technical implementation, the group having no specific assignment for developing further actions on implementation of selected use-cases. The alternative strategy for getting on with use-case development was to team up with projects or institutions already working on technical solutions for the scoped deposit opportunities.

SONEX usecase-based analysis

Table 2. Repository handshake (actor-based) use-case scenarios

Default content ingest: multi-authored, multi-institutional journal article

Use-case Actor 1: Individual author/researcher

Variant 1a: where the author making the deposit is the PI of funder research project (need for compliance with mandate from funder to deposit)

Variant 1b: the author making the deposit is not the PI of funded research project but the work being deposited is associated with one or more funded research projects (and one or more PIs)

Use-case Actor 2: Depositor (not author) - Mediated deposit

Variant 2a: Mediated by an actor directly reporting to the author

Variant 2b: Mediated by another institutional agent - eq library

Use case Actor 3: Institutional/Departmental Research Support Systems (CRIS/RMS/VRE systems)

Use case Actor 4: Libraries

Potential depositors of their own resources and document collections

Use case Actor 5: Repository Manager (RM) of an IR, wishing to be notified and obtain copy from a subject (SR) or institutional repository (IR)

Variant 5a: Search of SR1 (and many such subject repositories) hoping to obtain a document set of works relating to authors at their institution, either to extract metadata with links to full content, or to harvest that content

Note.- RM (SR1) could notify RM (IR1) [maybe broadcast to many RM(IRj)] that s/he has works for Institution j

Variant 5b: Search of IR2 (and IR-many) hoping to obtain a document set of works relating to authors at their institution, either to extract metadata with links to full content, or to harvest that content

Note.- Notification to RM(IR2) [maybe broadcast to many RM(IRj)] that s/he has works for Institution i

Use case Actor 6: Publisher

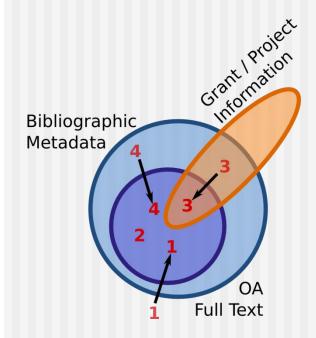
Publishers assisting with:

- a) OA deposit of the author's final copy (PEER project)
- b) OA to published copy
- c) Supply of pointers (DOIs)

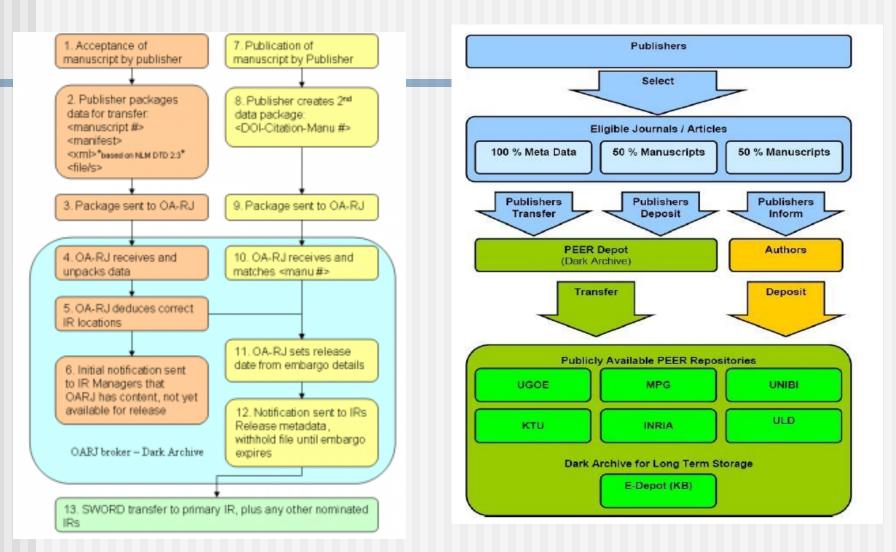
Use case Actor 7: Developer/vendor of authoring software

Use case Actor 8: Repository software developer/vendor

Use case Actor 9: Funding bodies/Policy bodies/Repository community



SONEX usecase scenario I: publisher-driven deposit



OA-RJ workflow

PEER workflow

SONEX usecase scenario II: CRIS/IR integration

+

Motivation: Enable broad collaboration in the information management of research publications

