Current State of Repository Interoperability
Eloy Rodrigues, Friedrich Summann, Jochen Schirrwagen, Daniel Beucke, Kathleen Shearer
Agenda

1. Introduction and Overview – Eloy Rodrigues
2. COAR Interoperability Roadmap - Friedrich Summann
   – OAR-CRIS interoperability
3. Controlled Vocabularies Interest Group - Jochen Schirrwagen
4. Usage Data and Beyond Interest Group - Daniel Beucke, Katharina Müller
Our vision

A global knowledge infrastructure, built upon a network of open access digital repositories

…will enhance the provision, visibility and use of research outputs
New modes of research and scholarly communication

Standards, policies, infrastructure, strategy, interoperability, support, awareness, integration…

**COAR aims to facilitate the vision by bringing together research repositories as part of a global infrastructure;** to link across continents and around the world, enabling new forms of research and supporting new models of scholarly communication.

Research libraries have a central role to play.

Inspired by Tim Berners Lee
Factsheet

• COAR e.V., a registered not-for-profit association of repository initiatives according to German law, Office seat: Göttingen, DE, Host: Göttingen State and University Library

• Founded in Ghent, Belgium, October 21, 2009 (28 members), evolved out of the European DRIVER Project (EC, FP7)

• One Annual Meeting of all members with General Assembly Members & Partners (May 2014): more than 120 member institutions (out of over 36 countries in Africa, Asia, Europe, Northern and Latin-America); 6 partner organizations

• Elected Executive Board:
  • Chairperson: Norbert Lossau, Göttingen University, DE
  • Vice Chairperson: Carmen-Gloria Labbé, Cooperación Latinoamericana de Redes Avanzadas (CLARA), Uruguay
  • Treasurer: Márta Virágos, University and National Library of Debrecen, Hungary
Activities

**Working Group 1: Repository Content**
**Related Task Forces and Interest Groups**
- Open Access Agreements and Licenses Task Force
- Impact and Visibility Interest Group

**Working Group 2: Repository Interoperability**
**Related Task Forces and Interest Groups**
- Usage Statistics Interest Group
- Task Force: Controlled Vocabulary for Repository Assets

**Working Group 3: Repository and Repository Networks Support and Training**
**Related Task Forces and Interest Groups**
- Joint Task Force on Librarians' Competencies in support of e-Research and Scholarly Communication
Repository Interoperability

• *Objective:* Facilitate the discussion on interoperability among OA repositories and as part of a wider e-Infrastructure

• Multiple activities from 2011 onwards through The Interoperability Project
The Interoperability Project

• The Case for Interoperability for Open Access Repositories (2011)
  Briefing paper available in English & Spanish

• COAR Current State of Open Access Repository Interoperability (October 2012)

• COAR Interoperability Roadmap (ongoing)
Other Activities

**Aligning Repository Networks**
- Host an international meeting to discuss the alignment of open access repository networks across regions.

**Repository Observatory**
- To help open access repositories to anticipate and respond to the constant state of rapid evolution.
- Identify trends and future scenarios in the context of the use of repositories in research and education.

**RDA Long Tail of Research Data Interest Group**
- Develop a set of good practices for managing research data archived in the university context.
If you are engaged in the development of repositories and their networks, we would be delighted to welcome you as a new member of COAR!

Participants of the COAR Annual Meeting in Athens, Greece, 2014
How to join COAR?

An organization may become a member at any time

- **as a single institution**

- **organizations with lots of members may consider to establish a Group Consortium** – with discount on membership fee.

- **as a Special Member** ("fee waiver option" for institutions from least developed countries)

...or become a **Partner**
Where can you get more information about COAR?

