PEER Project: Challenges & Solutions

Open-Access-Tage 2011

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Agenda

• Overview
• The PEER Observatory
• Challenges & Solutions - Publishers
• Challenges & Solutions - PEER Depot
• Challenges & Solutions - Repositories
• Achievements to date
• Research Studies in PEER
Agreement and Disagreement

Agreement between publishing and research communities that access to results of publicly funded research is important to maximize its use and impact.

However, they hold different views on:
- whether mandated deposit in OA repositories is necessary
- the appropriate embargo periods
- impact on journal viability
Project Overview

• Duration
  – 09/2008–05/2012 (3 years plus 9 months extension)

• Budget/Funding
  – 50 % by the European Union (eContentplus programme)

• PEER by Numbers
  – 5 Partners: STM (coordination), ESF, UGOE/SUB, MPG/MPDL, INRIA
  – 2 Technical partners: Uni Bielefeld, SURF
  – 12 Publishers
  – 241 Journals
  – 1 Depot/ Dark Archive
  – 6 Repositories
  – 1 Long-term preservation archive
  – 3 Research studies
Project objectives

• PEER has been set up to monitor the effects of systematic archiving of ‘stage two’ research outputs

• Large-scale 'experiment' regarding deposit of author manuscripts: in an ‘observatory’ of OA repositories

• Research studies to gather hard evidence to inform future policies
  – Usage Research ➔ Availability, usage
  – Behavioural Research ➔ Author behaviour
  – Economic Research ➔ Costs, viability

• Collaborative project of diverse stakeholder groups
  – Publishers, research community and library/repository community

→ “Report on economic research comparing publishers-assisted deposit with self-archiving“
PEER Observatory

• The Observatory consists of the
  – PEER Depot
  – PEER Repositories

• The Depot
  – Acts as a „Clearing House“ - is a Dark Archive!
  – Processes deposits
  – Distributes content to participating repositories

• The PEER Repositories
  – Provide the usage data (= log files) needed by our research partner CIBER

• Content inflow
  – 241 journals from four broad areas; selecting process
  – ~53,000 articles processed; ~16,000 EU deposits publicly available
  – 2 ways of articles deposit: publisher deposit / author self-archiving
“Observatory” developed to monitor the impact of systematically depositing stage-two outputs on a large scale.
Publisher deposits (cumulated)

Total amount of publisher provided content (~53,000 in October 2011)

EU Authors (incomplete)

EU Authors (complete - embargoed)

EU Authors (complete - embargo expired)

All
EU-Deposits processed (cumulated)

Author Deposits
Publishers Deposits
Embargo Expired

0
5000
10000
15000
20000
25000

Jan 10
Feb 10
Mar 10
Apr 10
May 10
Jun 10
Jul 10
Aug 10
Sep 10
Oct 10
Nov 10
Dec 10
Jan 11
Feb 11
Mar 11
Apr 11
May 11
Jun 11
Jul 11
Aug 11
Sep 11
Oct 11

Author deposit 170

PEER – Publishing and the Ecology of European Research 9 www.peerproject.eu
SSOAR is a subject repository accepting only a part of the PEER depot content.
Challenges and Solutions – Publishers

- **Ensuring journal validity**
  - Correct article type and matching metadata
  - All mandatory metadata (publication date!) received

- **Metadata delivery in several batches**
  - Article metadata are incomplete at acceptance time; Publication date unknown, DOI not attributed
  - Extraction of only "EU" authored manuscripts not possible at acceptance stage

- **Author accepted manuscripts in a variety of file formats**

- **Different metadata formats**
  - NLM2.x, NLM 3.0, ScholarOne, proprietary

- **Metadata delivered within PDF document**

- **Non publisher related technical challenges** (Author authentication, embargo management, file formats/metadata required by repositories)

- **Checking mechanisms**
  - Document kept until metadata completion

- **Article kept until metadata completion**
  - Metadata are accepted in either one step (on publication) or two passes (on acceptance and on publication)
  - Extraction done at PEER Depot