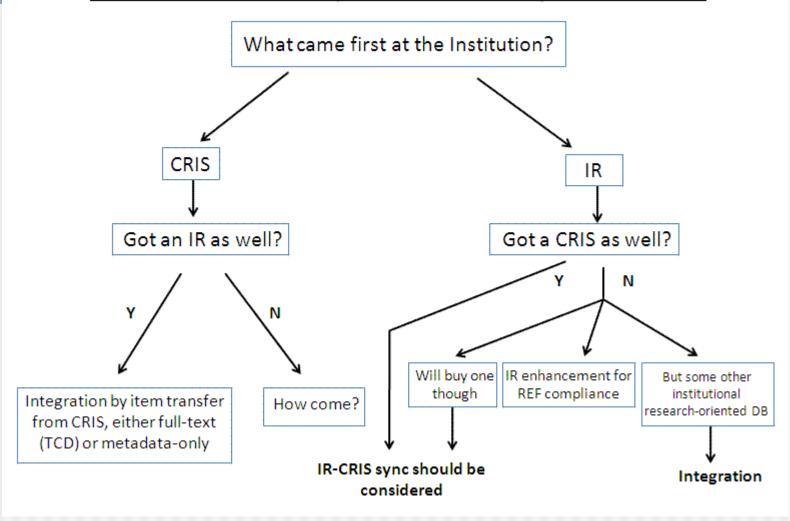


- If CRIS and OAR easily could exchange metadata about publications, they could support each other
- But CRIS and OAR have grown out of different communities and have developed rather different approaches to publication metadata
- If a university has a CRIS and an OAR, generally a publication must be registered twice to comply with both systems' requirements
- Both CRIS and OAR strive to be complete in their coverage of publications – both would benefit from collaboration – not to mention the authors/researchers.

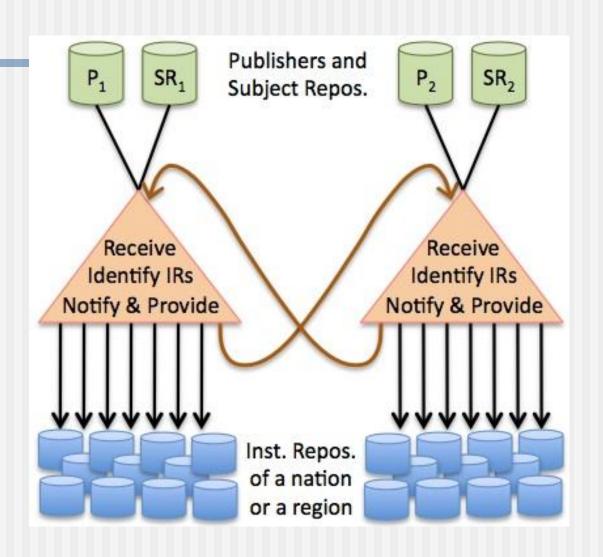
(from: "KE CRIS-OAR [publication metadata] interoperability project" <u>presentation</u>, CRIS2010 Aalborg, Denmark, June 2-5, 2010)

SONEX usecase scenario II: CRIS/IR integration

R4R & CRIS-IR implementation possibilities



SONEX usecase scenario III: Funder-mandated deposit



SONEX usecase scenario IV: Deposit via personal software

Information Environment Team Navigating the information environment...

Part 1 of 2: Report on #DepoST (Deposit Tool Show & Tell) Meeting 2009-12-10

(14) Alex Wade, Director for Scholarly Communication, Microsoft External Research

- Tool: WordDeposit
- Works with: Microsoft Word 2007, ArXiv, SWORD
- Platforms/Languages: Windows
- Description: Microsoft's External Research division is working with several leading academic organisations and researchers to produce workflow support tools. Alex discussed two exciting repository developments. First, the fact that arXiv now accepts submissions of Microsoft Office Word .docx files and other Office Open XML documents. Second, the company's hosted self-publishing eJournal Service, currently in alpha, which helps conference chairs handle submissions of papers, and subsequently allows them to easily select and share those papers (via SharePoint Server 2007) with one click.

Article Authoring Add-in for Word

This add-in for Word enables authors and editors to save Word files in the National Library of Medicine's NLM DTD (article or book) format, which is used for publishing and archiving. In addition, the add-in enables more metadata to be captured and stored at the authoring stage and enables semantic information to be preserved through the publishing process, which is essential for enabling search and semantic analysis once the articles are archived within information repositories.