• COAR Portal
  http://www.coar-repositories.org/

• Contact the COAR office to register your interest in becoming a member of COAR
  office@coar-repositories.org

• Follow us on Twitter: #COAR_eV

• Find us on Facebook:
  https://www.facebook.com/COAReV
The COAR Interoperability Roadmap

Friedrich Summann
June 12, 2014
Open Repositories 2014,
Helsinki, Finland
Concerned COAR Discussion Groups

- Experts Advisory Panel
- Roadmap Editorial Group
- COAR WG2 Interoperability
The preparation activities

- Experts Feedback and Comments
- Internal Discussions
- Identifying the Interoperability Issues
- Extracting a Questionnaire
- Processing the Results
- The result: The Roadmap document
Questionnaire

• Issues
• Immediate relevance (1-3 years)
• Future relevance (3-5 years)
• Complexity of implementing (low, medium, high)
• Comments
COAR Roadmap

for Future Directions for Repositories Interoperability

May 2014
The Introduction Chapter

- Repositories – the starting situation
- Current situation and strategic challenges
- Vision, Goal and Objectives
- Users needs and corresponding services
- The Repository Landscape - participating systems and stakeholders
35 Issues grouped in

– Key Aspect: Impact and Visibility
– Key Aspect: Data Issues
– Key Aspect: Validation and Aggregation
– Key Aspect: Usability
– Key Aspect: Sustainability
– Key Aspect: Technical Issues
Supporting Visibility in Repository Registries

Relevance

- Immediate
- Future

Complexity

- Low
- Medium
- High
- Low Complexity
- Medium Complexity
X - High Complexity

Immediate

Exposing Citation Formats - □
Supporting Data Export functions - □

Exposing Bibliometric Information - X
Supporting Author Identification Systems - □
Supporting Search Engine Optimization (SEO) - □
Exposing Publication Lists - □
Integrating different Persistent Identifiers - □
Supporting additional Metadata format(s) - X
Usability 2

- Complexity

Low

- Relevance -

Immediate

Future

Supporting Institutional Services
Integrating Availability Services
Supporting Data Export Functions
Extending EndUser Usability
Supporting Author Identification Systems
Sustainability

- Low
  - Exposing Persistent Identifiers
  - Improving Platform Stability
  - Integrating different Persistent Identifiers

- Medium

- High

- Relevance -
  - Immediate

- Future

Supporting Long-term Preservation and Archiving
Technical Issues

- Complexity -
  - Low
  - Medium
  - High

- Relevance -
  - Immediate
  - Future

Supporting CAI Service Provider Usage
Supporting Deposit Protocols
Defining Architectural Recommendations for Repositories and their Interoperability
Extending/Replacing Metadata Exposition Protocols
IR Interoperability

• The special case: CRIS-IR interoperability
• The common intersection: Publications
• The challenges:
  – The format question (CERIF – DC/MODS/MARC)
  – Related Services
<table>
<thead>
<tr>
<th>CRIS</th>
<th>IR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Externally-orientated</td>
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<tr>
<td>Research Office</td>
<td>Library</td>
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<tr>
<td>Research Information Mgt.</td>
<td>Open Access</td>
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<tr>
<td>Metadata</td>
<td>Fulltext</td>
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<tr>
<td>Automatic Harvesting</td>
<td>Self/Archive/Mediate Deposit</td>
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<tr>
<td>CERIF</td>
<td>DC METS MODS</td>
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<tr>
<td>Proprietary Software</td>
<td>Open Source</td>
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</tbody>
</table>
The “atomic structure” of the CERIF-XML set of schemas has been criticised by the OAR community as being too much a technically inspired structural copy of the CERIF database structure.
Summary

• Not quite a dichotomy – interoperability is the key feature

• Communication is the key strategy
“Not quite a dichotomy – interoperability the key feature”
“Not quite a dichotomy – interoperability the key feature”
COAR presentations in the CRIS community

• euroCRIS Meeting Brussels, Sept. 2013
• CRIS2014, Rome, May 2014
• German Library Conference, Bremen, June 2014

De Castro, Pablo; Shearer, Kathleen; Summann, Friedrich: The gradual merging of repository and CRIS solutions to meet institutional research information management requirements.


http://dspacecris.eurocris.org/jspui/handle/123456789/197
Interoperability by Controlled Vocabularies – A COAR Interest Group

Jochen Schirrwagen

June 12, 2014

Open Repositories 2014, Helsinki, Finland
Scope & Objectives

• **Scope** Controlled vocabularies for OA scientific results – one of the **cornerstones** for interoperability