- **Only one file format allowed – PDF**

- **Mapped into single TEI structure**

- **Extraction done at PEER Depot (GroBID) in order to increase content**

- **Changes, adjustments at publishers**

- **Agreement of Data transfer** (Face to face meetings; teleconferences; publisher specific communications)

- **STM – Publisher Cooperation** (Quarterly meetings; progress reports; request for additional content)

- **Technicalities** (Some publishers amended their workflows)
Challenges and Solutions – PEER Depot

- Deposit channels established for 12 publishers
- Link with PEER Author submission interface & match with publisher submitted metadata
- Validate file & metadata integrity: follow-up on problem areas
- Filter for valid participating journals (title, ISSN)
- Filter for EU authored content
- Filter for article type ‘valid research articles’
- Map publisher metadata schemas to PEER schema
- Transform metadata via TEI customisation
- Identify publication date & manage embargo period
- Distribute to participating repositories (SWORD protocol) & LTP archive (FTPs)
- Publisher exception: Extraction of metadata from PDFs (via Grobid (GeneRation Of Bibliographic Data) – an automatic metadata extraction from PDF process
  - This is a ground-breaking technical development
- Repository exception: Filtering content on subject via journal sub-set (subject repository)
Challenges and Solutions – Repositories

• **Technicalities/ Arrangement of Data acceptance**
  – Adjusting to PEER Standard
  – Implementation of SWORD protocol
  – Build dedicated PEER Repository within framework of home institution
  – Convert TEI metadata into DC metadata internally
  – Anonymisation of log files
  – Set up automated log file transfer to Usage Research Team
  – To be responsive regarding current issues

• **Communication**
  – E-Mail communication and work package/ task force meetings
  – Face-to-face meetings & collective teleconferences
  – Repository specific communication with WP leader and Depot

• **Difficulties encountered when inviting to join the Repository Task Force**
  – Thematic focus of manuscripts dealt with in PEER does not meet the bias of the invited repository
  – Find it difficult to comply to PEER standards
  – Find it difficult to communicate within the project
  – Find it difficult to make resources available
Green OA environment issues encountered by PEER

- Non uniformity of publisher outputs
- Varying requirements by repositories
- EU & article type filtering of content
- Embargo management
- Author authentication for deposit
- Non uniformity of log files
- Lower than anticipated EU% of research content
- Format problems with back-content files
- Technical & financial challenges for repository participation (non PEER Partner repositories)

→ Delays within the project are due to innovation & change, technical and other challenges which could not have been foreseen at earlier stages of the project and are simply due to its complexity.
Achievements to date

• Enormous efforts made and results obtained
  – Getting 6 heterogeneous repositories working in harmony on one project
  – Building the PEER Depot and creating infrastructural processes and protocols
  – Getting 12 very different publishers to contribute 241 test and over 200 control journals
  – Getting feeds for 241 heterogeneous journal systems to comply with PEER Depot requirements
  – Getting ~53,000 mss processed the PEER Depot with uniform metadata
  – Ensuring that after EU filtering, each embargo group and subject has a statistically significant sample set of mss
  – Appointing and managing 3 leading research teams to work on the Observatory
  – A working large-scale Observatory delivering results!

• Functioning collaborative infrastructure
  – Linking repositories and publishers
  – Organising the transformation and flow of content
  – Metadata curation (quality control, embargo management etc.)
  – Usage data being collected from repositories and publishers

• Substantial quantities of content visible in repositories:
  ~16,000 EU deposits made publicly available (as of September 2011)
PEER Research Projects

- Usage research
- Economic research
- Behavioural research

http://www.peerproject.eu/peer-research/
PEER Research Projects

• High-quality, credible research, neutral, transparent and supported by all stakeholder groups

• To ensure this, the project needed to put up with delays, therefore 9 months extension

• **Research Oversight Group (ROG)**
  
  Expert panel comprising three independent experts in scholarly publications and economics research:
  
  – Carol Tenopir, University of Tennessee (USA)
  
  – Cherifa Boukacem, Lille University (France)
  
  – Tomàs Baiget, *El profesional de la Información*, Barcelona (Spain)

  – Validate the specification for the research
  – Advise on methodologies
  – Evaluate the deliverables and confirm that the data is sound and conclusions are valid
Peer Observatory + Research Projects

Invited Europe based "PEER authors" to participate in survey for behavioural research.