Modus Operandi for Repository Deposits

Making it easy for you to create something digital and put it in a repository

Open Access Repository Junction (OA-RJ)	EDINA	UK	Theo Andrew & Ian Stuart (EDINA)
SWORD Project	UKOLN/JISC	UK	Adrian Stevenson (UKOLN), Julie Allinson (U York)
York Digital Library - Integration for the Next Generation (YODL-ING)	University of York/University of Leeds	UK	Julie Allinson (University of York)
PEER Project	STM-Assoc/ESF/Max Planck G/UGöttingen/INRIA/SURF/ UBielefeld	EU	Julia Wallace (STM)/Foudil Bretel (INRIA)
EasyDeposit – SWORD deposit tool creator	University of Auckland	NZ	Stuart Lewis (U Auckland)
BMC Deposit into DSpace@MIT	BMC/MIT	UK/US	Matthew Cockerill (BMC)
National & Institutional CRIS/IR			
CRIS/OAR Interoperability Project	KE/DTU	DK	Mikael K. Elbæk & Mogens Sandfær (DTIC)
TDC Systems Integration	Trinity College Dublin	ΙE	Niamh Brennan (TCD)
Enrich: Repository and Research System	University of Glasgow	UK	William Nixon (U Glasgow)
Integration	, .		(2)
CRISPool	University of St. Andrews	UK	Anna Clements (U St. Andrews)
CCLRC Corporate Data Repository (CDR)	Council for the Central Laboratory of the Research Councils	UK	E. Grabczewski (CCLRC)
NARCIS	Royal Netherlands Academy of Arts and	NL	Elly Dijk (KNAW)
** ***	Sciences (KNAW)		
U-GOV	CINECA Consorzio Interuniversitario	IT	Nicola Bertazzoni (CINECA)
FRIDA	University Centre for Information Technology (USIT-UiO)	NO	G. Christina Lingjærde, Andora Sjogren (UOslo, UiO)
Aramis	State Secretariat for Education and Research (SER)	СН	Beat Sottas (SER)
RCAAP/DeGóis Integration	UMIC/FCCN/FCT	PT	Eloy Rodrigues (UMinho)
SEMAT	Iranian Research Institute for Inf. Sc. &	ĪR	Omid Fatemi (Irandoc)
	Tech. (Irandoc)		
Commercial initiatives	Toom (Hullidoo)		
Article Authoring Add-in	Microsoft Research	US	Lee Dirks/Alex Wade (MS Research)
Repository tools	Symplectic Ltd	UK	Richard Jones (Symplectic Ltd)
Pure	Atira	DK	Bo Alroe (Atira)
Converis	Avedas	DE DE	Rudolf Weiss (Avedas)
Enovation Solutions	Enovation	IE	Gavin Henrick (Enovation)
Enovation Solutions	Ellovation	IE	Gavin Heinick (Ellovation)

JISC Deposit Call (Mar'10)



Home» Funding» JISC Grant Funding Call 2/10: Deposit of research outputs and Exposing digital content for education and research

JISC Grant Funding Call 2/10: Deposit of research outputs and Exposing digital content for education and research

The Joint Information Systems Committee (JISC) invites institutions to submit proposals for projects in the area of the Information Environment.

Strand A - Deposit

Ensuring take-up of solutions that enable and encourage author deposit of Open Access research outputs into repositories by embedding deposit into research or related practice.

Total funds: £750,000. Up to 5 projects will be funded. Maximum funding for any one project is £300,000.

Summary

Submission Deadline

20 April 2010 12:00

Funding

Various levels - see full Grant Funding Call

Committees

JISC Infrastructure and Resources Committee

Topic

<u>Digital Repositories</u>

Open Technologies

Research & Innovation

Web 2.0

Strategic Themes

Information Environment

First selected projects at JISC Deposit Call (Jul'10)

MONDAY, 19 JULY 2010

First projects selected at jiscDEPO call

Some selected bids for JISC Deposit Call (tagged as jiscDEPO) on "Deposit of research outputs and Exposing digital content for education and research" were announced along the Open Repositories 2010 Conference held in Madrid from Jul 6-9th. The jiscDEPO call was released last Mar 9th and according to its timeline, all selected projects should already be running (their estimated start due June 2010).

Following projects have been selected at the jiscDEPO call as of today - with some extra one still to come:

DepositMO opens at OR2010 in Madrid

"Changing the culture, embedding deposit into the natural everyday workflow"

"#depositMO looks like a really exciting project"

DepositMO made its debut on the international stage at the *Open Repositories 2010* conference in Madrid, from 6-9 July. Below is the slideshow and the Twitter commentary that accompanied the presentation.