• **Broader focus** aiming for **standardization** in scientific result descriptions and research information; **aligned with other initiatives**

• **Narrower focus** **authority** for „info:eu-repo“ vocabulary; knowledge space in COAR portal
About the Group

• Chair: Jochen Schirrwagen (Bielefeld Univ.)
• > 20 IG-members from COAR and other initiatives, like FAO-AIMS, CASRAI, EuroCRIS
  – Backed by infrastructures and guidelines, like OpenAIRE (EU), CORE (UK), SNRD (AR), V4OA (UK), RIOXX (UK), DINI-Certificate (DE)
• Authority group for “info:eu-repo”
“info:eu-repo” timeline

2008
- Introduced in DRIVER-II Guidelines

2009-2013
- NEEO, SURF, OpenAIRE Guidelines
- Adopted by SNRD Guidelines (Argentina)
- Supported by repository software suppliers (plugins/add-ons)

2014
- COAR takes over and continues maintenance of info:eu-repo
A Use Case Scenario – Aggregation of EU Research Output

Dataprovider

Aggregator/Research Infrastructure

Authority Services

OpenDOAR

Repository-Registry

OpenAIRE

OA / Funded Publ. & Research Datasets

Consolidated Knowledge Information Space

Project-Information

CORDIS / ERC CORDA

Open Repositories 2014 – June 12th, 2014 – Helsinki
Terms to Describe Research Publication Properties

- info:eu-repo/semantics/article
- info:eu-repo/semantics/openAccess
- info:eu-repo/grantAgreement/EC/FP7/12345
- info:eu-repo/date/publication
- info:eu-repo/semantics/dataset/doi/10.1234-567

Open Repositories 2014 – June 12th, 2014 – Helsinki
Challenges and Next Steps

• Wrt. “info:eu-repo” vocabulary
  – Revision and clean-up; support multilingual labels
  – Provide manifestations: XML Schema, SKOS
  – Improving support by repo software suppliers

• Wrt. Knowledge exchange
  – Webinars: “research information”, “linked data”, “design of Controlled Vocabularies”
  – Contribute to OA-Indicator Vocabularies (i.e. NISO-WG,V4OA)
More Information & Get Involved

• Contact
  – IG-Group Chair Jochen Schirrwagen, jochen@schirrwagen.info
  – COAR-Office office@coar-repositories.org

• Visit the COAR-IG website
  – http://tinyurl.com/coarIGCV
Activity Report
Interest Group: Usage Data and Beyond

Daniel Beucke, Katharina Müller
June 12, 2014
Open Repositories 2014,
Helsinki, Finland
Background

Lack of international standardised usage data for repositories.

This group aims at collecting experiences from several projects in order to standardise the transfer protocol and data format.
The Group

Start in 2013

Lead: Daniel Beucke (University of Göttingen), Paul Needham (Cranfield University)

+ 14 international members
• More than 60 Repositories (June 2014)
• Since July 2012: more than 16 million downloads of over 200,000 items from participating repositories
• Tracker Protocol for IR’s using Eprints or Dspace, whether locally installed or hosted by 3rd party services such as Eprints Services or OpenRepository
• Soon: IRUS-UK tracker functionality for other repository software platforms
• First (test) implementations (6 partner)
• Currently, the infrastructure is rebuild
• Using a pull service in opposition to IRUS-UK
• The service will official start this summer

Paper: "Standardised Usage Statistics for Open Access Repositories and Publication Services"
Both services process usage data according to COUNTER rules, removing robots and double clicks. BUT the current COUNTER rules don’t eliminate all robots/bad usage!

→ COUNTER has formed a Robots Working Group (Publishers, Repository representatives, COUNTER auditors, member of COAR-IG)
Current Activities

Robot and other Unusual Usage

• Common used robot list
• Common processing rules

List of Initiatives and Projects

Planned Activities

Usage Statistics Guideline

Webinars

• Usage Data for Repositories
• Altmetrics for Repositories
More Information & Get Involved

Contact

• IG-Group Chair
  – Daniel Beucke beucke@sub.uni-goettingen.de
  – Paul Needham p.a.needham@cranfield.ac.uk

• Visit the COAR-IG website
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