Deliver usage data (log files) for usage research.

Were queried for economic research.
Usage research: Logfile Analysis

– CIBER Research Ltd., UK [http://ciber-research.eu/]

– Objectives:
  • Determine usage trends at publishers and repositories;
  • Understand source and nature of use of deposited manuscripts in repositories (so called Green Open Access) via usage data provision
  • Track trends, develop indicators and explain patterns of usage.

A contribution to the new field of usage research is expected.

First large-scale and comparative collection of article level usage
Usage research: Final Report

• High volume of content in the project: 16,000 EU deposits made publicly available. CIBER requested sample of this size available for research with a high degree of confidence.

• Ongoing: measure activity over 12 months, starting March 2011.

• Log file collection until 31 August 2011 (first cut-off point for analysis).

• Interim confidential reporting: Sept 2011 (after 6 months), Dec 2011 (after 9 months), Feb 2012 (end).

• “Final Report on usage research”: April 2012 available via http://www.peerproject.eu/reports/
Economic research

- ASK research centre, Bocconi University, Milan, Italy
- **Objectives**
  - Analyze the overall effects of large-scale deposit (Green OA) on the economics of scholarly communication.
  - Investigate the cost of the large-scale deposit of stage-2 research outputs; including the economic efficiency or cost of the process of deposit.
  - Understand the costs incurred by participating publishers and PEER repositories
  - Understand, principally, for the deposit of so-called Stage 2 manuscripts the costs a) in time to depositors; b) for the set-up and the longer term to repositories and/or libraries; and c) to publisher when co-operating in the deposit process

First detailed empirical study of cost drivers to publishers and repositories
Economic research: Final Report

→ “Report on economic research comparing publishers-assisted deposit with self-archiving“

From the contents...

• Publishers cost structure
  - Cost of content certification
  - Cost of content publication
  - Cost of content archival and preservation
  - Compliance to PEER

• Repository cost structure
  - Cost of content uploading
  - Repository set up and maintenance cost
  - Author involvement
  - Involvement in PEER

• Comparison of cost structure and cost drivers
• The ecology of scholarly publishing
• Limitations of the study and recommendation

... Read more soon: http://www.peerproject.eu/reports/
Behavioural research

- Department of Information Science and LISU at Loughborough University, UK

- **Objectives**
  - Track trends and explain patterns of author and user behaviour in the context of so called Green Open Access.
  - Understand the role repositories play for authors in the context of journal publishing.
  - Understand the role repositories play for users in context of accessing journal articles.

- Two phases of Research between 2009 and 2011
  - Phase 1 (2009): Extensive Survey of European researchers + Focus groups

Unique collaboration with publishers and scientists to reach authors and users
Behavioural research: Final Report

“PEER Behavioural Research: Authors and Users vis-à-vis Journals and Repositories. Final Report”

• Covers Phase 2 of the Research: 2nd Survey of European researchers + Final Workshop (2010-11), and provides a synthesis of the results of both phases

From the contents...

• Awareness of Open Access and Open Access Repositories
  - Different types of repositories
  - Disciplinary similarities and differences

• Open Access Repositories in the research process
  - The use of Open Access Repositories by readers
  - Authors’ open access behaviour and self-archiving practice

• Researchers’ perceptions of the best way(s) of achieving Open Access
  - Motivations to self-archive and perceived benefits of OA
  - Perceived barriers of Open Access Repositories
  - Perceived influence of OAR on scholarly publishing
  - Disciplinary similarities and differences

… Read more soon: http://www.peerproject.eu/reports/
Announcements:

• Article: PEER, green open access - insight and evidence; Learned Publishing, 24:267–277
doi:10.1087/20110404

• Final PEER CONFERENCE: May 29th 2012 Brussels

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