A copy of the related short paper is available from the conference site. Original source materials are collected in our own digital repository, ECS EPrints at the University of Southampton.



First selected projects at JISC Deposit Call (Jul'10)

- RePosit: positing a new kind of deposit. The RePosit
 Project seeks to increase uptake of a web-based repository
 deposit tool embedded in a researcher-facing publications
 management system. Institutions involved in RePosit are
 University of Leeds (Chair), Keele University, Queen Mary
 University of London, University of Exeter and University
 of Plymouth, with close connection to Symplectic Ltd as
 commercial partner.
- DURA: Direct User Repository Access. The DURA
 project, lead by the University of Cambridge with
 Mendeley Ltd and Symplectic Ltd as consultant firms, aims
 to embed institutional deposit into the academic workflow
 at almost no cost to the researcher, by using Mendeley and
 Symplectic tools to allow researchers to synchronise their
 personal research collections with institutional systems.

The Sonex workgroup will be supplying its conceptual framework on deposit usecases to these projects and contributing to their coordination via the jiscDEPO project blog planet to be available shortly.









2. Register an app
Register your application online, and start building and testing it.

Ongoing projects at JISC Deposit Call (jiscDEPO blog planet)



jiscdepo

The jiscDEPO project is a kind of 'meta' project that lists several projects working in the area of Deposit

Project Home

Downloads

Wiki

Summary | Updates | People

Overview of jiscDEPO Projects

Institutional Projects Embedding Deposit Processes and Tools

- iiscdura
- reposit
- depositmo

Infrastructure Deposit Projects (Core Deposit Tools)

- swordv2
- OARJ

Synthesis Project Collecting Deposit Use Cases (Core Deposit Processes)

sonex







The blog of the JISC funded DURA project



RePosit: positing a new kind of repository deposit



jiscDEPO project blog planet

List of jiscDEPO project blog posts and other commentary from around the Web below (please subscribe to the RSS Feed here):

iginal Location of Post	Title of Post
p://blogs.ecs.soton.ac.uk/depositmo/2010/07/29/improvin	q-
oosit-an-open-digital-repositories-thunderbolt/ [1]	Mini update and project team picture [2]
	@mrnick blog about jiscdepo projects at:
p://blogs.ecs.soton.ac.uk/depositmo/2010/07/13/depositn	http://bit.ly/cOTHAV project notebook at:
ens-at-or2010-in-madrid/	http://bit.ly/a0hxe1 not sure why no jisc site pages

SONEX current tasks

- Widening deposit use-case analysis in cooperation with selected projects at JISC Deposit call: further use-case scenarios, more digital object types (beyond research papers)
- Providing support to selected projects at JISC Deposit call
- Gathering information on ongoing deposit-related projects and initiatives, http://sonexworkgroup.blogspot.com/2010/05/summary-of-ongoing-deposit-related 9901.html
- Dissemination of initiative for potential intnl cooperation: OpenAIRE, DL.org

MONDAY, 24 MAY 2010

A summary of ongoing deposit-related projects

Project name	Institutions/ Organisations	Country (ies)	Contact person			
Publisher-driven initiatives						
PEER Project	STM-Assoc/ESF/Max Planck G/UGöttingen/INRIA/SURF/ UBielefeld	EU	Julia Wallace (STM)/Foudil Bretel (INRIA)			
Open Access Repository Junction (OA-RJ)	EDINA	UK	Theo Andrew (EDINA)			
BMC Deposit into DSpace@MIT	BMC/MIT	UK/US	Matthew Cockerill (BMC			
National & Ins	titutional CRIS/IR integra	ation init	iatives			
NARCIS	Royal Netherlands Academy of Arts and Sciences (KNAW)	NL	Elly Dijk (KNAW)			
Enrich: Repository and Research System Integration	University of Glasgow	UK	William Nixon (U Glasgow)			

Acknowledgements

It is time now to re-visit and update our use case framework in the light of these new projects and with more than just research papers in mind. For this we need feedback and criticism, and would welcome both.



Acknowledgements

Members of the SONEX workgroup are grateful to the Joint Information Systems Committee (JISC) for support. In particular, thanks are due to Neil Jacobs and Andrew McGregor for their cooperation and guidance.

More info on Sonex: http://sonexworkgroup.blogspot.com/

Pablo de Castro, Carlos III University Madrid,

pcastro@db.uc3m.es

Peter Burnhill, EDINA National Data Centre,

peter.burnhill@ed.ac.uk